

# Simplified Approval Process Concept Note

Project/Programme Title: Enhancing Climate Resilience through Multi-Hazard  
Early Warning Systems in Bangladesh

Country(ies): \_\_\_\_\_ Bangladesh \_\_\_\_\_

National Designated  
Authority(ies) (NDA): \_\_\_\_\_ Ministry of Finance \_\_\_\_\_

Accredited Entity(ies) (AE): \_\_\_\_\_

Date of first submission: [YYYY-MM-DD] [V.0]

Date of current submission: [YYYY-MM-DD] [V.0]

Version:



*Eligibility for SAP is determined by the review of the concept note and the ESS screening.*

A. Project / Programme Summary (max. 1 page)					
<b>A.1. Project or programme</b>	<input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme	<b>A.2. Public or private sector</b>	<input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector	<b>A.3 RFP</b>	Not applicable
<b>A.4. Indicate the result areas for the project/programme</b>	<p>Check the applicable <a href="#">GCF result area(s)</a> that the proposed project/programme targets. Indicate for each checked result area(s) the estimated percentage of GCF budget devoted to it. The summed up percentage should be equal to 100%.</p> <p><b>Mitigation:</b> Reduced emissions from:</p> <input type="checkbox"/> Energy access and power generation: <u>Enter number</u> % <input type="checkbox"/> Low emission transport: <u>Enter number</u> % <input type="checkbox"/> Buildings, cities and industries and appliances: <u>Enter number</u> % <input type="checkbox"/> Forestry and land use: <u>Enter number</u> % <p><b>Adaptation:</b> Increased resilience of:</p> <input checked="" type="checkbox"/> Most vulnerable people and communities: <u>Enter number</u> % <input type="checkbox"/> Health and well-being, and food and water security: <u>Enter number</u> % <input type="checkbox"/> Infrastructure and built environment: <u>Enter number</u> % <input type="checkbox"/> Ecosystem and ecosystem services: <u>Enter number</u> %				
<b>A.5. Impact potential</b>	A.5.1. Estimated mitigation impact (tCO2eq over project lifespan)		<u>Enter number</u> tCO2eq		
	A.5.2. Estimated adaptation impact (number of direct beneficiaries)		<u>Enter number</u> direct beneficiaries		
	A.5.3. Estimated adaptation impact (number of indirect beneficiaries)		<u>Enter number</u> indirect beneficiaries		
	A.5.4. Estimated adaptation impact (% of total population)		<u>Enter number</u> % of the country's total population		
<b>A.6. Financing information</b>					
A.6.1. Indicative GCF funding requested ( <b>max USD 25M</b> )	Amount: <u>Enter amount</u> Currency: <u>Select currency</u> Financial Instrument: <u>Choose an item</u> * Please expand the information if needed.				
A.6.2. Indicative co-financing	Amount: <u>Enter amount</u> Currency: <u>Select currency</u> Financial Instrument: <u>Choose an item</u> (If other financial instrument is opted, please specify: _____) * Please expand the information if needed.				
A.6.3. Indicative total project cost (GCF + co-finance)	Amount: <u>Enter amount</u> Currency: <u>Select currency</u>				
<b>A.7. Implementation period:</b>	<b>4 Y</b>	<b>A.7.2. Total project/ programme lifespan</b>	<b>25 Y</b>		
<b>A.8. Is funding from the Project Preparation Facility needed?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>A.9. Is the Environmental and Social Safeguards Category C or I-3?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<b>A.10. Provide rationale for the ESS categorization (max 100 words)</b>					
<b>A.11. Has the CN been shared with the NDA?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>A.12. Confidentiality<sup>1</sup></b>	<input type="checkbox"/> Confidential <input checked="" type="checkbox"/> Not confidential		
<b>A.13. Executing Entity information</b>	Brief summary of the executing entity including implementation arrangements.				

<sup>1</sup> Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy ([Decision B.12/35](#)) and the Review of the Initial Proposal Approval Process ([Decision B.17/18](#)).

**A.14. Project/Programme rationale, objectives and approach of programme/project (max 100 words)**

*Brief summary of the problem statement and climate rationale, objective and selected implementation approach, including the executing entity(ies) and other implementing partners, including who will be implementing the measures to manage the environmental and social risks.*

Bangladesh, located in coastal areas adjacent to the Bay of Bengal, faces a high risk of flooding, which poses significant threats to crops, livestock, and infrastructure, leading to considerable damage to both human society and ecological resilience. Through the implementation of the VIC-River Routing Model in the Ganges-Brahmaputra-Meghna basin, this project aims to utilize not only historical river flow data but also generate medium to long-term forecast data, thereby utilizing it as flood forecasting information. This project can serve as a foundation for Bangladesh's governmental policies aimed at flood and drought preparedness and response, fostering regional community resilience and enhancing safety measures.

