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Ministry of Environment, Forests and Climate Change (MoEFCC)
Government of the People's Republic of Bangladesh

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বাংলাদেশ জলবায়ু পরিবর্তন ট্রাস্ট ফান্ডের অর্থায়নে বিভিন্ন সংস্থা কর্তৃক বাস্তবায়িত ৪৫টি প্রকল্প মূল্যায়ন

Evaluation of 45 Projects Implemented by Different Agencies and Funded by BCCT

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A Report on Evaluation of 45 Projects Implemented by Different Agencies and Funded by BCCT

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ACRONYMS AND ABBREVIATIONS

ADP	: Annual Development Programme
AEZ	: Agro-Ecological Zones
APA	: Annual Performance Agreement
API	: Application Programming Interface
AFOLU	: Agriculture, Forestry and Other Land Use
BADC	: Bangladesh Agricultural Development Corporation
BAU	: Business as Usual
BARI	: Bangladesh Agricultural Research Institute
BCCRF	: Bangladesh Climate Change Resilience Fund
BCCSAP	: Bangladesh Climate Change Strategy and Action Plan
BCCT	: Bangladesh Climate Change Trust
BCSIR	: Bangladesh Center for Scientific and Industrial Research
BDRCS	: Bangladesh Red Crescent Society
BDT	: Bangladeshi Taka
BFD	: Bangladesh Forest Department
BINA	: Bangladesh Institute for Nuclear Agriculture
BoT	: Board of Trustee
BREB	: Bangladesh Rural Electrification Board
BSMRAU	: Bangabandhu Sheikh Mujibur Rahman Agricultural University
BWDB	: Bangladesh Water Development Board
CAPI	: Computer-Aided Project Information
CC	: Climate Change
CCA	: Climate Change Adaptation
CCTF	: Climate Change Trust Fund
CDM	: Clean Development Mechanism
CDSP	: Char Development and Settlement Project
CEGIS	: Centre for Environmental and Geographic Information Services
CER	: Certified Emission Reduction
CFF	: Climate Fiscal Framework
CHT	: Chattogram Hill Tracts
CIRDAP	: Centre on Integrated Rural Development for Asia and the Pacific
CPEIR	: Climate Public Expenditure and Institutional Review
CPP	: Cyclone Preparedness Programme
CRI	: Climate Risk Index
DAE	: Department of Agricultural Extension
DCT	: Data Collection Tool
DDM	: Department of Disaster Management
DDO	: Drawing-Disbursing Officer
DoE	: Department of Environment
DPD	: Deputy Project Director
DPHE	: Department of Public Health Engineering
DPM	: Direct Procurement Method
DPP	: Development Project Proposal
DRR	: Disaster Risk Reduction
DTWs	: National e-Government Procurement

EIA	: Environmental Impact Assessment
EoI	: Expressions of Interest
FAO	: Food and Agriculture Organization
FD	: Forest Department
FF	: Field Facilitator
FGD	: Focus Group Discussion
FS	: Field Supervisor
FY	: Financial Year
GHG	: Green House Gas
GIS	: Geographic Information System
GoB	: Government of Bangladesh
GPS	: Global Positioning System
GPS	: Global Positioning System
HOPE	: Head of the Procurement Entity
IBFCR	: Inclusive Budgeting and Financing for Climate Resilience
ICT	: Information Communication Technology
IDI	: In-Depth Interview
IFRC	: International Federation of Red Cross and Red Crescent Societies
IFRD	: Institute of Fuel Research and Development
IGA	: Income Generating Activities
IPPU	: Industrial Processes and Product Use
IMED	: Implementation Monitoring and Evaluation Division
IPCC	: Intergovernmental Panel on Climate Change
JV	: Joint Venture
KII	: Key Informant Interview
LGED	: Local Government Engineering Department
LGI	: Local Government Institutions
LTM	: Limited Tendering Method
MCP	: Mujib Climate Prosperity Plan 2022-2041
M&E	: Monitoring and Evaluation
MoA	: Ministry of Agriculture
MoCHTA	: Ministry of Chittagong Hill Tracts Affairs
MoD	: Ministry of Defence (MoD)
MoEFCC	: Ministry of Environment, Forest, and Climate Change
MLGRDC	: Ministry of Local Government, Rural Development and Cooperatives
MoPEMR	: Ministry of Power, Energy and Mineral Resources
MTBF	: Medium-Term Budgetary Framework
NAP	: National Adaptation Plan
NDC	: Nationally Determined Contribution
NGOs	: Non-Government Organization
O&M	: Operation and Maintenance
ODK	: Open Data Kit
OECD	: The Organization for Economic Cooperation and Development
OSTETM	: One Stage Two Envelope Tendering Method
OTM	: Open Tendering Method
P. SL	: Project Serial

PBS	: Palli Bidyut Samity
PCM	: Project Cycle Management
PCR	: Project Completion Report
PD	: Project Director
PDBF	: Palli Daridra Bimochon Foundation
PFM	: Public Financial Management
PIC	: Project Implementation Committee
PIU	: Project Implementation Unit
PMID	: Participatory Management Initiative for Development
PMU	: Project Management Unit
PO&PV	: Physical Observation and Physical Verification
PPA	: Public Procurement Act
PPCCTFs	: Project Proposal for Climate Change Trust Fund
PPR	: Public Procurement Rule
PSC	: Project Steering Committee
QBS	: Qualifications-Based Selection
QCO	: Quality Control Officer
RCC	: Rajshahi City Corporation
RCC	: Reinforced Concrete Cement
RDPP	: Revised Development Project Proposal
REB	: Rural Electrification Board
RFQ	: Request for Quotation
RQ	: Research Question
RTI	: Right to Information
SDG	: Sustainable Development Goal
SES	: Solar Energy System
SMART	: Specific, Measurable, Attainable, Realistic and Time bound
SND	: Special Noticed Deposit
SPSS	: Statistical Package for the Social Sciences
SQS	: Semi-Structured Questionnaire
SWOT	: Strengths, Weaknesses, Opportunities and Threats
ToR	: Terms of Reference
UNDP	: United Nations Development Programme
UNO	: Upazila Nirbahi Officer
UNFCCC	: United Nations Framework Convention on Climate Change
VAT	: Value Added Tax
VER	: Verified Emission Reduction
WMCA	: Water Management Cooperative Association

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EXECUTIVE SUMMARY

Bangladesh is widely recognized to be one of the most vulnerable countries due to climate change impacts. In the world, Bangladesh ranked¹ 7th among the most affected countries from 2000–2019 due to the impacts of extreme weather events² (German watch, 2021). It experiences frequent natural disasters which cause loss of life, damage of infrastructure, economic assets, and adversely impact on lives and livelihoods. To address these vulnerabilities and reduce the GHG gas emissions in the atmosphere (i.e., mitigation), Bangladesh made a strategic document, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2009. Bangladesh enacted the Bangladesh Climate Change Trust Act and established a trust (the Bangladesh Climate Change Trust, BCCT) with its own revenue budget in 2010 to implement BCCSAP. Through this fund, BCCT has already implemented around 800 projects. This report entails the consolidated evaluation findings of BCCT, which financed and implemented 45 projects (specified by BCCT itself through a call for evaluation) by 19 different government agencies (some agencies implemented more than one project) during the period from 2010 to 2017.

