ICAT Country Needs Assessment Report

BANGLADESH

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Climate Action
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1. Introduction

1.1. Climate Change Context of Bangladesh

Bangladesh, due to its geographic location and socio-economic status, is widely regarded one of the most vulnerable countries when it comes to the adverse impacts of climate change. The country has a history of regular floods, cyclones, storms, river and coastal erosions – all of which will are expected to be exacerbated as a result of changing climate. Considering that a significant group of the population live below the poverty line, the ability to cope with these impacts will also be lower (Dasgupta et al. 2010). It is predicted that in Bangladesh, the possible effects of climate change will not only threaten the country with more frequent and more intense natural disasters, but its slow onset effects will also rupture the country's economic growth and worsen the already existing poverty levels.

The Third National Communication of Bangladesh (TNC) to the United Nations Framework Convention on Climate Change (UNFCCC), highlights some of the climatic trends in Bangladesh, with a focus on the slow temperature changes as well as some erratic patterns. For annual temperature, 18 weather stations have consistent data up until 2014, and considered 1961 as the base year as per the IPCC guidelines.

The document reports that according to trends it can be understood that Bangladesh is experiencing a rise in temperature. The mean annual temperature rose by 0.0056°C/year from 1961 to 2014. The diagram below shows the rise in mean temperature over the years.

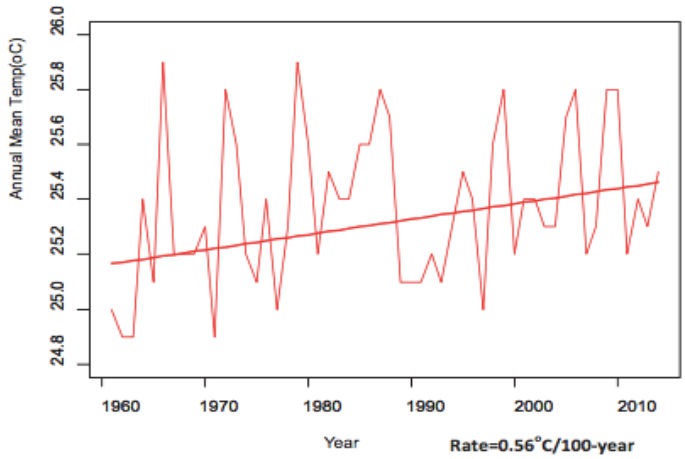

Figure 1: Mean temperature rise since 1960

According to an analysis of seasonal temperature trends by Nishat and Mukherjee (2013) it was seen that over the past decades Bangladesh has experienced hotter summers and warmer winters with a notable increase in the minimum temperature. Increase in minimum temperature by 0.45°C was observed during the winter months of December, January February and 0.52°C was observed in monsoon months of (June, July and August). The trends also showed that the maximum temperature increased by 0.87°C and 0.42°C, during pre-monsoon and post-monsoon months respectively. Despite the increase in minimum and maximum temperature, there are erratic cold spells that are observed in the country. This is especially prominent in the northern region of the country (GoB, 2012).

Other slow-onset impacts of climate change such as salinity intrusion, river erosion and sea level wise, affect the coastal areas and land used for agriculture, threatening food security and livelihood opportunities in affected areas. According to a World Bank report it is projected that climate change might cause Bangladesh to lose a total of approximately USD 121 billion or 5% of national GDP during the period 2005-50 (Yu et al. 2010).

1.2. Need for Climate Action

Being one of the most climate vulnerable countries and also having a small emission portfolio, adaptation is clearly the priority for Bangladesh. However, the country is actively engaged in both adaptation and mitigation actions. Globally Bangladesh participates in the negotiation processes and contributes towards policies and frameworks that shape the landscape of climate action. Considering Bangladesh's low GHG emissions, according to the Paris Agreement (2015) the country is exempt from climate change mitigation. The Paris Agreement states that mitigation measures are dependent on national circumstances and nationally determined contributions (NDCs). Nevertheless, Bangladesh did submit its NDC and identified priority areas for emission reductions as well as adaptation actions. Bangladesh has also expanded its renewable energy market. In fact, Bangladesh has one of the largest numbers of Solar Home Systems (SHS), that provides electricity to the remote corners of the country.

In regard to climate change adaptation Bangladesh has made remarkable strides and has positioned itself to be one of the global leaders of adaption. According to the Third National Communication (NC3), over the past three decades the Government of Bangladesh has invested more than USD 10 billion to build climate resiliency and lower vulnerability. Community based adaptation measures include flood management embankments, cyclone shelters and coastal polders. Capacity building initiatives have been employed to enhance knowledge on climate change issues and to ensure disaster risk reduction.

1.3. Need for Tracking Adaptation Measures

However, since the effects of climate change are both uncertain and relatively long term, it is difficult to assess if the adaptation measures that are being undertaken are adequate and effective (IPCC, 2014). In order to ensure that proper utilization of the limited amount of resources that are available to the most vulnerable countries, and to better understand which adaptation measures are most effective against the impacts of a changing climate it is important to invest in tracking adaptation progress. The Paris Agreement highlighted the importance of developing metrics to compare each country's adaptation efforts (Ford et al. 2015). Although the interest in justifying global investment for adaptation and the need to evaluate effectiveness of adaptation measures has been widely recognized, there is no established framework for tracking adaptation at the global level. One of the main issues preventing the setup of a universal methodology for tracking adaptation is that adaptation is highly context specific and accordingly adaptation projects are diverse in nature (Stadelmann et al. 2015).

While adaptation to climate change has been prioritised into national plans and policies in Bangladesh, the state of M&E in adaptation projects is still inadequate. It is important to ensure transparent and effective use of the available adaptation funds (khan et al. 2013) and in order to do so tracking adaptation is a massive roadblock. The main idea behind establishing a practice of Monitoring and Evaluating (M&E) is to understand if the adaptation project implemented has successfully achieved the desired outcome.

The overall objective of this needs assessment report for Bangladesh is to provide an overview of national circumstances of Bangladesh in the context change and to develop a better understanding of the current status of monitoring and evaluation (M&E) of adaptation projects in Bangladesh. In the context of the ICAT-A project the two priority sectors selected were agriculture and water. The report as it progresses will delineate why agriculture and water were selected as the priority sectors.

2. Climate Change Responses and Priorities

Bangladesh has shown political will, both nationally as well as globally, when it comes to mainstreaming climate change and global climate policies within the framework of national plans of action. In the process of setting up national plans and policies to tackle climate risks Bangladesh has gained extensive experience in adapting to climate change and has established itself in a position guide other countries facing similar struggles in their adaptation efforts (Rai et al. 2014). This section discusses the national policy initiatives undertaken by the government to mainstream climate change in the country's overall development strategy.