**B. Project / Programme information**

**B.1. Context and Baseline (500 words)**

*Describe as relevant the climate vulnerabilities and impacts, GHG emissions profile, and mitigation and adaptation needs that the prospective intervention is envisaged to address.*

*Please indicate how the project fits in with the country's national priorities, action plans and programs and its full ownership of the concept.*

*Describe the main root causes and barriers (social, gender, fiscal, regulatory, technological, financial, ecological, institutional, etc.) that need to be addressed. Where relevant, please describe the key characteristics and dynamics of the sector or market.*

**Background**

Bangladesh is a country located in South Asia with its land area of 147,570 km<sup>2</sup> and an extensive coastline. More than 88% of the country is covered with wide deltaic floodplains and there are more than 300 rivers around the country. When it comes to the geography of the country, most of the land is flat and low-lying with its mean elevation of 4-5m above sea level. There are some hilly regions in the northeast and southeast part of the country, but the amount of this higher elevation is relatively little. In 2022, Bangladesh's total population was 165,158,616 with 81,712,824 male, 83,347,206 female, and 12,629 Hijra<sup>2</sup>. Bangladesh is the 10<sup>th</sup> most densely populated country in the world (1,063 people per square km<sup>2</sup>)<sup>3</sup>. Among these population, more than two-thirds of them are living in rural areas (113,063,587). In the gender comparison among population in rural and urban areas, the number of females was higher in rural areas and the number of male was slightly higher in urban areas.

Due to its unique geographical location and topography, Bangladesh is highly susceptible to disasters, ranking as the fifth most disaster-prone country globally, with a particularly high risk of flooding in South Asia<sup>4</sup>. Each year, especially during the monsoon season from May to September, approximately 20-30% of the area along the river in the country is inundated and experiences flooding. However, the extreme flood results in inundation of 50-70% of the country beyond the riverbanks. These recurrent floodings lead to loss of life, disruption of livelihoods, and significant damage to crops, livestock, and infrastructure, and almost 75% of the population living in rural areas are impacted.

Over recent decades, factors such as population growth, and human activity on floodplains have made floods more frequent and severe. In addition, due to the climate change, the intensity and frequency of the flooding increased. With its flat topography and location at the confluence of the Ganges-Brahmaputra-Meghna River basin, Bangladesh faces challenges in controlling floods through structural measures.

<sup>2</sup> Bangladesh Bureau of Statistics(2022) Population & Housing Census 2022 Preliminary report

<sup>3</sup> NDA Secretariat Economic Relations Division Ministry of Finance Government of the Peoples' Republic of Bangladesh (2018) Journey with Green Climate Fund Bangladesh's Country Programme for Green Climate Fund

<sup>4</sup> European Commission(n.d.) Enhancing Flood Early Warning System in Bangladesh