The evaluation findings are consolidated and presented in two forms: one is clustered into the thematic areas of the BCCSAP 2009, and the other is as summary of individual project findings. Following are the six thematic pillars (i.e., areas) of the BCCSAP, 2009: Food Security, Social Protection and Health, Comprehensive Disaster Management, Infrastructure, Research and Knowledge Management, Mitigation and Low Carbon Development, and Capacity Building and Institutional Strengthening.

The evaluation was primarily aimed at reviewing and describing the progress in achieving project objectives and provide opinions on whether the planned activities were making the projects effective. Assessing, analyzing the relevance and effectiveness of the projects implemented, the impacts created, and the strengths, weaknesses, opportunities, and threats of the projects implemented so that the formulation of future projects could be leveraged from these evaluation findings, especially from lessons learned, and the implementation of the projects further undertaken could be done in a more effective and efficient manner.

The overall approach of the evaluation study was participatory, consultative, and feedback oriented. It comprises a mixed methodology using quantitative and qualitative research methods and data collection tools. The projects likely to have an impact at the community level were evaluated utilizing only qualitative methods, and the remaining other projects likely to have a direct impact at the household level were evaluated utilizing a mix of quantitative and qualitative methodologies. Quantitative data collection was done using – A semi-structured household-based questionnaire survey, and Literature review, i.e., desk review of project-related documents (to collect secondary data, common for both qualitative and quantitative). While the set of qualitative data collection tools and instruments used were: Key Informant Interview (KII), Focus Group Discussion (FGD), Physical observation and verification of project infrastructure (when applicable), Case studies (using in-depth interviewing, e.g., IDI), Consultative stakeholder meetings/workshops (i.e., project officials, staff, local level stakeholders, and target beneficiaries) for SWOT analysis, Validation workshops with BCCT and with other national-level stakeholders.

The Government of Bangladesh has been trying to integrate climate change issues into the development strategies and programmes/projects to achieve sustainable development for the country. This brief description covers the nature and extent of integrating climate change concerns into the national and sectoral policy, acts, rules, plan and strategy. In doing so, the following government and related documents are considered: Bangladesh Climate Change Strategy and Action Plan 2009 and updated version, 2024 (draft), National

¹ The Global Climate Risk Index (CRI), developed by German-Watch, 2021

² Meteorological events such as tropical storms, winter storms, severe weather, hail, tornadoes, and local storms; hydrological events such as storm surges, river floods, flash floods, and mass movement (landslides); climatological events such as cold-wave/heat wave, wildfires, and droughts

Adaptation Plan (NAP), Nationally Determined Contribution (NDC), Mujib Climate Prosperity Plan (MCP), Climate Change Trust Act 2010, Climate Change Trust Fund Policy 2010, Bangladesh Climate Change Trust Guidelines/Principal (*Nitimala*) 2012 and other national policy documents related to water, forest and agriculture are also important for addressing the issues of climate change.

Bangladesh Climate Change Strategy and Action Plan-2009: The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) is a strategic document built upon the National Adaptation Programme of Action (2005 and 2009). The update version of BCCSAP (draft) was made considering the NAP, NDC and MCP. The climate change strategy and action plan of Bangladesh is a part of the overall development strategy of the country. The climate change constraints and opportunities are being integrated in to the overall plan and programme involving all sectors and processes for economic and social development. Bangladesh Government plans to take 44 programmes over the short, medium and long term within six strategic areas. The updated BCCSAP has 11 thematic areas and 52 programmes considering short, medium and long term

National Adaptation Plan (NAP): Bangladesh is going to implement its adaptation related activities, projects and programmes by following the National Adaptation Plan (NAP) -2023-2050. The NAP primarily encompasses eight distinct sectors: water resources; disaster, social safety and security; agriculture; fisheries, aquaculture and livestock; urban areas; ecosystems, wetlands and biodiversity; policies and institutions; and capacity development, research and innovation. Infrastructure, water and sanitation (WASH), health, gender, youth, the elderly, persons with disabilities, ethnic communities and other socially disadvantaged groups, and the private sector are cross-cutting issues and part of identifying appropriate strategies aligned with national aspirations. The key risks and vulnerabilities of climate change in the eight sectors will pose disproportionate and severe impacts on Bangladesh's resources, water and food security, infrastructure, livelihoods, ecosystem health and biodiversity. The number of internal climate migrants may reach 19.9 million by 2050, comprising half of those in the entire South Asian region. The current rate of annual loss to gross domestic product (GDP) of approximately 1.3 percent due to climate-induced disasters may rise to 2 percent by 2050 and over 9 percent by 2100 under extreme scenarios. With an underlying objective of reducing risks and vulnerabilities to climate change impacts, the NAP envisions building a climate-resilient nation through effective adaptation strategies that foster a robust society and ecosystems and stimulate sustainable economic growth. Bangladesh needs 230 billion USD to implement the NAP up to 2050

Nationally Determined Contribution (NDC): Bangladesh has also committed to reduce greenhouse gas emissions by following its updated nationally determined contribution (NDC). Bangladesh submitted its NDC to UNFCCC on 25 September 2015, for three sectors (Power, Industry and Transport). Subsequently, Bangladesh prepared the NDC Implementation Roadmap and Action Plan in 2018. Bangladesh's NDC proposed for 12 million tons (5%) unconditional reduction in GHG emission from Business as Usual (BAU) scenario by 2030 and a further 24 million tons (10%) conditional reduction in GHG emission with support from the international community taking the base year 2011. As part of the global initiative, Bangladesh is updating the NDC incorporating additional sectors following IPCC guidelines. The updated NDC covers Energy, Industrial Processes and Product Use (IPPU), Agriculture, Forestry and other Land use (AFOLU) and Waste. Bangladesh needs 175 billion USD to implement the NDC up to 2030

Mujib Climate Prosperity Plan (MCP): A comprehensive plan created to guide Bangladesh toward a sustainable and low-carbon future is the Mujib Climate Prosperity Plan. It includes a variety of programmes and actions that emphasize economic development while both cutting greenhouse gas emissions and enhancing the nation's capacity to deal with the impacts of climate change. In order to increase the share of renewable energy in Bangladesh's energy mix, the MCP aims to improve the usage of renewable energy sources and energy efficiency measures in the country's energy industry. The implementation of renewable energy sources including solar, wind, and hydroelectric power is one of the specific goals of the strategy. It also stresses the use of energy-efficient technologies in

construction and business. The objective is to employ renewable energy sources much more, with a target of 30% by 2030 and at least 40% by 2041.

Evaluation findings are grouped into six thematic areas of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009. These are as the following:

Thematic Area I: Food Security, Social Protection and Health

The evaluation encompasses 8 (eight) projects under this theme, and of them a single project was implemented by BARI, another project was implemented by DAE, and the rest six – two by each agency – projects were implemented by BADC, DPHE and BWDB. The period of implementation of the projects ranges between May 2010 to December 2019.