There are three broad categories of national level policies highlighted in this segment:

- **Climate change specific policies**
    - National Adaptation Programme of Action (NAPA) to National Adaptation Plan (NAP) (2005)
    - Bangladesh Climate Change Strategy and Action Plan (BCCSAP) (revised) (2009)
    - Nationally determined contributions (NDCs) (2015)
    - Bangladesh Climate Change Trust Act (2010)
    - Climate Change Gender Action Plan (2013)
- **Medium-term development policy**
    - The Outline Perspective Plan- Vision 2021
    - Sixth and Seventh Five-year Plans
    - Country Investment Plan for Environment, Forestry and Climate Change (2017)
- **Long-term development policy**
    - Bangladesh Delta Plan 2100 (BDP2100)

2.1. Climate Change Policies

One of the earliest moves made by Bangladesh in terms of climate action was the development of the National Adaptation Programme of Action (NAPA) - a document that identifies activities for addressing the immediate needs for climate change adaptation in the country. It was prepared in 2005 by the Ministry of Environment and Forests (MoEF) [1]in wide consultation with the government and other stakeholders, and revised in 2009. NAPA is built on four pillars – i) Food security, ii) Energy security, iii) Water security and iv) Livelihood security. The document included 45 measures to address adverse effects of climate change, including variability and extreme events. NAPA initially listed 15 concept notes of climate change adaptation projects, each of which incorporated an M&E component. However, it is unclear how many of those concepts have been implemented in practice.

Following the NAPA, the Cancun Adaptation Framework adopted in 16th UN Conference of Parties (COP16) held in Cancun in 2010, set the rationale for all developing countries to develop a National Adaptation Plan (NAP). Bangladesh has since developed a roadmap for developing the National Adaptation Plan (NAP) in 2015, supported by the Norwegian Government. During the process of formulation of NAP there were several consultations with CSOs to ensure inclusivity.

In 2009, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) was formulated to serve as the primary strategic framework document for climate change in the country. The BCCSAP is a 10-year strategic plan which was valid till 2018, and the document is currently being revised and updated. The previous plan listed 44 medium and long-term actions across six key thematic pillars – i) food security, social protection and health, ii) comprehensive disaster management, iii) infrastructure, iv) research and knowledge management, v) mitigation and low carbon development, and vi) capacity building and institutional strengthening.

In order to implement the BCCSAP - the Bangladesh Climate Change Trust Fund (BCCTF) was subsequently created. The fund is resourced from a block budgetary allocation from the government's revenue. Till its inception, significant funds have been channeled to support mostly public sector projects targeting the six thematic areas of the BCCSAP.

The implementation of the BCCSAP was rather slow and some of the main flaws of this document include the aspect of monitoring and evaluation. Any large plan or programme needs an in-built monitoring and evaluating scheme. This not only ensures its success but also helps learn from the experience for future reference. BCCSAP did not have a proper M&E mechanism in place; this is due to the uncertain implementation strategy during its formation (Asaduzzaman et al. 2013). The revised document should include a robust M&E framework to monitor implementation of the projects under the BCCTF.

The Climate Change Trust Act passed in 2010 and legally mandated the Bangladesh Climate Change Trust Fund (BCCTF). The planning commission accordingly already initiated the process of incorporating climate change into long-term and medium-term planning processes. The Climate Change Trust Act (2010) does not include much information about adaptation tracking. However, one of the functions of its board of trustees was to constitute a general evaluation team to revise and approve the evaluation report at least once a year.

[1] The ministry has since been renamed to Ministry of Environment, Forests and Climate Change (MoEFCC)

Additionally in 2015, Bangladesh submitted its intended national contributions (INDCs) to UNFCCC which acknowledges that monitoring and evaluation of adaptation policies and programmes is crucial to ensure that resources are well utilized to increase the overall resilience of our people. (MoEF, 2015). As the Paris Agreement has come to force, the INDC is now the NDC (Nationally Determined Contributions) and Bangladesh has already drafted a road map for its implementation. It is expected that the NDC will be the primary document for climate actions for addressing climate change under the UNFCCC process.

The Ministry of Environment, Forests and Climate Change (MoEFCC) has been established as the focal ministry to deal with climate change nationally and internationally as a coordinating entity of the government. Department of Environment (DoE) serves as the technical arm of the MoEF in this regard. In addition, there is a focal person in each ministry in charge of climate change activities and mainstreaming climate change into sectoral activities.

A Climate Change Cell was also established within the DoE in 2004. The Climate Change Cell is responsible for coordinating with the focal persons in each ministry and also provides secretarial services to the two trust funds. In addition, an online database on climate change information is being developed by the Climate Change Cell.

2.2. Medium-Term and Long-Term Development Policies

One of the key medium-term development plans for the country includes the national five-year plans (FYP). The five-year plans are implemented through annual development plans (ADP), which is a collection of public sector development projects. The government is assessing how climate change issues may be integrated within project designs and understanding where it can be best fitted.

The Seventh FYP (2016-2020) has been formulated in light of the achievement of the Sixth FYP (2011-2015) and the main theme of this plan was 'Accelerating growth, Empowering citizens' and the plan centers on three themes: GDP growth acceleration, employment generation and rapid poverty reduction; A broad-based strategy of inclusiveness with a view to empowering every citizen to participate fully and benefit from the development process; A sustainable development pathway that is resilient to disaster and climate change; entails sustainable use of natural resources; and successfully manages the inevitable urbanization on transition (Planning Commission, 2015).

There have been references to address climate change included in the 7th FYP (2016-2020). Up until the 6th FYP (2011-2015), the approach of undertaking M&E of plans and programmes was limited to tracking finances. The 6th FYP is a landmark document from which results based M&E system that emphasized both on assessing achievement of objectives and public spending, was incorporated for tracking progress. The plan recognized strong monitoring and evaluation capacity as an 'urgent national priority'. While the introduction of the results-based M&E is a crucial step forward, there were still some gaps in the previous results framework identified by the First Implementation Review. For instance, the results framework, particularly the governance indicators were put together without adequate research and analysis. Limited data and lack of good quality data sets were identified as roadblocks for monitoring (GED, 2015).

The 7th FYP also listed specific steps to strengthen the process initiated during 6th FYP. However, there are major challenges towards the successful implementation of the proposed framework as there is lack of capacity and awareness of the importance of a results-based M&E. Also, inadequate data and lack of

institutions and institutional coordination in terms of managing the overall M&E process remains as the major challenges. The 7th FYP has dedicated a whole chapter on monitoring and evaluation that identifies the critical challenges towards implementing result based monitoring and evaluation and outlines some ways to overcome such challenges.