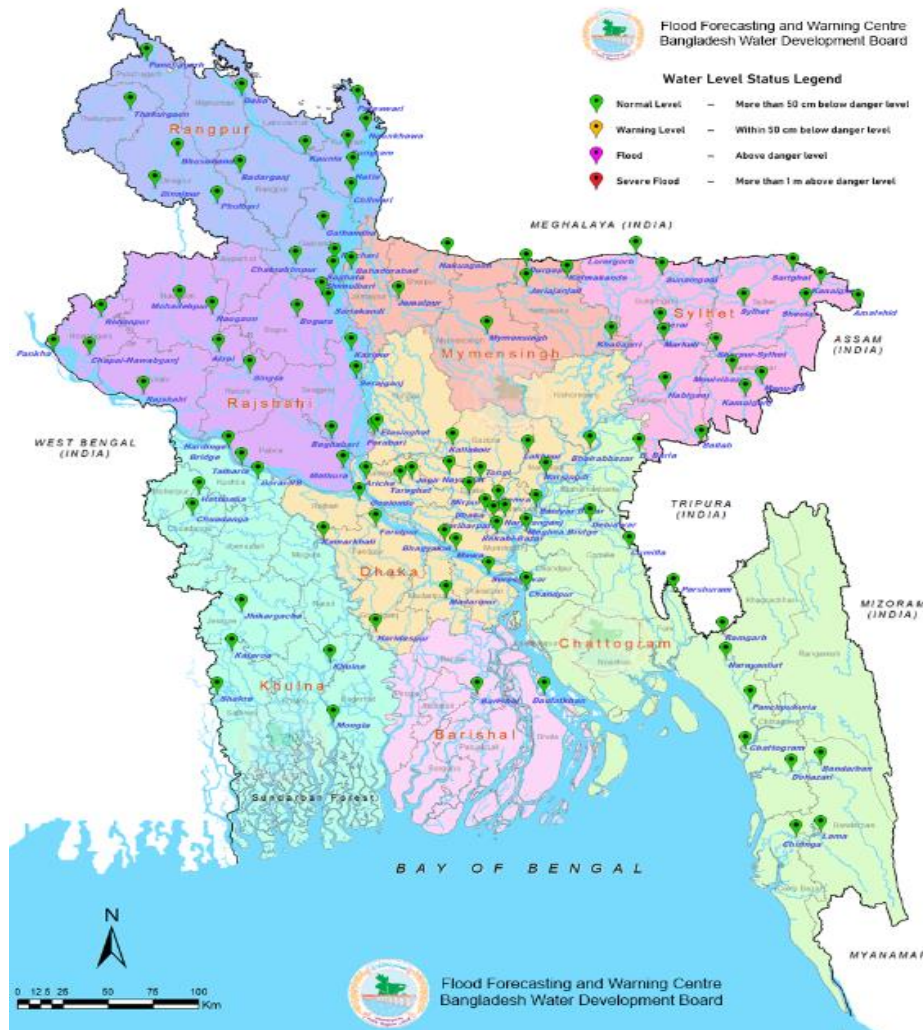


Figure 1. Flood forecasting stations in Bangladesh (Updated On: 24 Apr 2024) (Flood Forecasting & Warning Centre, 2024)

**Current forecasting capacity**

The flood management approach has shifted since the early 2000s, emphasizing a combination of structural and non-structural measures, with a focus on non-structural solutions like flood forecasting and early warning systems. The Flood Forecasting and Warning Center (FFWC), part of the Processing Flood Forecasting Circle (PFFC) within the Bangladesh Water Development Board (BWDB), is responsible for generating flood forecasts and issuing early warnings. The FFWC collaborates with the Regional Integrated Multi-Hazard Early Warning System (RIMES) to generate 1~10-day probabilistic forecasts for 38 Bangladesh locations. However, the current 3 to 5-day deterministic flood forecasts are often insufficient for effective planning and flood management.

There is a strong demand, particularly among farmers and agricultural extension workers, for medium and long-range flood forecasts, as even a 10-day lead time may not be adequate for long-term planning, thus the 'Climate Forecast Application for Bangladesh (CFAB)' model, developed with RIMES and National Center for Atmospheric Research, Georgia Tech in the 2000s, needs technical enhancements for more accurate 10-day forecasts.

Furthermore, the existing flood forecast products by FFWC are underutilized due to weak dissemination linkages to remote flood-prone communities. Forecast and warning messages primarily reach national and district-level stakeholders, but there is a lack of capacity and resources for disseminating this information down to the village and household levels. Even when the forecast reaches the community level, there is often a shortage of expertise to interpret and apply the forecast effectively.

**B.2. Project / Programme description (1000 words)**

*Describe the expected set of components and activities to address the above barriers identified that will lead to the expected outcomes.*

*Please explain why this project or programme is ready for scaling up and has the potential for transformation. Has it been piloted in the country or region? Are the proposed interventions well documented for their costs and benefits?*

*Describe in what way the Accredited Entity(ies) is well placed to undertake the planned activities and what the implementation arrangements with the executing entity(ies) and implementing partners will be.*

*Please provide a brief overview of the key financial and operational risks and any mitigation measures identified.*

*Please explain how the M&E will be conducted as part of the project or programme (routine and concurrent monitoring, interim and final evaluations, and annual reports)*

The 'Climate Forecast Application for Bangladesh (CFAB)' model, developed with RIMES and National Center for Atmospheric Research, Georgia Tech in the 2000s, needs technical enhancements for more accurate 10-day forecasts. The FFWC has previously conducted research, in collaboration with RIMES on generating a 1-3 months flow outlook for the Brahmaputra and Ganges rivers which showed promising results using the ensemble mean of the European Center for Medium-range Weather Forecast (ECMWF's) 6-month precipitation forecast which is made available to FFWC through RIMES with further technical assistance this system can be operationalized and applied for flood flow and hydrological drought monitoring across the major rivers of Bangladesh. However, the short-term (less than 10 days) forecasts do not provide a sufficient period for disaster prevention. Thus, it is inevitable to generate medium- to long-term (over 10 days) forecasts to enable the preemptive response to disasters such as floods.

The overall objective of this technology support is to develop a medium- to long-term hydrological forecasting system for the Ganges-Brahmaputra-Meghna River basins in Bangladesh. This technology will leverage the VIC-River Routing Model with the subseasonal-to-seasonal forecast (1~45 days) data provided by ECMWF to enhance the understanding of hydrological responses in the region and provide opportunities for flood forecasting in Bangladesh. In addition, this technology generates grid data with a resolution of 9 km using the VIC-River Routing model, a numerical model. It provides consistent spatial resolution in the target area, allowing data to be generated at all points, and since it continuously provides data through simulation, obtaining continuous data from the past to the future is easy. This technology ultimately has the project's medium- to long-term objectives of mitigating flood and drought risks, thus improving food security and livelihoods.