The projects implemented – as of the evaluation package – addressed the thematic focuses on the needs of the poorest and most vulnerable groups of the community related to food security, employment, and access to basic services including health. In accordance with the thematic targets, a few awareness raising activities were undertaken towards increasing the community resilience; however, those were mainly focused on agriculture and increased access to safe water supply, not much on fisheries and livestock systems.

About 75% beneficiaries of the project implemented by BARI, 67% beneficiaries of the projects implemented by BADC, 58% beneficiaries of the project implemented by DAE, and 86% beneficiaries of the projects implemented by DPHE, for examples, opined that the projects were highly relevant/useful and effective to the local context and needs of the people. In terms of project benefits, 92% opined that food security has increased for the poor families, 89% mentioned that unused char-lands become sustainable income earning sources for local communities, and 68% said that soil health of char-lands has improved. The DAE project on floating bed vegetable and spices cultivation, as opined by the target beneficiaries, has crafted a revolutionary transformation of agricultural production and practices in the waterlogged areas in southern Bangladesh. About 68% farmers said that by now on vegetables can be cultivated round the year, 47% said farmers are not now sitting idle, and most importantly, 60% farmers opined that food security of the local communities – especially the poor and most vulnerable – has been tremendously increased. The DPHE projects have resulted in a significant increase in accessing to safe water supply – supported by 93% beneficiaries – to climate vulnerable communities in coastal Bangladesh, and this has eventually contributed towards sweeping reduction of the prevalence of waterborne diseases.

These grossly reveal that the projects implemented have conspicuously contributed to increase the resilience of the targeted communities to be protected from climate change impacts. However, in some cases – particularly for agricultural innovation – it was found that farmers themselves took immense interest in carrying forward the initiatives on their own, while there was generally a lack of proper institutional mechanism established for further scaling up.

Thematic Area II: Comprehensive Disaster Management

With the aim of minimizing the loss of lives and property in the coastal-belt community through disseminating early warning signals, rescue sheltering, providing first aid and relief by trained and dedicated volunteers, the only one project was under this theme for the purpose of evaluation. The project was implemented by the Cyclone Preparedness Programme (CPP) in the midst of the year 2013 and 2015. The project's aim was – as found to be – modestly aligned with the thematic targets (of the BCCSAP) of strengthening (a) government's capacity and that of the civil society partners and communities to manage natural disasters, (b) community based adaptation, and (c) early warning systems for cyclone, storm surge and flood to enable more accurate short, medium and long term forecasts.

The evaluation findings portray community responses upon the project interventions and its perceived benefits distinctively positive in general. Specifically, about 88% community people ranked the project highly relevant and effective to the local context and demand, while 11% termed it relevant and effective. Communities are receiving the project benefits through CPP volunteers as – and 87% people perceived that – the capacity of them has significantly increased. Similar group of people perceive that the capacity of seagoing fishermen has also enhanced which have enabled them to cope with natural disasters by themselves. Alongside the capacity of CPP volunteers as well as seagoing fishermen, almost everyone (99%) acknowledge that the early warning systems for cyclone, storm surge and flood have improved. These all-together have enabled the CPP volunteers to effectively operate emergencies during and immediate-post disasters, such as providing early warning, rescuing, relocating/evacuation of survivors i.e., communities at high risk to shelters, and managing overall emergency situations. Such improved capacities of the CPP volunteers and seagoing fishermen – as generally opined by local community people – have been eventually contributing towards reduction of damages and losses of houses, infrastructure, plant resources, domestic pets and animals, and all-importantly human lives.

Sustainability of the project activities, processes and their impacts are ensured through the permanent existence/presence as well as community level engagement of the trained/capacitated CPP Volunteers across the coastal region. However, the project was implemented in five districts only leaving other coastal districts having similar demands.

Thematic Area III: Infrastructure

The largest amount – 23 projects – of which 9 (nine) were implemented by BWDB, 8 (eight) were implemented by LGIs including 8 Pourashavas and 1 City Corporation, 5 (five) were implemented by LGED, and 1 (one) project implemented by DDM were under the evaluation. It is noteworthy to mention that the period of implementation of the projects was in between July 2010 and June 2019. Also, the objectives of the projects were closely aligned with the BCCSAP thematic goal of ensuring infrastructural assets that those are well maintained and fit-for-purpose and urgently put in place to deal with the likely impacts of climate change.

Primarily – as against the thematic targets – the evaluation finds that only 3 out 23 projects were related to repair and rehabilitation of existing infrastructure e.g., coastal embankments, river embankments and urban drainage systems), the most i.e., 20 out 23 projects were planned, designed and constructed as part of urgently needed infrastructure e.g., cyclone shelters, coastal and river embankments, river erosion control works to meet the changing conditions expected with climate change. However, no projects were under the evaluation package which undertook strategic planning of future infrastructure needs, taking into account the likely future patterns of urbanization and socioeconomic development, and the changing hydrology of the country because of climate change.

Explorative to the evaluation findings of the projects, as in general, suggest that the projects implemented were moderate to highly relevant and effective on their purpose. Those were completed – although not in time for most cases, taken several time extensions – but reportedly as were planned and per design of the infrastructural assets. The evaluation findings also revealed that the projects like coastal and river embankments, riverbank erosion protection works, canal excavation and re-excavation were used to serve multiple purposes (for example, canal ex/re-excavation offers flood containment, irrigation as well as riverine transportation facilities and expanded opportunities for local employment etc.) for the local communities – protecting them from the risks of natural disasters like cyclones, storm surges, riverbank erosion, and floods. Urban drainage systems were likely to enhance physical provisions of reducing waterlogging as well as addressed public health issues. Infrastructures repaired and newly built effectively supported local communities to be protected from damages and losses of lives and properties arising from disasters like flooding, and surges. One project that was implemented by DDM offering disaster resilient houses/shelters to the 2013 tornado affected community in Brahmanbaria, for example, have gained immense credentials. About 93% sheltered households were reportedly feeling safe during disaster and 79% of them said that their disaster related anxiety is reduced.

More importantly, almost every household under the project target (99%) ranked the project highly relevant, effective and useful to their needs.

As such the infrastructure projects have bigger gains, there was other side of the coin revealed as well. Most projects – as clearly understood - were undertaken based on crying needs, but taken likely by overlooking the financing constraints of the BCCT. The actual demand for most of the projects were high in terms of technical and financial requirements, but part – bigger or smaller – of those are fulfilled; hence the projects were based on gap financing and thus lost major potentials. There were other issues associated with infrastructural projects revealed as well. Firstly, almost every project – as part of fulfilling the proposal development guideline – outlined their O&M modalities based on departmental revenue sources. The need for O&M for them was obvious, but at the project end, necessary revenues remained unsourced. This leads to almost every project, secondly, to be ended up with no actual O&M of the infrastructure built or repaired; and therefore, mostly left unattended.