The Perspective Plan 2021 was developed by the Government of Bangladesh in order to achieve a prosperous Bangladesh on the basis of sustainable development. The perspective plan takes into account the roadblocks that could be presented by climate change and proposes appropriate adaptation measures against the adverse impacts of climate change. In addition, the plan also suggests other mechanisms that promote scientific assessment, forecasting, knowledge dissemination, capacity building and agro-ecosystem monitoring for assessing and managing risks.

The General Economics Division of the Government of Bangladesh formulated the Bangladesh Delta Plan 2100 (BDP2100) with support from the Government of Netherlands. BDP2100 is a long term development strategy aimed to plan out a sustainable pathway for the country over the next 100 years. The BDP 2100 has been formulated primarily to address climate change adverse impacts and ensuring availability of water for safe multi-uses.

2.3. Alignment with the Sustainable Development Goals (SDGs)

In addition, it should be noted that Bangladesh is also taking actions to meet the 17 Sustainable Development Goals (SDGs) and its targets. The country has aligned the national policies and plans in coherence with the SDGs. The Planning Commission of the Ministry of Planning reports that the 7FYP was designed with the SDGs in mind. An assessment by the GED reveals that about 33 per cent of SDG targets are fully aligned with national and sectoral development plans, while another 21.9 percent is partially aligned with national plans. GED has conducted a mapping of ministries, where they have clearly identified the responsibilities of the ministries and agencies to achieve the SDGs. Bangladesh has mapped out lead, co-lead and associate ministries against each target of the SDGs. This mapping exercise is expected to reduce duplication of efforts, enhance synergy and help formulate action plans. A data gap analysis was also conducted by the Planning Commission, which revealed that Bangladesh has data for 70 SDG indicators and partially available data for 108 indicators but need to devise new mechanism for data mining for the remaining 63 indicators. In order to finance the SDGs, the country has also developed a needs assessment and financing strategy. Through this the country has determined the financing needs for SDGs implementation with a view to mobilizing internal and external resources.

In terms of monitoring and evaluating SDG progress, Bangladesh prepared a national M&E framework for the implementation of SDGs. This framework has a macro level web-based data repository system to facilitate data collection, analysis, progress tracking and reporting. Furthermore, Bangladesh has also introduced Annual Performance Agreement (APA), a results-based performance management system, across the whole spectrum of public sector assessing individual and ministries/agencies' performance, this will help evaluate the progress of the various bodies working towards SDG achievement.

2.4. Climate Financing for Sustainable Development: Budget Report 2019-20

In 2012, the Government of Bangladesh conducted Climate Public Expenditure and Institutional Review (CPEIR) as part of the process of integrating climate strategies and policies within public finance, and analyzed the policy and institutional context together with the financial management arrangements of the agencies involved in climate action measures in Bangladesh. In 2014, Bangladesh adopted its Climate Fiscal Framework (CFF) to make the public financial management (PFM) system climate inclusive which was another significant step towards linking climate policies and strategies with the resource allocation process. Building on the lessons from these two initiatives, Government of Bangladesh began producing annual climate budget report starting in 2017.

Climate Financing for Sustainable Development: Budget Report 2019-20 is the third annual climate budget report, and this initiative is being supported by Inclusive Budgeting and Financing for Climate Resilience (IBFCR) Project of Finance Division funded by UNDP. This report summarizes the budget allocation by 25 ministries/divisions of varying scales towards climate relevant expenditure between the period of FY2015-16 to FY2019-20. Climate relevant allocations were identified employing a climate public finance tracking methodology and activities were matched against the different strategic objectives and thematic areas underscored in the BCCSAP.

3. Existing Monitoring and Evaluation (M&E) Frameworks

Over the last decade, policymakers in Bangladesh have recognized the urgency of monitoring and evaluation of development interventions, beyond issues of transparency and tracking finances. Developing proper M&E frameworks has been given some importance when assessing the success of effectiveness of climate change adaptation projects in particular. M&E of adaptation is inherently challenging, and there is no globally agreed framework as of yet. Bangladesh has spent almost a billion US dollars in the last decade on several hundred projects and activities to tackle climate change of which majority has been on adaptation, however its success in achieving desired output is yet to be well recognized.

Since Bangladesh does not have a national M&E framework for climate change adaptation, the segment will look at the M&E processes undertaken by the BCCTF, which is the key national climate fund operational in Bangladesh. In addition, the Results Based Monitoring (RBM) framework employed in a major climate adaptation project, namely the Community Climate Change Project (CCCP), which was funded by BCCRF will also be discussed. It is worth reiterating once again that it is only since the 6th FYP (2011-2015) onwards that the importance of results based monitoring has been acknowledged. Prior to this M&E was only conducted as a means for tracking finance.

3.1. Implementation Monitoring and Evaluation Division (IMED)

The IMED, standing for Implementation Monitoring and Evaluation Division, is a division under the Ministry of Planning of the Government of Bangladesh (GoB), in charge of monitoring and evaluating the performances of development investments made by the government. IMED mainly contributes to

development work in pre-project phase, implementation phase, post- implementation phase through in-depth monitoring, impact evaluation, dissemination of findings, and providing feedback and recommendations. They follow a four-tier monitoring system – employing evaluation at the project, agency, ministry and central level. The IMED collects information on projects and specific results that originate from the implementing organizations. In addition to specific projects and programs, IMED also analyses the performance of ministries and sectors to evaluate whether the set targets were met and to better understand why they failed. IMED usually monitors the project by tracking the basic information of the project, its implementation progress and inspection.

In the 7th FYP, it is stated that the Government of Bangladesh will review the IMED thoroughly and build its capacity for conducting proper results based M&E. The government also intends to have IMED undertake impact assessment of projects using both experimental and non-experimental data, ensuring that M&E moves beyond tracking of finances and simply the completion of projects. The 7th FYP also encourages IMED to collaborate with non-state actors, experts and think tanks to enhance the M&E efforts. In regard to adaptation projects, this redefinition and change in methodology will allow IMED to assess the adaptation projects under the BCCTF and evaluate the outcomes of the projects beyond its financial expenditure, to understand if the necessary impact was achieved through the implementation of the project (GED, 2015).

3.2. Bangladesh Climate Change Trust Fund (BCCTF)

The BCCTF was created in 2009-2010 by the Government of Bangladesh (GoB) to finance the implementation of projects under the BCCSAP. The projects undertaken so far include building cyclone resilient houses, afforestation, excavation/re-excavation of canals, introduction and dissemination of stress tolerant crop varieties and seeds, construction of embankments and river bank protective work, waste management and drainage infrastructure, and installation of solar panels. According to the fund's website, as of 2016, 440 projects have been approved, of which 377 are being implemented by government, semi-government and autonomous agencies, while 63 projects (BDT 250 million) are being implemented by NGOs which are being managed by the PKSF (BCCT, 2016).