### **Component 1: Enhancement of hydro-meteorological infrastructures and data integration system**

This Project aims at identifying areas that are prone to the damage of flood in Ganges-Brahmaputra-Meghna River basins and specific regions to construct hydrometeorological infrastructures such as Automatic Weather Station (AWS) and hydrological observation equipment. The installation process will follow WMO building procedure. AWS will be equipped with basic weather instruments such as thermometers, barometers, hygrometers, and anemometers. For the hydrological equipment, it would include rain gauges, water level meters, flow meters, and sluice gate monitoring tools.

The installation of weather station and meteorological equipment through this project would increase the density of weather forecasting stations in flood prone areas and improve the capacity to monitor flood and its impacts. Increased density would improve the resolution of the data which could also fasten the disaster detection and decision-making for the further actions to take.

Furthermore, due to the lack of connectivity of the observed data gathered from the various stations, data delivery was delayed. Throughout this project, one data management system that could integrate the data from the stations from the overall regions in high to low basins would be constructed. Thanks to this data integration system, the data network could also be improved which could benefit the flood forecasting and adaptation of the expected flood.

Sub-component 1.1: Hydrometeorological Infrastructure development

Sub-component 1.2: Integrated data management system

Sub-component 1.3: Network development

### **Component 2: Integration of flood forecasting model into existing Multi Hazard Early Warning System**

Monitoring and collecting the data of flood and hazardous events are essential for the MHEWS. It would use VIC-River Routing Model for forecasting river discharge of 10 days In addition, Digital Elevation Model (DEM) data and GIS tool would be utilized to estimate the river discharge each day by calculating the slope, flow direction, and river order of the landscape.

From this project, Flood Forecasting and Warning Center (FFWC) under the Bangladesh Water Development Board (BWDB) would have enhanced capacity to predict long-term flood and model that observe the weather data and forecast the weather

events (especially the flood). In addition, probabilistic risk assessment, modelling, technologies would be developed. Observed data from AWS and meteorological equipment would be gathered and transmitted to the central data integration system. By utilizing the numerical models, collected data would be computed and analysed to assess the hazardousness of the weather events and forecast the adequate results.

Depend on the level of severity of the weather events, proper warnings would be delivered and disseminated to the populations that are residing in the designated region. In addition, trainings on evacuation procedures would be delivered to make the community members take proper and timely actions.

Sub-component 2.1: Acquisition of weather and hydrological forecast data

Sub-component 2.2: Evaluation of flood hazard modelling and forecast

Sub-component 2.3: Early warning dissemination

Sub-component 2.4: Preparedness and response

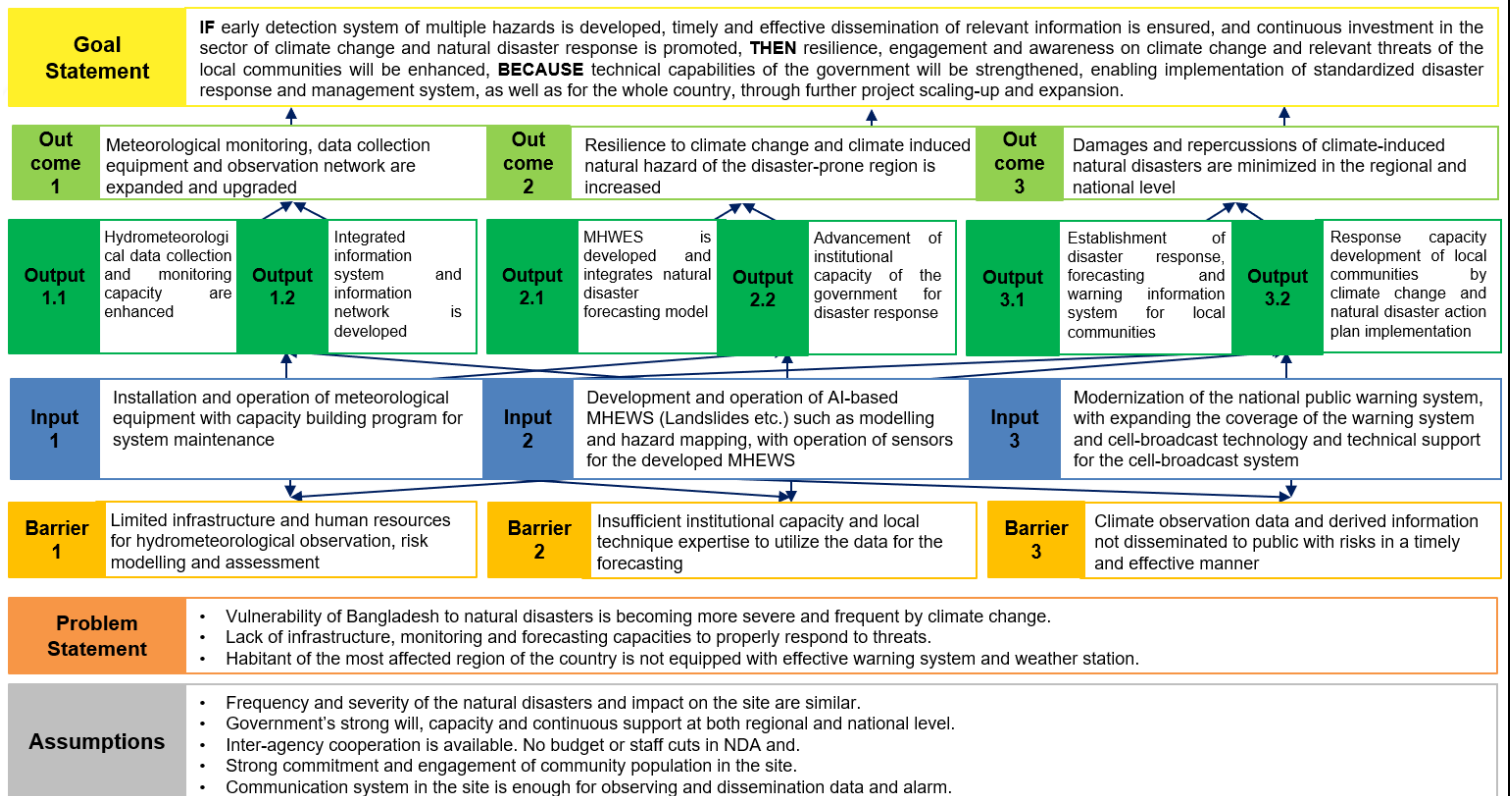
**Component 3: Strengthening climate-adaptative resilience in local communities**