Thematic Area IV: Research and Knowledge Management

There were three projects – implemented by three eminent research focused government agencies e.g., BARI, BINA, and BSMRAU – were under evaluation; and those were implemented within a span of period between September 2010 and June 2019. Primarily, the projects were found likely to be a-bit unclear in its purposes to be aligned with the thematic goal of predicting the likely scale and timing of climate change impacts on different sectors of the economy and socioeconomic groups underpinning future investment strategies, and to ensure that Bangladesh is networked into the latest global knowledge on science and best practices. These would have been made evident by proper research documentation, knowledge management and dissemination; instead, the projects were implementation focused, as revealed by the evaluation. Nonetheless, the projects were found modestly successful by developing models of cropping pattern innovations and management and addressing issues of food security and livelihoods in the face of climate change challenges.

Above all the limitations and prevailing scopes, key stakeholders and primary beneficiaries of the projects – in general – opined that the projects were highly relevant to the local contexts i.e., implemented mostly in the areas of waterlogging, and prone to drought and salinity. The project products were grossly innovative in nature, providing highly potential as well as scalable climate tolerant cropping patterns. Specifically, BARI developed drought and salinity tolerant cropping systems, BSMRAU developed salinity tolerant doubled haploid species for local farmers, and BINA conducted nuclear agricultural research – all those have considered impactful on local farmers by providing them with agricultural varieties to withstand disaster risks, and thus are beneficial socioeconomically. However, most projects expected farming communities and the benefits of innovative cropping to entice others to replicate the models but having no such specific plans and institutional set-ups established and operationalization to ensure the sustainability of the projects.

Thematic Area V: Mitigation and Low Carbon Development

There were 9 (nine) projects – of which two implemented by Bangladesh Forest Department (BFD), two implemented by Rural Electrification Board (REB), and single one implemented each by DoE, IFRD, PDBF, Bangladesh Army and Singra Pourashava – were under the evaluation. The projects were found to be aligned with the thematic goal of evolving low carbon development and increasing demand for renewable energy, and thus, contributing to the country's economy over the coming decades.

The projects implemented under this theme – as per the opinions of beneficiaries and key stakeholder - were highly relevant and effective to the local context and community needs. About 92% of people ranked the projects highly useful, and those were effective in terms of addressing the community as well as country needs as those have significantly contributed towards reducing greenhouse gas emission and lowered the likelihood of climate induced disasters. One for example, dragged out from PDBF implemented project, the project

interventions – as 98% opined that - those have ended up with the sufferings of the lack of electricity in the former enclaves, while about 62% opined that now people can enjoy electric and electronic appliances at home which was like a dream for them a few years ago. This has been significant – as part of the IFRD implemented project results – that a total amount of greenhouse gas emission has been reduced from a unit of biogas plant is 15.07 ton per year. However, in a broader sense, quite a few of the projects addressed the need of developing investment portfolio to ensure national energy security and lower greenhouse gas emission, and promoting efficient production, consumption, distribution, and the use of alternative (renewable) energy. Apart, in most cases, due to lack of appropriate monitoring and strong follow-up measures from the line agencies as well as inter-agency coordination, the benefits from the interventions those led to mitigation and low carbon development have been shakenly narrowed by covering the project areas by national grid based electric supply.

Thematic Area VI: Capacity Building and Institutional Strengthening

Only one project titled “Forest Information Generation and Networking System” – which was implemented by BFD - under the evaluation during April 2011 to March 2013. The project was found to be better aligned with the thematic goal of enhancing the capacity of government ministries and agencies; but however, it had likely to have limited scope to address the capacity building of civil society and the private sector along with the government to meet the challenges of climate change and mainstreaming them into development actions.

The project was highly relevant and useful with its purposes, as output of the project to update satellite image-based forest maps of different forest areas was done successfully. However, BFD acknowledged that for proper forest monitoring, these maps need to be updated on a regular basis. Managing forests through developing forest information generation and networking systems (FIG&NS) reportedly have contributed to effective and efficient forest management, and thus it directly benefits the forest dependent communities. Indirectly, the communities are benefitting from the well-managed forests in a multifold of ways – as for example, well-developed and managed forests balances ecosystem and improve environmental condition and which eventually helps people to be capable of adapting climate change. Other than these, the project addressed none of the other thematic targets, and indeed, it is considered not possible to address all the thematic target by only one project.

The overall strengths, weaknesses, opportunities, and threats of the 45 projects implemented (and those are under this evaluation package), as synthesized from the four regional consultation workshops, are as follows:

STRENGTHS : Contemporary as well as emerging climate change issues are addressed; Climate change adaptation is the focused area of project activities as Bangladesh is one of the most vulnerable countries in the world due to climate change impacts; Government agencies and departments step forward to implement projects within the constraints of limited resources to achieve and/or contribute to the achievement of the BCCSAP; Departmental expertise, relevant and expert human resources and their expertise, institutional set up used efficiently, knowledge based institutions are optimally used; BCCT’s role was significant in coordination and creating symbiotic environment to address the issues of climate change adaptation and mitigation; Expertise and experiences of different agencies and ministries are being institutionalized for mainstreaming and integrating climate change induced disaster risk reduction (DRR) and climate change adaptation (CCA) into the activities of the project.

WEAKNESSES: Limited and inadequate funding for designing and undertaking effective and long term project/programme; The structural barriers of the PPCCTF formats and restrictive BCCT policies to recruit sectoral expert; Limited provision for training, orientation, and skill/capacity development and strengthening of key and important personnel of the project; The implementing agencies are utilizing their typical monitoring

tools and guidelines which do not often have scopes of capturing and accommodating climate change issues, given that the projects are aimed to contribute to BCCSAP, and as a result, the projects remain weakly monitored during the implementation, or in other term, the monitoring results do not appropriately serve the interests of BCCT as well as reflect on climate change adaptation and mitigation perspectives; The process-related limitations for project preparation, processing, and submission within the concerned line ministry, and then the review and approval process being undertaken by the BCCT; The projects needing land acquisition before the start of interventions usually face challenges and are sometimes delayed in starting and ending.

OPPORTUNITIES: With proper collaboration and coordination between projects and implementing agencies, more scope can be leveraged to address climate change issues sustainably; The BCCT Act clearly offers opportunities of sourcing foreign aids/funds for accelerated in-country project funding, which is yet not leveraged effectively; Programmatic approach might be more effective than the project based approach; Several low-budget projects may be replaced to address the broader issue of a comprehensive climate change issues and to address both the adaptation and mitigation; For the projects aimed at climate smart agriculture, enhancing food security and social protection in communities can be achieved through active participation of farmers, scientists, extension workers, civil society members, policymakers and bureaucrats; More issues can be explored, such as biogas, bio-fertilizer, rainwater harvesting, reducing the use of groundwater, reverse osmosis plant, demonstration of climate smart agriculture, innovation of new cropping pattern, climate knowledge hub for different sectors, climate smart low cost housing and shelter, climate smart livestock and fisheries etc. Innovative and small scale applied research projects should be undertaken.