The BCCTF projects do not usually fall under the regular monitoring framework of the Implementation Monitoring and Evaluation Division (IMED) of the Government. They follow the M&E framework established by BCCT. Implementing ministries are primarily liable for monitoring and evaluation of the projects using the same procedure they follow for projects under the Annual Development Programme (ADP). Project directors send monthly progress report to the M&E branch of the Trust, and a monitoring committee analyses the progress reports (BCCT, 2016). Local administration including administrative officials and elected representatives also provide local oversight. Both the BCCT and the office of the Comptroller and Auditor General (CAG) have the authority to audit the projects and the Trust is also answerable to the questions raised by the members of the parliament. The NGO projects allocated under BCCTF are monitored by the Palli Karma Sahayak Foundation (PKSF).

The trust fund was created to support the program activities listed under six thematic pillars of BCCSAP. However, when the distribution of the approved projects was assessed critically, it was seen that some pillars and some geographic areas were given more priority than others. Journalists and academics

highlighted that there is a lack of transparency in this process, which leads to corruption and imbalance of priorities. Such information clearly indicates that the BCCT should keep track of the money it holds and ensure that adaptation funds are directed to the most climate vulnerable communities without bias.

On paper, the, fund established a good system of reviewing proposals and allocating resources accordingly. A separate project evaluation format has also been put in place for assessing projects funded by the BCCTF. However, this format only serves to track whether physical and financial targets identified by the project have been met. While the evaluation form provides a section to solicit feedback on the effectiveness of the intervention from beneficiaries, local stakeholders as well as the evaluators, there is no detail specifications on the criteria against which the effectiveness of the project will be assessed.

3.3. Community Climate Change Project (CCCP)

The Community Climate Change Project (CCCP) was an adaptation project which ran from 2012 to 2016, aimed at 'enhancing the capacity of selected communities to increase their resilience to the adverse impacts of climate change.' The project was financed under the Bangladesh Climate Change Resilience Fund (BCCRF) with The World Bank acting as the trustee. Around 10 % of the Bangladesh Climate Change Resilience Fund (BCCRF) has been channelled through NGOs for community level climate actions through this project and the Palli Karma-Sahayak Foundation (PKSF) has been designated for implementing community-level climate change adaptation activities under the project. The project encompassed a number of sub-projects across a range of sectors, including agriculture and water. The activities were implemented in line with the BCCSAP. There were 41 NGOs taking the role of Project Implementing Partner (PIP), who were involved in implementing these activities.

PKSF's central M&E unit monitored the achievement of the expected management outputs in consultation with the CCCP-Project Management Unit (PMU) and submitted progress reports to the management and the World Bank. Monitoring is understood as a shared responsibility between PKSF, PIPs, and local communities. The CCCP implemented a Result Based Monitoring (RBM) system within the project. A baseline questionnaire was developed for assessing the indicators set to capture the status of the community and beneficiaries. The sub-projects under its umbrella had different outcomes and goals corresponding to their tailored needs. Three implementation level objectives were identified based on the three risk zones (Flood, Drought and Salinity), which were then merged with the overarching project goal- This led to the formation of three implementation level result frameworks for three risk zones and an overarching result framework for the overall project implementation.

The project monitoring unit team visited the proposed working areas of the NGOs in order to evaluate the capacities of the primarily selected NGOs at the field level. This evaluation was later used to short list eligible NGOs, who were then allowed to submit sub-project proposals. The M&E manual worked as one of the major tools for ensuring effective tracking of the adaptation project. It served as the basis for PIP-level monitoring practices. The manual also helped capture information in a way that is beneficial for knowledge management in the future.

Through the RBM scheme, PKSF ensured that the exercise was conducted twice a year to keep track of project activities. This resulted in improved fieldwork and overall time management, keeping the project on track. As the project was being constantly evaluated, the manual was updated according to the needs

of the project. The CCCP project has gone through three distinct steps to award sub-grants to the PIPs. This has been proven as a successful approach for planned implementation of project activities. The M&E process also helped identify gaps within the project and the reasons behind any setbacks.

The CCCP had a tiered approach as well as established and trusted partners. Prior experience within those communities through PIPs made it possible for them to successfully implement the results based monitoring (RBM) programme. However, this might be difficult to replicate for other implementing entities without such institutional arrangements and experience.

4. Sectors and Focus Areas for the ICAT-A Bangladesh Case Study

For the purpose of this project, for the Bangladesh case study, the two sectors that have been selected are: agriculture and water. The primary reasons for selecting these two sectors as focus areas are based on the following considerations.

4.1. Climate Vulnerability and Policy Significance

Firstly, both agriculture and water are sectors that are highly susceptible to the impacts of climate change. Moreover, the livelihoods of a large segment of the population are dependent on these two sectors, which means that adverse impacts to these sectors will bear significant costs to the national economy and exacerbate the vulnerability of a substantial numbers of people in the country.

The figure below is adopted from the NDC implementation roadmap and it highlights some of the major adaptation domains of Bangladesh. While, most of these domains are interdependent on one another and all of these elements are extremely crucial in establishing climate resilience, it can be seen that agriculture and water security are two factors that can potentially affect all other domains.

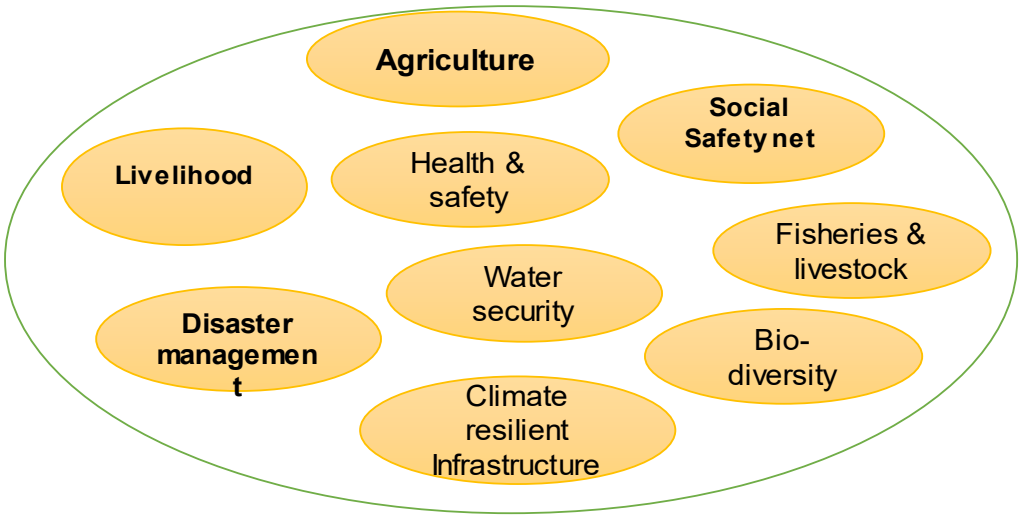

Figure 2: Major adaptation domains of Bangladesh (Source: NDC Implementation Road Map)

The table below (adopted from the Bangladesh NDC Implementation Roadmap), shows that taking climate vulnerabilities into consideration, the Government of Bangladesh has identified the following areas of interventions and adaptation priorities to address the adverse impacts of climate change. The first area highlighted in the table reiterates the importance of agriculture sector and the issue of water security to ensure climate resilience in Bangladesh.