Even though warnings have been made from the forecasted data and have been delivered to the community members, it is still considered that the current early warnings to the communities in need still need to be developed. First of all, it is required for the governmental agencies to improve their capacities to have a prompt and proper decision when the flood or related disaster occurs or it is expected to be occurred. The activity of enhancing the capacity includes the information delivery and dissemination for the community members, deciding and issuing the warning messages, and preparing and implementing the required actions such as evacuation of the population residing in the endangered regions. In addition, community members would also take adequate actions based on the disseminated warnings. It is required for the populations to engage in the capacity building program and share their knowledge with others.

Sub-component 3.1: Institutional capacity strengthening

Sub-component 3.2: Community Engagement

Sub-component 3.3: Knowledge sharing



**B.3.Expected performance against the GCF investment criteria (500 words)<sup>5</sup>**

Please describe and provide an estimate of the expected impacts aligned with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

<sup>5</sup> For more information please refer to Annex XIV of document [GCF/B.07/11](#)

### **Impact potential**

Given Bangladesh's geographical location on the low-lying coastal plains adjacent to the Bay of Bengal, the country is highly susceptible to flooding, with up to 70% of its land potentially inundated during severe flood events. To mitigate such flood damage, the Bangladeshi government has, since the early 2000s, embraced a comprehensive flood management strategy, emphasizing the provision of flood prediction and early warning information. The project will specifically address the Ganges-Brahmaputra-Meghna river basins, which are particularly vulnerable to monsoon-induced flooding. The availability of mid- to long-term hydrological forecasts will equip the Bangladeshi government with crucial data for proactive water resource management, enabling better preparedness and response to both floods and droughts within a 15- to 30-day window. Socially, the real-time hydrological forecasting system will allow citizens to monitor current river flow rates and compare them with historical data, thereby improving community resilience to imminent flood and drought risks. These anticipated outcomes underscore the substantial impact of the project, highlighting its potential to enhance flood risk management and improve the socio-economic resilience of Bangladesh.

### **Paradigm shift potential**

By employing the VIC-River Routing Model, the project will generate mid- to long-term forecast data and historical river flow data for the Ganges-Brahmaputra-Meghna River basin, which will be utilized for accurate flood forecasting. Demonstrating the effectiveness of this hydrologic forecasting system will pave the way for its expansion to other regions with similar flood risk profiles. This scalable model can be adapted and implemented in other areas vulnerable to flooding, particularly as climate change and rising sea levels increase the risk of flood damage in Bangladesh. As accuracy and reliability of the hydrological models improve, this enhancement will significantly boost community response and management capabilities across all affected regions. Additionally, the project aims to build local institutional capacity, fostering the establishment of forecasting, response, and management systems at the community level in Bangladesh. Also, this project will create an enabling environment for future climate-related initiatives. It is poised to foster a transformational shift towards sustainable development in Bangladesh, reinforcing the country's resilience to climate-related disasters.