THREATS: Projects are undertaken with no maintenance costs. Sustainability and issues of integration in the agency were not addressed properly; Sustainability of the activities might be an issue as there were no feasibility study/community consultation for the project; Investment in only addressing current or contemporary issues and limited linkage with the projected future climate change impacts; Poor linkages between research and extension and no guarantee of the new/innovative findings to be extended or disseminated to the stakeholder and the practitioner; Undue obstacles created by vested quarters, such as representative of LGIs, local political leaders, influential contractors etc

The projects under this evaluation were formulated and implemented under each of the six thematic areas of the BCCSAP, 2009. Therefore, the evaluation was done both in terms of the performance of individual project as well as thematic performance, and the evaluation findings are organized and presented in a similar fashion. The analysis of the projects' findings in terms of their objective-wise achievements, relevance, effectiveness, and socioeconomic impacts reflects the fact that most projects are moderately to highly relevant to the local as well as national context and those are eventually addressing the needs of the community people. Apart from that, the projects implemented were found to be effective in producing the expected results and therefore addressing the thematic targets set out in the BCCSAP. The outcome of the projects was remarkable and most of them were found to be supporting communities, especially the climate vulnerable communities, including women and children to address the climate change impact and reducing GHG emission.

BCCT funding approach: The funding approach, which included (a) preparing and submitting the project proposals; (b) technical review; (c) approval of the project proposals; and (d) financing the projects following a stringent and to some extent inefficient process, leading to delays in implementation and sometimes ineffective use of financial resources. These problems are often compounded by the lack of an appropriate and timely M&E system within the implementing agencies, both internally and externally to measure strengths and weaknesses to find out the forward looking smart strategy

Implementation by agencies : The roles of the implementing agencies and the administrative ministries are clearly spelled out in the Climate Change Utilization Guideline 2012, where the government entities must submit project proposals through their concerned ministries,

and thus ministries have very important role to play in winning projects from the CCTF and implementing them accordingly.

Activities of climate change adaptation work supposed to be best with community involvement. However, community consultation was not found in the projects under evaluation, particularly during the design phase. Thus, other than working as laborers during construction work, community involvement was never a prominent issue in the BCCT funded projects. Besides, there was little collaboration with the agencies concerned and LGI, though some municipalities had some projects awarded particularly on renewable energy but in terms of involvement with other projects, the coordination/participation and participation of LGIs is very minimum. Coordination might be improved for effective and sustainable and in some cases to ensure the ownership of some projects after the completion of the project.

Inadequate financing: It was observed that the project funding was limited (a gap between demand and supply) due to BCCT policy constraints³. In many cases, specially projects under infrastructure theme were financed less than those were actually demanding to serve their purposes. This has resulted into failure of achieving the project objectives; for example, a riverbank protection project required 1.5 kilometer to protect from erosion but budget for completion of about 1 kilometer riverbank protection work was allocated. As the other portion of work is not done simultaneously, the completed work is lost somewhere and gets damaged on many occasions and creating some problem to determine the ownership of the whole work.

Inadequate orientation on climate change issues: Projects under BCCT have to be managed with the existing human resources of the entity sometimes obstacles for effective and timely implementation. Thus, the work of the project might be neglected or delayed. It was also observed that the project team did not receive sufficient orientation on climate change issues and thus had to follow generic project management practices, which limit the potential impacts of the project under implementation.

O&M, exit plan and sustainability: The projects under evaluation did not have operation and maintenance budget, with the expectation that the implementing ministry and agency will look after the issue. However, the O&M issues of the project activities were not integrated properly with the work plan of the implementing agency. For these reasons, after the completion of the projects, there is hardly any maintenance work visible, which leads to activities became unsustainable particularly early damage to the construction sites.

Lack of long term approach in CC adaptation and mitigation : The projects submitted for funding and eventually implemented with BCCT funding found lack of holistic climate change approach, as it seems the projects were designed with a narrow focus on solving short term issues. This neither helps the national agenda of combating the threat of climate change nor brings any long-term benefits for the people at large.

Procurement process : According to the BCCT fund utilization guidelines, for procurement under BCCT funded projects, the government's procurement act and rule must be followed. With few exceptions, the agencies are following the PPR 2008 and PPA 2006. There are indications of less practice of competitive bidding (reportedly due to unavailability of local bidders) as well as, which can be better identified through regular monitoring and auditing. There is detailed discussion in the section dedicated to procurement.

Challenges: Since inception, there has been limited assessment of the need for human resources to manage the mandated tasks. The types of works and the volume were never assessed either. Thus, it was BCCT needs a strong expert pool both for climate change adaptation and mitigation.

³ BCCT policy (i.e., Niteemala) allows a maximum funding threshold of BDT 25.0 crore for an individual project, and presently this amount has been reduced to BDT 15.0 crore

Combating the climate change challenge requires significant technical capacity on the part of the BCCT, as the grant requests made to the BCCT are mostly technical in nature and the projects cover all six (6) thematic areas of the BCCT. There is no engineering unit, agricultural unit, research unit, or expert on renewable energy in the BCCT to review grant proposals or monitor the technical aspects of infrastructure project implementation, which compromises the quality of reviewing grant proposals and monitoring.

According to practice, the implementing ministry monitors the projects before recommending the final payment. However, both teams monitor the projects based on their experience as there is an insufficient monitoring framework and tools. BCCT has been trying to improve the monitoring tools and develop an online monitoring system that may change the situation, and routine monitoring will be in place soon.

The Board of Trustees (BoT) is full of dignitaries, including ministers and other high-ranking officials, which makes holding meetings difficult. According to the BCCT Act, the BoT has to meet quarterly, and additional meetings are also possible if needed. In reality, BoT could never meet more than twice a year and sometimes once a year, which causes delays in approval, awarding projects, fund disbursement, and, therefore, the implementation of the projects.

Of the 45 projects under evaluation, almost all the activities can be labeled as routine works that were being done by the respective public entities for years, even before the establishment of BCCT. These routine works are surely helping vulnerable communities, but in terms of combating climate change effects, their contributions are numbered. BCCT can do very little if they do not receive innovative proposals from the concerned department or agency.

BCCT itself cannot conduct any significant research on combating climate change due to the absence of its own research unit. BCCT could have conducted many research studies if there had been a research unit of its own and could have extended directions to the government and other social sector organizations for climate action.