Key Areas to address adverse impacts of climate change	
1	Food security, livelihood and health protection (including water security)
2	Comprehensive disaster management
3	Coastal Zone Management including salinity intrusion control
4	Flood control and erosion protection
5	Building Climate Resilient Infrastructure
6	Increased rural electrification
7	Enhanced urban resilience
8	Increasing resilience of vulnerable groups
9	Development of climate resilient cropping systems
10	Development of surveillance systems for existing and new disease risks
11	Ecosystem based adaptation (including forestry co-management)
12	Community based conservation of wetlands and coastal areas
13	Implementing drinking water and sanitation programmes in areas (e.g., coastal areas, flood- and droughts-prone areas) at risk from climate change
14	Policy and institutional capacity building

Table 1: Key areas identified in the NDC Roadmap for climate action

Considering the dense population of Bangladesh arable land has always been scarce, making food security a considerable challenge. In addition agriculture also remains as one the largest employers in the country, around 43 percent of the labour force is directly employed in agriculture and around 41 percent of the population depends on agriculture for their livelihood either directly or indirectly (UNFCCC, 2018). This sector is highly sensitive to climate extremities. Future changes in climate patterns especially in regard to temperature and precipitation, as predicted for Bangladesh, will increase the frequent number and magnitude of possible floods and droughts and further increase the vulnerability of the agriculture sector. Bangladesh's NDC implementation roadmap mentions that while Bangladesh has made significant progress in regard to agriculture in the past four decades, these gains could easily be threatened by climate and associated extreme events as well as slow on set changes such as salinity intrusion in coastal areas. This is also supported by the 7th FYP, where it mentions that the Comprehensive Disaster Management Programme (CDMP) and other analyses done at the Climate Change Cell of the Department of Environment suggest that 10-15 percent land of the country will be inundated due to sea level rise of 45 cm by 2050. In Bangladesh agriculture is highly dependent on land and natural resources; therefore, it is essential to take measures against a changing climate. The document also states that new policy options and actions should ensure that cutting edge technologies are embedded in integrated farming options, and should provide diversification, farmer market links and post- harvest loss and value addition ensuring stimulus for farmers' income.

The water sector in Bangladesh is also significantly vulnerable to the impacts of climate change. Scientifically, increases in GHG emissions will cause increases in temperature, evaporation and precipitation. Due to increased evaporation, more water vapour will be available in the atmosphere, which will change the moisture content in the soil. Eventually this process will affect surface run-off and groundwater recharge. The water sector in Bangladesh will be highly vulnerable to the changes in climatic parameters. Human interventions in the river basins may lead to further complexity. According to present calculations future rates of sea-level rise are expected to increase coastal flooding, erosion, and saltwater intrusion into surface and ground waters (IPCC, 2013). This will lead to changes in weather patterns at different times, for example monsoon onset dates could be shifted to earlier dates and the season could continue for a prolonged period of time, causing longer flooding season in Bangladesh. Additionally, increase in temperature and higher rates of soil moisture loss could lead to longer and higher impact droughts in the country. The Bangladesh NDC implementation roadmap confirms the vulnerability of the water sector to a changing climate.

It can be seen from the above discussion that agriculture and water are key areas of importance when it comes to the climate change. The government will continue to invest in adaptation projects tailored for building resiliency of these sectors, in order to ensure food security and livelihood security. Therefore, it is important to monitor and evaluate the adaptation initiatives for these sectors and understand whether communities are truly adapting to the impacts climate change

4.2. National Stakeholder Consultation

In addition, the national consultation workshop held under the ICAT-A project in Dhaka, Bangladesh on the 7th February 2019, invited representatives of a diverse stakeholder group working on issues related to climate change, climate change adaptation and monitoring and evaluation of development interventions. A survey conducted during the workshop aimed to understand which priority sectors should be given focus for this project. The results of the survey are presented below:

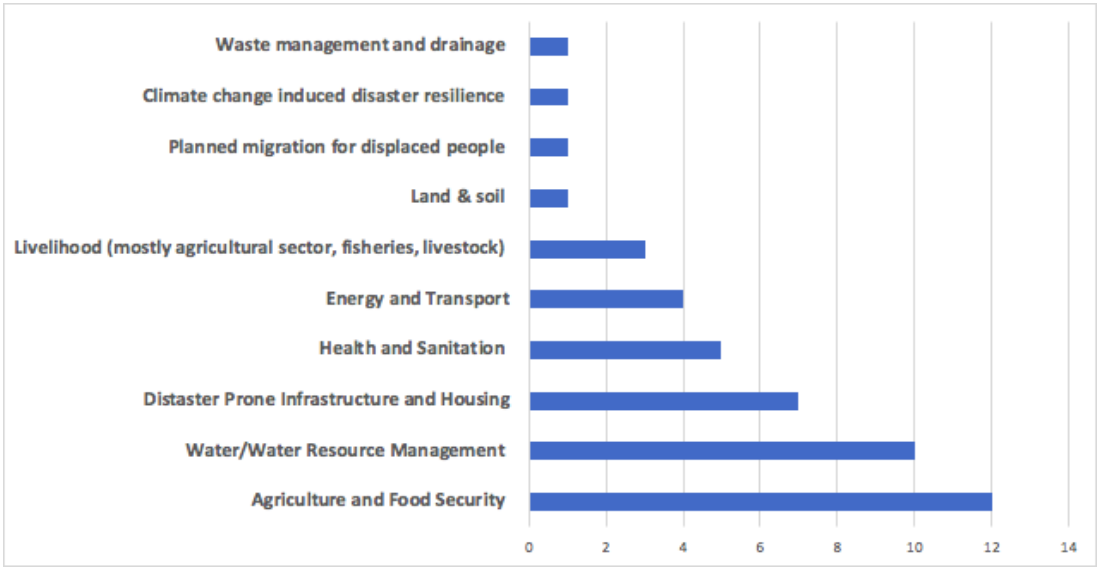

Figure 3: Sector wise priority for M&E of adaptation projects as determined by participants from the ICAT-A national consultation workshop held in Dhaka, Bangladesh in February (2019)

Survey results suggest that most participants also identified agriculture and food security, as well as water and water resource management as key sectors for the Bangladesh case study of the ICAT-A project. This to a degree validates the findings obtained from reviewing the available literature, consisting mainly of reports and national policy documents.