### **Sustainable development potential**

This project is aligned with the Sustainable Development Goal (SDG) no.13 "Take urgent action to combat climate change and its impacts". The supply of scientific-based information on drought, flood, and other climate-related disasters over a distributed network owned and managed by local communities will help strengthen their resilience and adaptive capacity to climate-related hazards and natural disasters (13.1). Moreover, the VIC-River Routing model, utilizing forecast data openly provided by ECMWF, enables the prediction of river discharge. This can be utilized in national policies, strategies, and plans related to measures and prevention of damages from droughts and floods caused by climate change. It holds the potential to minimize the impact of natural disasters on the people of Bangladesh.

It also contributes to goal no.2 "End hunger, achieve food security and improved nutrition and promote sustainable agriculture", as the project will help mitigate the impact of hydrological disasters by collecting the necessary meteorological data and forecasting the flow of the river, thereby promoting sustainable agriculture. It also contributes to goal No.6 "Ensure availability and sustainable management of water and sanitation for all" since, with the acquired data, agricultural management can provide advice to emergency response teams before the flood season. Finally, the utilization of forecasted mid to long-term river discharge data can help minimize the damage to densely populated cities, enabling them to become more resilient (no.11 "Make cities and human settlements inclusive, safe, resilient and sustainable").

### **Needs of recipient**

Bangladesh ranks among the most disaster-prone countries in the world, with 20 to 30% of its land area experiencing annual flooding, and up to 70% affected during catastrophic flood events. The severity and frequency of floods have increased over the past decades, driven by climate change, population growth, and human activities on floodplains. Additionally, the country's vulnerability is exacerbated by insufficient capacity and resources for effective disaster-related information dissemination.

This project aims to address these vulnerabilities by enhancing early warning systems and disaster response capabilities. The targeted areas and populations are particularly exposed due to their geographic and socio-economic conditions. Financial constraints and institutional capacity deficits further hinder the implementation of effective flood management strategies. By providing robust forecasting tools and improving community dissemination practices, this initiative seeks to mitigate the impacts of flooding and build resilience against future climate-related disasters. The project's approach is grounded in sound evidence, recognizing the urgent need for comprehensive solutions to bolster Bangladesh's disaster preparedness and response infrastructure.

**Country ownership**

According to Nationally Determined Contributions published by Bangladesh in 2021, Disaster management, such as flood, is a key priority included in the adaptation plan released by Bangladesh. Water resource management is also essential for food security, and thus the Ministry of Water Resources is establishing several projects for climate change adaptation. As stated by the Ministry of Environment, Forest and Climate Change (2021), the implementation of NDC is achieved through capacity building and strengthening, where data collection is a key factor.

**Efficiency and effectiveness**

Aligned with the new paradigm set by the government of Bangladesh, flood prediction and disaster management are prioritized within the broader framework of climate adaptation measures. The deployment of advanced flood forecasting technology serves as a foundational element for establishing a comprehensive long-term strategy for climate crisis management and disaster risk reduction.

The anticipated outcomes include significant adaptation impacts in climatically vulnerable regions, along with considerable economic benefits for the country. By enhancing flood disaster adaptation and preparedness at the community level, the project is expected to reduce the financial burden associated with flood damage resilience. This reduction in financial needs translates into greater economic and financial viability for the program. Economic analyses indicate that the improved forecasting capabilities will facilitate more efficient allocation of resources and proactive measures, thereby minimizing the costs of reactive disaster responses. Furthermore, the project is designed to attract co-financing opportunities, leveraging additional investments that enhance the return on investment. The anticipated reduction in flood damage and associated costs will not only improve community resilience but also contribute to the financial stability and growth of Bangladesh, demonstrating a compelling case for economic and financial support of the initiative

**B.4 Stakeholders consultation and engagement (300 words)**

*Please describe how engagement among the NDA, AE, EE and/or other relevant stakeholders in the country has taken place so far and what further engagement will be undertaken as the concept is developed into a funding proposal.*

**C. Indicative financing information (max. 2 pages)**

**C.1. Financing by components**

*Please provide an estimate of the total cost per component and disaggregate by source of financing.*

Component	Output	Indicative cost (USD)	GCF financing		Co-financing			
			Amount (USD)	Financial Instrument	Type	Amount (USD)	Financial Instrument	Name of Institutions
<b>Component 1</b>	Enhancement of hydro-meteorological infrastructures and data integration system	10,000,000	10,000,000	Grants	Choose an item.	Enter amount	Choose an item.	Click here to enter text.
<b>Component 2</b>	Integration of flood forecasting model into existing Multi Hazard Early Warning System	9,000,000	9,000,000	Grants	Choose an item.	Enter amount	Choose an item.	Click here to enter text.
<b>Component 3</b>	Strengthening climate-adaptative resilience in local communities	6,000,000	6,000,000	Grants	Choose an item.	Enter amount	Choose an item.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Enter amount	Enter amount	Choose an item.	Choose an item.	Enter amount	Choose an item.	Click here to enter text.
<b>Indicative total cost (USD)</b>		25,000,000	25,000,000		Enter amount			