Recommendations: Based on the above discussion, the following recommendations are made to improve the overall performance of BCCT:

Applicable for BCCT: Introduction of BCCT's Project Cycle Management (PCM) approach: BCCT should introduce a project cycle of receiving grant proposals, reviewing, and awarding grants, and disbursing funds. This project cycle will guide monitoring, evaluation, auditing, and reporting. Introducing a new project proposal submission format: The existing proposal form is comprehensive, but insufficient in terms of monitoring plan, exit plans, sustainability plans, etc. A comprehensive monitoring policy and framework: Monitoring is an integral part of a project's lifecycle. BCCT has initiated the design of an online monitoring system, but this has to be done under a policy. Innovative projects on adaptation and mitigation: Experience suggests that BCCT does not receive enough innovative project proposals. To have innovative projects, BCCT may mention issues like adaptation projects that have mitigation co-benefits, climate-smart agriculture, etc. BCCT may organize training sessions for the potential entities on how to fill out the project proposal template together with the annexure. Provisions should be kept in the projects to recruit additional human resources for technical activities or at the time of necessity. Local communities should be involved to develop ownership among them for better maintenance of the project activities after the completion of the project. The feasibility of forming a maintenance committee could be explored. An impact assessment should be performed for selected projects. A fund can be kept for third party impact evaluation on a selected number of projects every year. BCCT funds could be increased for implementing long-term adaptation projects and programmes. Projects should be approved based on their necessity to address any climate vulnerabilities in a specific location. Verification of local climate vulnerability might be mandatory before approving any project. BCCT needs to improve all the relevant documents for successful project implementation based on the updated BCCSAP, NAP, NDC and Mujib Climate Prosperity Plan, SDG, NCS, Delta Plan 2100, Prospective Plan 2041, Fifth

Year Plan. More responsibility for the BCCT team: In a new project management cycle, BCCT officials should be entrusted to make a short list of the potential projects after getting the project application and reviewing them professionally.

Applicable for Implementing Agencies: The skills of project directors are very important for the successful implementation of a project. Therefore, project directors should get support from the relevant authorities. Recognition and reward for efficient PDs, and some sort of penalty for inefficient PDs, could be introduced. The tendering process for purchasing various goods and services should strictly follow the PPA 2006 and PPR 2008. The respective local government bodies (city corporation, municipality, upazila parishad, union parishad etc.) should be involved with the relevant projects during project preparation and implementation. Stakeholder consultation should be done before preparing the project (local administration, LGI, NGO, local people etc.). Participatory needs assessment, feasibility study, effective involvement of community members, capacity building of implementing agencies, transparency, equity, and effective accountability mechanisms should be incorporated into relevant acts, rules, policies, and guidelines to make them mandatory in different steps of the BCCT projects.

Applicable for Policy Makers: Building a strong monitoring team: Having a good monitoring policy or framework is not enough to capture field realities during project implementation. To capture quality information and data, a knowledgeable and skilled monitoring team is equally important. Monitoring of infrastructure and other technical projects should be performed by relevant professionals. Capacity Building of the BCCT Officials: Since its inception, BCCT officials have not had enough opportunity for advanced training to enhance their skills and knowledge on project monitoring under different sectors, both for climate change adaptation and mitigation. Respective authority should take initiative. Recommendation from the coordinating ministry: As of now, all public entities have to submit applications through their respective ministries. BCCT should take initiative to ask the ministry concerned to take over the successful projects for wider replication or nationwide implementation through their ADP funding. Enforcing strong administrative compliance: It was observed that many entities submit their project proposals without sufficient information, i.e., without clear objectives and justifications and with mismatched objectives, justifications, and expected outcomes. Strong review and scrutiny particularly by the implementing entity will reduce such weakness on the part of the proposal-submitting entities of the project proposal. BCCT should implement this strategy by incorporating it in the policy for the approval of the project. Complexities related to the release of funds for projects should be resolved, and the process should be made easy and less time-consuming. The budget of a project should be rational with regards to targeted activities. MD of BCCT should have more discretion to release the fund for timely implementation. The project should have some extra funding for maintenance or be linked to an appropriate authority for maintenance after completion. For better monitoring of the project, there should be a technical unit under BCCT supported by experts such as an environment specialist, a civil engineer, an electrical engineer, an agricultural expert, etc. based on the technical nature of the project. The project approval process should be made easy because it is complicated and time-consuming. The capacity of the committees under local government institutions (eg. Disaster management committee) should be further developed so that they can address the challenges of climate change impacts, take over the implemented projects of BCCT after the project implementation, and mainstream and integrate climatic issues and vulnerabilities in their regular development activities in an effective manner. BCCT's role should not be confined to only managing funds; capacity development/strengthening of the implementing agencies and monitoring of the projects should also be among their priorities. BCCT capacity should also be strengthened by increasing human resources according to needs, especially for monitoring projects. All information on the projects, including plans, activities, budget, M&E report, and audit report, should be disclosed and made available on the webpage. To get the community well informed about the project information, a citizen charter, billboard, etc. should be displayed in the project areas and in the respective offices. Accountability mechanisms and monitoring systems, as well as the roles of relevant departments and institutions, i.e., the

IMED, MoEFCC, and LGED, should be clearly accommodated in the project/policy document so that accountability mechanisms can be functional in a coordinated manner. It is also crucial to define the role of citizens/beneficiary in the monitoring process

BCCT-funded projects are to achieve thematic goals set in the BCCSAP, 2009. This evaluation covered 45 projects approved by different public agencies from 2009 to 2017. Of the six thematic areas, a large share of the projects are infrastructure focused. To achieve better results on climate change adaptation and mitigation projects, BCCT must act fast to streamline the project management activities, from receiving proposals to monitoring, evaluating, and reporting. Strong adherence to the BCCT Act, along with the BCCT Fund Utilization Guidelines, should be the point of inclination in this regard. The projects implemented so far have also suggested that there is a dearth of innovative and research projects. BCCSAP is a very comprehensive document, and achieving thematic goals should have been the priority in approving project proposals. The role of BCCT should not be limited to awarding projects and receiving a completion report indicating that projects are completed and money is spent. As a statutory organization, the BCCT should be the custodian of public resources and spend them judiciously so that money is spent efficiently and accordingly, reducing the climate change-induced vulnerability of the country, as well as participating in GHG emission reduction with the global effort. It is also an opportunity for BCCT to show the performance of the global community as the government-owned dedicated trust for climate change and an entity of a climate-vulnerable country. Finally, effectiveness and long-term sustainability should be the central goals from approval to completion of any project or programme. By making some improvement in project selection and implementation, in future BCCT have good chance to become an accredited entity of Green Climate Fund and Adaptation Fund.

Section 1. Background and Introduction



1.1 Context and Background

Bangladesh is one of the most climate vulnerable countries of the world. Like many other countries, Bangladesh faces adversities arising from climate change. There is a growing concern all over the world regarding effective adaptation and mitigation measures to address the issues of climate change (CC) and to address vulnerability. According to the Global Climate Risk Index (CRI) developed by German-Watch, Bangladesh ranks 7th among the most affected countries in 2000–2019 due to the impacts of extreme weather events.⁴ High population density, together with high level of poverty, vulnerability and depleted ecological system have made Bangladesh more vulnerable to impacts of climate change, which also threatens the sustainability of development achievements over the last decades.

The increasing risks from climate change and sea level rise, natural and man-made hazards, such as cyclone, storm surge, flood, flash flood, riverbank erosion, water logging, salinity intrusion and drought have adversely affected livelihoods of the people living in vulnerable areas. These are projected to increase due to increased temperature, erratic behavior of rainfall and excess precipitation (IPCC 6th Assessment Report), recession of Himalayan glaciers, and sea level rise. Monsoon rainfall will increase resulting in higher flows during the monsoon season in the rivers, which flow into Bangladesh from India, Nepal, Bhutan, and China. Sea level may rise between 0.18 and 0.79 meters, even more, up to 1.5 meters which could increase coastal flooding and salinity intrusion into aquifers and rivers across a wide belt in the southern part of the country. Rainfall is predicted to become both higher and more erratic and the frequency and intensity of droughts are likely to increase, especially in the drier northern and western parts of the country. As large populations live in vulnerable areas such as coastal areas and islands which are impacted regularly by cyclones, coastal floods and are dependent on natural resources; they would become highly susceptible due to climate change. The Government of Bangladesh has several initiatives to address climate vulnerabilities, one of which is the creation of Bangladesh Climate Change Trust (BCCT) drawing upon annual national budgetary allocations.