5. Gaps and Limitations

It is widely understood that in order for adaptation projects to be a success, it is essential to monitor and evaluate how the implemented climate action impacts the target areas and builds resiliency against climate change. However, M&E of adaptation is hardly a straightforward process and while Bangladesh is beginning to acknowledge its need there are many gaps and limitations that have to be addressed in order to successfully track adaptation.

Under the scope of the ICAT-A project, the main focus will be to understand the M&E of adaptation projects under the water and agriculture sector in Bangladesh. While the project will help illustrate a detailed account of the M&E needs and requirements within these two sectors, the following section aims to discuss some of the more general gaps and limitations that are standing in the way of successfully implementing M&E measures for climate change adaptation projects. These points, while more general, are also applicable for adaptation projects within water and agriculture sectors.

The following gaps and limitations have been identified on the basis of desk based research as well as ad hoc consultations following a guided checklist/questionnaire with key experts working on climate change and M&E within the country.

There are many factors that complicate the process of M&E of adaptation projects. This section explores some of these challenges as well as their drivers.

5.1. Difficulty in identification of climate change adaptation projects

Globally, as well as nationally in Bangladesh, there remains contention regarding what constitutes a climate change adaptation intervention. While projects undertaken by the BCCTF can be exclusively considered as climate change interventions, development projects often have adaptation components, however defining the additionality element within them continues to be difficult.

Each year, the Government of Bangladesh identifies a set of projects across a range of sectors to be implemented under the Annual Development Programme (ADP), to accomplish the different development programmes, policies and investments laid out in the national government's five-year plans (FYP). While there are a number of projects that are focused on climate change adaptation, there is no sub-section within the ADP highlighting projects specifically targeting climate change.

This lack of a proper database and set guidelines to help identify adaptation projects makes it difficult to understand the number and types of climate change adaptation projects being implemented at different levels in Bangladesh. There is no commonly agreed upon criteria for defining climate change projects in Bangladesh. Among implementers, there also remains inadequate understanding on what constitutes

adaptation and the characteristics distinguishing business-as-usual (BAU) development interventions from climate change adaptation interventions. This can attributed to the difficulty in establishing linkages between climate change risks and expected projects outcomes and impacts.

Absence of this information also make it difficult to monitor and evaluate whether the projects implemented have been successful in reducing vulnerability and building resilience of targeted population against the forecasted impacts of climate change.

5.2. Limited capacity of relevant stakeholders

Climate change adaptation action in Bangladesh, due to its cross-cutting and cross-sectoral nature, encompasses an extensive group of stakeholders ranging from the public sector to the private sector and across different scales.

However, there remains a lack of technical and institutional capacity to mainstream climate change adaptation amongst these stakeholders, particularly at the local level. Capacity constraints include technical inadequacies including lack of data collection and management skills among personnel as well as unavailability of necessary equipment. Personnel often possess low levels of knowledge and understanding on climate change adaptation and are not sufficiently trained on M&E tools and approaches. Capacity related constraints also include low levels of awareness among on the need and importance of M&E of adaptation and limited understanding on the systematic linkages between budgets, programmes plans and outcome indicators.

5.3. Challenges with quality and quantity of data

Considering that establishing M&E frameworks for adaptation projects require setting of indicators and targets, there is a need for having a large repository of accessible and comprehensible data.

While there are gaps in data sets that need to be addressed, discussions with various stakeholders working in the area of data management in Bangladesh revealed that it is not always a case of missing data, sometimes the concern lies in the quality and accessibility of the data. The already existing data often fails to be consistent in its formatting style and contains errors, which make it difficult to use for the purposes of analysis. Set classification of units and terminologies is required for improving the quality of data. This results in a lack of uniform baseline information. This problem is exacerbated by lack of Management Information Systems (MIS) for collection, storage and retrieval of data.

Another issue which adds to the complexity is the ownership of the data. Different data sets are owned by different agencies and there is no set format for collecting and processing the data. This often leads to different baseline values being followed by different institutes, without consistency in baseline data on all aspects of the adaptation projects, it will be difficult to understand the changes brought by the project.

Furthermore, since data is considered to be a valuable asset, the organizations that have collected different sets of data for their own agenda are often reluctant to share the data sets they own with the wider community. There is no set rule/guideline for providing acknowledgement when using someone else's data, which makes organisations unwilling to share their data with others.

There is no set mandate or platform for data sharing. This means it is difficult to know what data already exists and who owns this data. Without this knowledge it is not possible to utilise the existing data and it runs the risk of duplicating the collection of similar sets of data by different agencies- which results in inefficient use of limited resources.

5.4. Inadequate coordination amongst stakeholders

Adaptation encompasses a wide variety of actors at different levels – across ministries, and between public, private, and development sectors. Better coordination amongst different stakeholders is crucial for developing a successful M&E framework for climate change adaptation projects.

However, at present, organizations and actors responsible for implementing climate change adaptation projects and also in charge of ensuring effectiveness and better reporting of adaptation tend to work in silos. There is little coordination in terms of planning as well as knowledge and data sharing, especially amongst public sector agencies.

Consultations with experts revealed that implementing organizations, especially those that are not in the public sector, often employ their own templates for conducting M&E of their projects and programmes. Even within the public sector, the BCCT employs their own monitoring framework, where ADP projects are evaluated against a separate framework established by the IMED. There is little coherence between the two.

Having a generalised M&E framework with inputs from a variety of entities holding different expertise would be beneficial to ensuring uniform assessment of the effectiveness of climate change adaptation interventions in the country, however at present there is no such practice. In regard to the above mentioned concerns regarding data availability, different organisations have ownership of different data sets, and improved coordination amongst these agencies will help data be more accessible for all parties.

Additionally, development of suitable indicators for tracking adaptation progress would need active involvement from all relevant stakeholders. In order to ensure that the community is being able to voice what aspects of the project works and what aspects do not work, it is important for local level participation when designing indicators for monitoring adaptation. An active platform for stakeholders to communicate their inputs and concerns is perhaps necessary to advance this process.

5.5. Culture of low priority for M&E

Another issue of concern is the low priority culture that exists in Bangladesh in regard to M&E of climate change adaptation. Since there is a lack of communication amongst the different bodies working on M&E of adaptation, the importance of the issue is not highlighted enough. There continues to be negative perceptions surrounding M&E, particularly among the public sector and it is generally viewed as a means for error checking and a merely as a tool for ensuring outward accountability leading to results being manipulated to fulfil reporting needs. The opportunity M&E provides for learning and improving implementation effectiveness is often overlooked. This results in low levels of interest and involvement in assessment and reporting processes.

6. Way Forward

The ICAT-A project aims to address some of these gaps and limitations within the existing status of M&E for adaptation. The overall outcome of the project is to enhance the capacity of the project partner countries to track and measure adaptation gaps on a national level and to increase the level of transparency within countries to report under the Paris Agreement.