*For private sector proposal, provide an overview (diagram) of the proposed financing structure.*

**C.2. Justification of GCF Funding Request (300 words)**

*Explain why the Project/ Programme requires GCF funding, i.e. explaining why this is not financed by the public*



*and/ or private sector(s) of the country.*

Although the Government of Bangladesh is currently allocating 6 to 7 (USD 1 billion) percent of its annual budget to climate change adaptation, the World Bank estimated that the required financial allocation by 2050 should be around USD 5.7 billion a year, which is 5 times higher than the current one. The presented forecast technology will contribute, in terms of flood prediction, to the different adaptation plans established by the government of Bangladesh, and will help allocate funds to other projects. Moreover, the government of Bangladesh carries the burden of all financial risks aligned with the effects of climate change. Given Bangladesh's limited financial resources, the project will rely heavily on GCF grants to overcome structural barriers and achieve its goals.

The Green Climate Fund (GCF) emphasizes supporting both climate change adaptation and greenhouse gas emission reductions. In this framework, adaptation projects are designed to mitigate the impacts of climate change on developing nations and marginalized communities. Likewise, the main goal of this project is to lessen the human and material damage caused by severe flooding by improving early warning systems and disaster response mechanisms in Bangladesh's flood-prone areas. This initiative stands out as a significant climate change adaptation effort that directly benefits the local population. It is well-aligned with the GCF's strategic objectives, as it aims to enhance the resilience of flood-vulnerable communities to the adverse effects of climate change.

### **C.3. Exit Strategy and Sustainability (300 words)**

*Please explain how the project/programme sustainability will be ensured in the long run and how this will be monitored, after the project/programme is implemented with support from the GCF and other sources.*

The objective of this project is to improve the infrastructures to forecast the flood in the regions, as well as to enhance the climate-adaptive capacities of both technicians and the populations in the local community. Stakeholders would be guaranteed to engage throughout the whole processes in all the components of the project. This engagement would build necessary capacities for the diverse activities and build their ownership of the project.

The project includes three main components:

- 1. Construction of hydro-meteorological infrastructures and data integration system:** Technicians utilizing the infrastructures and the technologies would be involved from in the project from the consultation of the construction. Throughout this process, stakeholders would learn how to construct each elements of the infrastructures to improve their skills to fix and maintain the quality of the infrastructures.
- 2. Integration of flood forecasting model into existing Multi Hazard Early Warning System:** Pohang University of Science and Technology (POSTECH) have hosted regular monthly technical meeting with BWDB to transfer technology for the mid to long-term prediction of the flood in the landscape. This technical meeting would enhance the capacity of observers and forecasters to forecast better of the flood in the region by collecting and analyzing the data.
- 3. Strengthening climate-adaptative resilience in local communities:** Populations in the local communities would have training sessions and would be recommended to participate in the sessions. The trainings would include proper actions that need to be taken after they receive warning messages and the nearest evacuation places to evacuate from the severe flood.

After the completion of the project, maintenance period for 3-5 years would be followed to monitor the performance of the constructed infrastructures. Regarding the capacity building programs for the local communities, after the completion of the project, both central and local governments would deliver regular annual workshops for keep improving the climate-adaptative resilience of the country.

### **D. Annexes**

- ESS screening check list (Annex 1)
- Map indicating the location of the project/programme (as applicable)
- Evaluation Report of previous project (as applicable)

## Annex 1: Environmental and Social Screening Checklist<sup>6</sup>

### Part A: Risk Factors

Please indicate your answers to the questions below and provide an explanation on the response selected. In cases when the TBD response has been selected please explain briefly why you are not able to determine now and when in the project cycle the question will be addressed.

If the criteria is not applicable to the project you may write N/A in the justification box.