1.2 Acts, Rules, Policies, Process and Practices related to the activities of BCCT

Bangladesh is one of the most vulnerable country due to climate change impacts. Among the vulnerable countries Bangladesh's position is 7 on the basis of vulnerability analysis from 2009-2019 (German watch, 2021). The Government of Bangladesh has been trying to integrate climate change issues into the development strategies and programmes/projects to achieve sustainable development for the country. This brief description covers the nature and extent of integrating climate change concerns into the national and sectoral policy, acts, rules, plan and strategy. In doing so, the following government and related documents are considered:

- Bangladesh Climate Change Strategy and Action Plan 2009 and updated version, 2024 (draft)
- National Adaptation Plan (NAP)
- Nationally Determined Contribution (NDC)
- Mujib Climate Prosperity Plan (MCPP)
- Climate Change Trust Act 2010
- Climate Change Trust Fund Policy 2010
- Bangladesh Climate Change Trust Guidelines/Principal (*Nitimala*) 2012
- The national policy documents related to water, forest and agriculture.

⁴ Meteorological events such as tropical storms, winter storms, severe weather, hail, tornados, local storms; hydrological events such as storm surges, river floods, flash floods, mass movement (landslide); climatological events such as freezing, wildfires, droughts.

These are known as the ‘foundation documents’ for climate change adaptation, loss & damage and mitigation.

Bangladesh Climate Change Strategy and Action Plan-2009

The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) is a strategic document built upon the National Adaptation Programme of Action (2005 and 2009). The update version of BCCSAP (draft) was made considering the NAP, NDC and MCPP. The climate change strategy and action plan of Bangladesh is a part of the overall development strategy of the country. The climate change constraints and opportunities are being integrated in to the overall plan and programme involving all sectors and processes for economic and social development. Bangladesh Government plans to take 44 programmes over the short, medium and long term within six strategic areas –

The strategy will be achieved through the implementation of an action plan, which will have 6 pillars-

1. Food security, social protection and health
2. Comprehensive disaster management
3. Infrastructure development
4. Research and knowledge management
5. Migration and low-carbon development
6. Capacity building and institutional development.

The updated BCCSAP has 11 thematic areas and 52 programmes considering short, medium and long term

National Adaptation Plan (NAP)

Bangladesh is going to implement its adaptation related activities, projects and programmes by following the National Adaptation Plan (NAP) -2023-2050. The NAP primarily encompasses eight distinct sectors: water resources; disaster, social safety and security; agriculture; fisheries, aquaculture and livestock; urban areas; ecosystems, wetlands and biodiversity; policies and institutions; and capacity development, research and innovation. Infrastructure, water and sanitation (WASH), health, gender, youth, the elderly, persons with disabilities, ethnic communities and other socially disadvantaged groups, and the private sector are cross-cutting issues and part of identifying appropriate strategies aligned with national aspirations. The key risks and vulnerabilities of climate change in the eight sectors will pose disproportionate and severe impacts on Bangladesh’s resources, water and food security, infrastructure, livelihoods, ecosystem health and biodiversity. The number of internal climate migrants may reach 19.9 million by 2050, comprising half of those in the entire South Asian region. The current rate of annual loss to gross domestic product (GDP) of approximately 1.3 percent due to climate-induced disasters may rise to 2 percent by 2050 and over 9 percent by 2100 under extreme scenarios. With an underlying objective of reducing risks and vulnerabilities to climate change impacts, the NAP envisions building a climate-resilient nation through effective adaptation strategies that foster a robust society and ecosystems and stimulate sustainable economic growth. Six national adaptation goals have been set to achieve this vision: Goal 1: Ensure protection against climate change variability and induced natural disasters; Goal 2: Develop climate-resilient agriculture for food, nutrition, and livelihood security; Goal 3: Develop climate-smart cities for improved urban environment and well-being; Goal 4: Promote nature-based solutions for conservation of forestry, biodiversity, and well-being of communities; Goal 5: Impart good governance through integration of adaptation into the planning process; and Goal 6: Ensure transformative capacity building and innovation for CCA.

The NAP implementation will seek to realize these six goals through 23 broad-scale strategies and 28 outcomes encompassing diverse aspects of safeguarding against climate-induced disasters. It will develop climate-resilient agriculture, infrastructure and other socioeconomic sectors through implementing inclusive and ecosystem-based adaptation, improved governance, enhanced climate finance and transformative capacity-building, and

innovation. The NAP considered 11 climate stress areas in devising 113 interventions based on developed adaptation pathways and sectoral adaptation requirements. Bangladesh needs 230 billion USD to implement the NAP up to 2050

Nationally Determined Contribution (NDC)

Bangladesh has also committed to reduce greenhouse gas emissions by following its updated nationally determined contribution (NDC). Bangladesh submitted its NDC to UNFCCC on 25 September 2015, for three sectors (Power, Industry and Transport). Subsequently, Bangladesh prepared the NDC Implementation Roadmap and Action Plan in 2018. Bangladesh's NDC proposed for 12 million tons (5%) unconditional reduction in GHG emission from Business as Usual (BAU) scenario by 2030 and a further 24 million tons (10%) conditional reduction in GHG emission with support from the international community taking the base year 2011. As part of the global initiative, Bangladesh is updating the NDC incorporating additional sectors following IPCC guidelines. The updated NDC covers Energy, Industrial Processes and Product Use (IPPU), Agriculture, Forestry and other Land use (AFOLU) and Waste. For the NDC update, 2012 has been considered as the base year following the Third National Communication of Bangladesh, which details a comprehensive national GHG emission inventory for 2012. The NDC update aims to further mitigation actions that Bangladesh may take to tackle its growing emissions and play its role in global efforts. The NDC calls for a number of mitigation actions that will help limit the country's GHG emissions. These actions will play a key role in realizing the move to a low-carbon, climate-resilient economy and becoming a middle-income country whilst ensuring that it will not cross the average per capita emissions of the developing countries. Bangladesh needs 175 billion USD to implement the NDC up to 2030

Mujib Climate Prosperity Plan (MCP)

A comprehensive plan created to guide Bangladesh toward a sustainable and low-carbon future is the Mujib Climate Prosperity Plan. It includes a variety of programmes and actions that emphasize economic development while both cutting greenhouse gas emissions and enhancing the nation's capacity to deal with the impacts of climate change. In order to increase the share of renewable energy in Bangladesh's energy mix, the MCP aims to improve the usage of renewable energy sources and energy efficiency measures in the country's energy industry. The implementation of renewable energy sources including solar, wind, and hydroelectric power is one of the specific goals of the strategy. It also stresses the use of energy-efficient technologies in construction and business. The objective is to employ renewable energy sources much more, with a target of 30% by 2030 and at least 40% by 2041.