The specific objectives and activities planned by the ICAT-A project are completely in line with Bangladesh's needs for improving its efforts for tracking adaptation efforts. The project will also allow better management of the limited resources available to employ effective climate actions for building the resilience of its people against some of the inevitable adversities of a changing climate. Some of the activities under the project, which can contribute include the following.

6.1. Development of tools and guidance documents to increase the transparency of monitoring, reporting and evaluating adaptation policies and measures

As referred to in the gaps and limitations section, there remains contention regarding the additionality of adaptation and elements that distinguish adaptation projects from business-as-usual development projects. There has to be consensus on this among national level actors involved in the formulation and implementation of climate change adaptation interventions in the country, especially within the identified priority sectors of water and agriculture. The definitions and terminologies have to be commonly agreed upon by the key stakeholders and conveners when climate actions are discussed and initiated.

Climate change is a cross cutting issue likely to affect all sectors within the country, as such initiatives to help adapt to climate change will also vary in its nature. Due to the diverse range of projects that can be considered as adaptation projects it is difficult to measure adaptation with a generic M&E framework. The scale, objective, location and type of projects for adapting to climate change will have little in common, except the common agenda of reducing vulnerability and building resilience against a changing climate. Therefore, it is essential to develop guidelines and indicators that can help track adaptation progress in the country and evaluate if climate change projects have met its goal of reducing vulnerability of the target people.

This is an important field of work for a climate vulnerable country like Bangladesh, yet very little has been done to formulate a general set of guidelines that can be used for a diverse range of adaptation projects. In line with this need, one of the main objectives of the ICAT-A Bangladesh case study is to work on tracking adaptation progress within the water and agriculture sector. The project aims to cater to this pressing need by producing a guidance document outlining a set of criteria and indicators that will:

- Identify the adaptation components within climate change and development projects under the water and agriculture sector.
- Assess the effectiveness of adaptation projects under the water and agriculture sectors in building climate resiliency.

Building on the first point, one of the key agendas of the Advisory Committee and Working Committee meetings under the ICAT-A project is to discuss these additionalities that distinguish climate change adaptation projects and develop key indicators and definitions that will help identify the element of additionality that makes a project specific to climate change.

Secondly, in order to conduct M&E of adaptation projects and assess their effectiveness, a set of guiding criteria and indicators will also be developed under the project, particularly for the water and agriculture. The indicator set will draw from a series of M&E frameworks that are already being applied in Bangladesh, this includes the IMED framework and BCCT M&E frameworks. In addition the indicators will also draw inspiration from the BCCSAP thematic areas and the targets and indicators developed under goal 2 (Zero Hunger), goal 6 (Clean water and Sanitation) and goal 13 (Climate Action) of the SDGs. The indicators will be developed in close consultation with relevant stakeholders and experts in the country via the working group meetings as well as a multilogue learning and sharing platform, where stakeholders can share their expertise and experiences. In order to ensure that the document is co-produced by all, in addition to relevant stakeholders, which includes policy makers, academics, project implementers and donors, the project will also consult field level project staff and target beneficiaries when needed.

To test the validity and applicability of the guidance document, defined criteria and indicators will be tested against a set of already completed projects within the water and agriculture sector will comprise of a mix of projects implemented by the BCCT, from the ADP as well as those undertaken by non-public sector agencies. It is suggested to include a diverse range of projects to cover a broad range in terms of size, number of beneficiaries, political will, geography etc. These can then be assessed against the established indicators for the following sectors. The process of project selection will be guided by the Advisory Committee and further filtered through advice from the Working Committee.

The aim would be to check whether the defined criteria and indicators can be successfully applied to underscore the additionality component of adaptation within these projects and also to assess their effectiveness in reducing vulnerabilities and increasing resilience of targeted populations. Once the document is tested, further consultations with stakeholder groups will be undertaken for incorporating their feedback and further refining the final product. W question

6.2. Addressing capacity needs of relevant actors for assessment and reporting on transparency of adaptation actions across scales

To address prevalent capacity gaps and challenges faced by relevant national stakeholders for better assessment and reporting on transparency of adaptation actions in Bangladesh, it would be essential to understand their present capacity status in regard to M&E of climate change adaptation in the country, and also to assess specific capacity building needs of these entities.

For the purpose of establishing a framework for enhanced M&E of adaptation interventions, particularly within the water and agriculture sectors in the country, stakeholders can be classified into three broad clusters – i) data group, ii) climate change knowledge brokers group and iii) implementation group. These clusters will consist of actors and stakeholders across different scales, representing the national, regional

as well as the local level, with particular emphasis on those engaged in the water and agriculture sector in the country. Each of these groups will require targeted, demand-driven capacity building interventions.

To accomplish the above, a comprehensive stakeholders' capacity building needs assessment tool will be developed under the ICAT-A project. The tool will entail a guided survey for assessing the baseline capacity of the different stakeholders across four institutional domains – i) Aspirations and Strategy, ii) Human Resources, iii) Systems and Infrastructure and iv) Organizational Assets. The domains will comprise of sub-domains to understand various facets of institutional capacity, such as organizational M&E approaches, financial allocation towards M&E, technical capacity of staff, knowledge management procedures, local community presence and policy influence, amongst others.

The survey will be complemented by a thorough guidance manual for those administering the tool, which will present the theoretical framework for the assessment as well as detailed instructions for carrying out the assessment. The idea behind this is to ensure sustainability of the practice beyond the timeline of the project; so that such needs assessment exercises can become a continuous practice for organizations to employ themselves in the future without assistance from the ICAT-A initiative.

These assessments will be undertaken through extensive bilateral meetings between the ICAT-A team and key stakeholders, where discussions will revolve around understanding the drivers of reported capacity gaps and identifying strategies and approaches that can be employed by the ICAT-A initiative to address these capacity gaps. Discussions during these meeting will focus on domains which are most relevant to the type of stakeholder being assessed. This ensures a broad range of information which covers the context of the different entities as well as a detailed analysis of issues that are most relevant for the different units.

Due to the varied and cross-sectoral nature of climate change planning and action, capacity building in this regard would need to be targeted at a wide range of actors from the public sector (all the ministries), as well as the private sector (including national and international NGOs). BCCT, IMED and the Bangladesh Bureau of Statistics (BBS) have been identified following ad-hoc consultations with national experts, as three primary institutions with a substantial role to play in establishing a framework for enhanced M&E of climate change adaptation in Bangladesh. Their capacity needs in particular will need to be assessed in an elaborate manner.