Risk Factors	YES	NO
Will the activities involve associated facilities and require further due diligence of such associated facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: It would not need associated facilities.</i>		
Will the activities involve trans-boundary impacts including those that would require further due diligence and notification to affected states?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: The activities of the project would be in southern provinces of Bangladesh</i>		
Will the activities adversely affect working conditions and health and safety of workers or potentially employ vulnerable categories of workers including women and children?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: The project would give equal opportunities to both gender</i>		
Will the activities potentially generate hazardous waste and pollutants including pesticides and contaminate lands that would require further studies on management, minimization and control and compliance to the country and applicable international environmental quality standards?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: It would not generate hazardous pollutants</i>		
Will the activities involve the construction, maintenance, and rehabilitation of critical infrastructure (like dams, water impoundments, coastal and river bank infrastructure) that would require further technical assessment and safety studies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: It would not affect critical infrastructure.</i>		
Will the proposed activities potentially involve resettlement and dispossession, land acquisition, and economic displacement of persons and communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: It would not have severe social impacts.</i>		
Will the activities be located in or in the vicinity of protected areas and areas of ecological significance including critical habitats, key biodiversity areas and internationally recognized conservation sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: It would be held in southern provinces of Bangladesh</i>		
Will the activities affect indigenous peoples that would require further due diligence, free, prior and informed consent (FPIC) and documentation of development plans?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: The project would not affect indigenous people</i>		
Will the activities be located in areas that are considered to have archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values or contains features considered as critical cultural heritage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>Please provide a justification of your answer: It would be located outside such areas.</i>		

<sup>6</sup> In answering this checklist, you may refer to Annex 1: Guidance on Part A ESS Screening of the "[Guidelines for the environmental and social screening of activities proposed under the SAP](#)"

**Part B: Specific environmental and social risks and impacts**

Assessment and Management of Environmental and Social Risks and Impacts	YES	NO	TBD
Has the E&S risk category of the project been provided in the concept note?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Has the rationale for the categorization of the project been provided in the relevant sections of the concept note?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are there any additional environmental, health and safety requirements under the national laws and regulations and relevant international treaties and agreements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: The project would follow the GCF's and the government's guidelines</i>			
Are the identification of risks and impacts based on recent or up-to-date information?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: The information of the risks and impacts is based on the update of 2024 May.</i>			
Labour and Working Conditions	YES	NO	TBD
Will the activities potentially have impacts on the working conditions, particularly the terms of employment, worker's organization, non-discrimination, equal opportunity, child labour, and forced labour of direct, contracted and third-party workers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not have such impact</i>			
Will the activities pose occupational health and safety risks to workers including supply chain workers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not pose such risks to the workers</i>			
Resource Efficiency and Pollution Prevention	YES	NO	TBD
Will the activities generate (1) emissions to air; (2) discharges to water; (3) activity-related greenhouse gas (GHG) emissions, (4) noise and vibration; and (5) wastes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: The construction of the project that was listed in the Component 1 would generate little amount of emission, noise, and vibration, the amount and the impact would be minimal.</i>			
Will the activities utilize significant amount of natural resources including water and energy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not use significant amount of resources</i>			
Will there be a need to develop detailed measures to reduce pollution and promote sustainable use of resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not need such measures</i>			
Community Health, Safety, and Security	YES	NO	TBD
Will the activities potentially generate risks and impacts to the health and safety of the affected communities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not have potential impacts to the community</i>			
Will there be a need for an emergency preparedness and response plan that also outlines how the affected communities will be assisted in times of emergency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not need an emergency preparedness and response plan for the affected community</i>			
Will there be risks posed by the security arrangements and potential conflicts at the project site to the workers and affected community?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<i>Please provide a justification of your answer: It would not pose risks to the community</i>			
<b>Land Acquisition and Involuntary Resettlement</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities likely involve land acquisition and/or physical or economic displacement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: The project site will be based on the region that would be granted by the government of Bangladesh</i>			
<b>Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities potentially introduce invasive alien species of flora and fauna affecting the biodiversity of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not introduce any alien species</i>			
Will the activities have potential impacts on or be dependent on ecosystem services including production of living natural resources (eg. agriculture, livestock, fisheries, forestry)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would have no to little potential impact on the ecosystem of the region</i>			
<b>Indigenous Peoples</b>	<b>YES</b>	<b>NO</b>	<b>TBD</b>
Will the activities potentially have any indirect impacts on indigenous peoples, ethnic minorities, or vulnerable and marginalized groups?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not have impacts on populations of the region both directly and indirectly.</i>			
<b>Cultural Heritage</b>	<b>Yes</b>	<b>NO</b>	<b>TBD</b>
Will the activities restrict access to the cultural heritage sites and properties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: It would not restrict access to the cultural heritage</i>			
Will there be a need to prepare a chance-find procedure in case of the discovery of cultural heritage assets?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: There is no reason to believe that the project will lead to the discovery of cultural heritage assets</i>			
<b>Stakeholder engagement and grievance</b>	<b>Yes</b>	<b>NO</b>	<b>TBD</b>
Will the activities include a continuing stakeholder engagement process and a grievance redress mechanism and integrated into the management/implementation plans?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Please provide a justification of your answer: The management and implementation of the project would follow the government's guidelines</i>			

**Part C: Sign Off**

**Sign-off:** *Specify the name and designation of the person responsible for the environmental and social screening and any other approvals as may be required in the accredited entity's own management system.*