BCCT is a key figure in charge of most activities related to climate change adaptation, while BCCT has a mandate to provide training to other institutions to spread and enhance knowledge on climate change, BCCT does not have the necessary resources and capacity to do so. In addition, the other two entities that need to be trained include BBS, who is in charge of managing a large repository of data which is essential for developing any indicators or monitoring progress on social, economic and environmental fronts. Training BBS about issues of climate change and M&E of climate change adaptation will help them understand the context of climate data better, so that more relevant and useful data can be collected and processed in the future. IMED is the other entity that could benefit from training. IMED is already engaged in developing monitoring and evaluation frameworks for development of the country, under the mandate of the 7FYP, the M&E frameworks developed by IMED need to go beyond fiscal records and should cover issues such as effectiveness of the project in creating targeted impacts. Knowledge on

climate change could help IMED design indicators and M&E frameworks that can be tailored for climate change adaptation projects in Bangladesh.

Within the scope of the project, it would be useful to gear capacity building interventions towards a select group of personnel from BCCT, IMED and BBS. Capacity building will entail enhancing their knowledge of climate change adaptation and also training them on different M&E tools, approaches and best practices. There will be a strong focus on developing institutional memory so that change of personnel, a common phenomenon within public sector agencies, does not lead to sudden capacity loss. Furthermore, these institutions often employ staff at the local level who work in close collaboration with grassroots, community–based organizations. Understanding their capacity needs and appropriately addressing them, would also be crucial to ensure capacity building seeps through strata and reach those closely engaged in data generation and tracking project implementation.

Following completion of the capacity needs assessment survey with different stakeholders, results and findings from the exercise will be analyzed against the theoretical framework outlined in the guidance manual. The results will be presented to the Advisory Committee as well as the Working Group to solicit further inputs into developing appropriate strategies for addressing capacity gaps amongst different stakeholders. At the end of the ongoing phase of the project, a synthesis report delineating the capacity building needs of stakeholders relevant for M&E of climate change adaptation in Bangladesh will be produced.

6.3. Enhanced coordination and engagement among relevant stakeholders

Establishing a commonly agreed upon framework and approach for effective M&E of adaptation interventions in Bangladesh would require substantial coordination and engagement on the issue among relevant national stakeholders. In this view, the ICAT-A Bangladesh team has taken the initiative to establish an Advisory Committee as well as a Working Committee, consisting of stakeholders representing the government, academia, practitioners and experts, who would provide guidance on different activities and processes associated with implementation of the ICAT-A initiative.

The two committees are expected to have separate and distinct functions. The Advisory Committee will consist of distinguished representatives from key stakeholder organizations, specifically those in leadership positions and with decision-making authority. Their role would be to provide overall guidance to the project team, validate project approaches and also to facilitate decision-making and ownership from the national government. The Advisory Committee would meet bi-monthly and commonly agreed upon decisions regarding project implementation will be established in these meetings for advancing forward. The Working Committee on the other hand, will comprise of representatives nominated by the Advisory Committee members from within their respective organizations. These are expected to be personnel with notable experience and knowledge on both climate change adaptation as well as M&E frameworks in Bangladesh. This group will work closely with the project team and meet on a more frequent basis. Their role would be to provide technical assistance for accomplishing the different objectives of the project.

The Department of Environment (DoE) under the Ministry of Environment, Forests and Climate Change, serves as the primary convening body for climate change in Bangladesh. The DoE is deeply embedded in the global climate change negotiations as it is the Bangladesh focal point for the UNFCCC processes. Therefore, the Advisory Committee should be chaired by a representative from the DoE. Representatives from other key public sector agencies such as BBS and IMED will also have distinguished functions and roles within the committee. Active involvement of these entities with the project will help promote commitment from and also incentivize both public sector and private sector actors to actively engage in and contribute to the process.

Enhanced coordination and engagement among stakeholders is also essential for addressing the issue of data quality and accessibility for undertaking M&E of adaptation measures in Bangladesh. As referred to in the gaps and limitations section, while availability of relevant data is no longer an issue, different agencies have ownership of different data sets.

To help address the above issue, different agencies within the data management sector will be brought together under the umbrella of both the Advisory Committee and the Working Committee, with the aim of promoting dialogue and communication amongst these agencies. This will serve two major objectives. First, it would help initiate the process of establishing a common set of guidelines that can be used for different facets of data management i.e. collection, processing, analysis, reporting as well as sharing. Second, this will also help identify the various agencies that have possession of various sets of data in the country. Within the scope of the current phase, an expected output out of this process would be a data inventory document outlining what data exists where, particularly within the water and agriculture sector in the country.

The above platform will also aim to establish BBS as the data custodian in charge of consolidating the different data sets relevant to M&E of climate change adaptation interventions within the focus sectors of the project. Success of such a platform will incentivize future efforts for forming a more comprehensive data hub, encompassing a wider range of sectors. Moving ahead, the custodian will not only organize the existing data sets, enabling full utilization of current resources and avoiding duplication but will also create a platform of engagement for data producers, who can have their data ownership recognized more publicly. This is expected to lead more willingness when it comes to data sharing.

In alignment with the ICAT-A's efforts, the Government of Bangladesh has recently formed the National Data Coordination Committee (NDCC) to help coordinate different data providing agencies in the country with the national statistics agency of BBS. The NDCC aims to establish guidelines for SDGs data generation and international reporting and also enhance capacities of national statistics offices. The ICAT-A team will strive to engage this committee in the process of improving data coordination and coherence in Bangladesh.

To ensure progress made by ICAT-A towards improved stakeholder coordination, sustains beyond the current phase, a multilogue platform consisting of a wider range of stakeholders will be established in the later stages of the project. This multilogue platform will serve to promote continuous learning and knowledge sharing on the issue of adaptation M&E as well as data coordination in Bangladesh.

6.4. Formalizing engagement with national government and promoting national and global outreach of the programme

Ensuring buy-in from the government is central for the ICAT-A project. A No-Objection Certificate (NOC) will thus be ensured from the Department of Environment (DoE). Having a NOC from the government will facilitate active participation and engagement from other public sector agencies in the country and also serve as endorsement in major international platforms (e.g. UNFCCC Conference of Parties) – both factors vital for succession of the overarching project goals.

To further formalize engagement with DoE, a Memorandum of Understanding (MoU) will also be signed with them. MoUs will also be signed with other key agencies such as BCCT, IMED and BBS. It is expected that bringing these stakeholders under the umbrella of ICAT-A will help establish national ownership of the initiative and promote commitment from other relevant actors on the issue.

Promoting national outreach of the ICAT-A project would also be critical for ensuring collective ownership of the initiative by the different, associated stakeholder groups in the country. This can be achieved via sharing about the ICAT-A project across different knowledge sharing platforms on climate change in Bangladesh e.g. seminars, workshops, policy dialogues etc. A series of newspaper articles highlighting the project's goals, objectives and approaches will also be produced for further publicizing the initiative.

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