The MCP seeks to promote environmentally friendly agricultural methods and lessen the amount of emissions produced when food is produced in the agriculture and food security sector. This includes programs that support organic farming, enhance the effectiveness of pesticide and fertilizer use, and upgrade irrigation infrastructure. The plan also includes a number of sector-specific measures as well as more general initiatives that span several different industries. These cross-cutting initiatives encourage the development of low-carbon technologies and environmentally friendly enterprises.

1.3 An Introduction of BCCT

1.3.1. A Brief History of the Bangladesh Climate Change Trust (BCCT)

Bangladesh is one of the world's climate vulnerable countries due to global warming and various natural causes at present. Bangladesh Climate Change Strategy and Action Plan 2009 (BCCSAP, 2009) was finalized by the government in 2009. Bangladesh is the first developing country to adopt such an integrated action plan. Climate Change Trust Fund (CCTF) was set up with the government's own funding in 2009-10. This is the first in the world to create such a fund on their own without waiting for money to be received from the developed countries that are mainly responsible for climate change and this initiative has been especially appreciated in the international arena.

The Climate Change Trust Fund (CCTF) was set up from the government's revenue budget to implement the Climate Change Strategy and Action Plan 2009. The goal and objective of the Bangladesh Climate Change Trust Fund are to increase the capacity of local people to combat the adverse impacts of climate change and to innovate and expand climate-tolerant technologies. Climate Trust Act-2010 was enacted to ensure the smooth management Climate Change Trust Fund. The instance of passing such a law in the sublime National Assembly to protect the country and its' people from the adverse effects of climate change is rare in the history of the world. According to the provisions of the Act, A board of trustees has been formed with a high-powered climate change panel comprising 10 Hon'ble Ministers/State Ministers, Cabinet Secretary, Finance Secretary, Governor of Bangladesh Bank, one member of the Planning Commission and two members of the Civil Society under the leadership of Hon'ble Minister of Environment, Forest and Climate Change. A technical committee with 13 members headed by the Secretary, Ministry of Environment, Forest and Climate Change has been formed to assist the board.

Bangladesh Climate Change Trust is a government statutory body under the Ministry of Environment, Forest and Climate Change. The Bangladesh Climate Change Trust (BCCT) was formed on January 24, 2013 in accordance with Section 3 of the Climate Change Trust Act-10. All the movable and immovable property including the manpower of previous Climate Change Unit has been transferred to the Trust. Bangladesh Climate Change Trust (BCCT) has been serving secretarial duties to Trustee Board and Technical Committee formed under the Climate Change Trust Act, 2010 along with other activities of the Climate Change Trust Fund. A Managing Director with the rank of additional secretary is acting as a Chief Executive Officer of the Bangladesh Climate Change Trust.

1.3.2. Vision and Mission

Vision

To build a climate resilient Bangladesh capable of dealing with the impact of climate change

Mission

1. To adopt and implement of short, medium and long term projects in light of Bangladesh Climate Change Strategy and Action Plan, 2009 to address the adverse impacts of climate change.
2. To take necessary steps for adaptation, mitigation, technology development and transfer, capacity building and financing to address adverse impacts of climate change on human, biodiversity and nature.
3. To Increase the use of environmentally friendly technologies to reduce carbon emissions.

1.3.3. The goals of Bangladesh Climate Change Trust (BCCT)

- To take and implement necessary action plans to adapt vulnerable people affected by climate change and to improve their quality of life and long-term risks.
- To take necessary steps to adapt, mitigate, develop and transfer technology, increase capacity and take measures to address adverse effects of climate change on human, biodiversity and nature.

1.3.4. The purposes of Bangladesh Climate Change Trust (BCCT)

- To use climate change trust fund to address the adverse impacts of climate change as a special area outside the government's development and non-development budget;

- To implement special programs related to climate change and adopt and implement appropriate action plans to ensure sustainable development.
- To adopt projects or programs related to institutional, social empowerment and human resource development of local communities at the grassroots level to tackle climate change;
- To adoption and implementation of pilot programs with appropriate expansion in the light of the necessary practical research and research findings in the areas of Adaptation, Mitigation, Technology Transfer, Finance and Investment in response to climate change;
- To adopt and implement various plans or programs for adapting people with the changing climate and to combat its vulnerabilities;
- To adopt and implement appropriate programs to alleviate poverty by raising public awareness about potential environmental disasters caused by climate change and increasing the capacity of institutional, social or local communities to deal with disasters;
- To assist in emergency response to any natural disaster caused by climate change.

1.4 Legal and Policy Framework

The Government of Bangladesh undertook two landmark initiatives addressing climate vulnerabilities. First, it adopted the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2009 (which is under review again), and second, it created the Bangladesh Climate Change Trust (BCCT) together with the Climate Change Trust Fund (CCTF) from its own resources. The CCTF has been created to finance projects for implementation within the thematic areas and programmes identified in BCCSAP. Initially, the Trust Fund was operated through a project under the then Ministry of Environment and Forests. Subsequently, the Climate Change Trust Act, 2010 was enacted; and as per the provisions of the Climate Change Trust Act, 2010, Bangladesh Climate Change Trust (BCCT) was established on January 24, 2013, with effect from October 13, 2010. It is to be noted that CCTF was created from its own source of funding by the government and has been separated from the Bangladesh Climate Change Resilience Fund (BCCRF), which is supported by the donor agencies.

GoB also conducted Climate Public Expenditure and Institutional Review (CPEIR) in 2012 and analyzed the policy and institutional context together with the arrangements of financial management of the agencies involved in climate responses in Bangladesh and proposed very useful recommendations. In 2014, Bangladesh made a pioneering attempt to adopt its Climate Fiscal Framework (CFF) to introduce a climate responsive public financial management (PFM) system. The CFF prompted more specific interventions to make the government's budgeting exercise under MTBF, climate inclusive. Inclusive Budgeting and Financing for Climate Resilience (IBFCR) Project, being implemented by the Finance Division with support from UNDP, embraces these interventions in its agenda.

Like in the Sixth Five Year Plan, the Government of Bangladesh addresses climate change on two fronts, e.g., adaptation and mitigation, in the Seventh Five Year Plan. The BCCSAP 2009 is a major step to act on climate change issues from the government's side. Lack of adequate funding and, furthermore, the release of funding, especially by the development partners, have crippled the ability of the government to implement priority projects and programmes in line with the BCCSAP. This plan also recognizes that strong coordination among the relevant institutions (especially the government agencies) and appropriate capacity are needed, and the MoEFCC, which serves as the focal point on climate change, has been trying to coordinate with other institutions effectively.

The government aims to attain several broad goals, including good governance in environmental sustainability, addressing population growth, ensuring the sustainability of cities with improved infrastructure, production, and economic activity with minimal

degradation, meeting national air and water quality standards, protecting endangered species, and sustainable conservation of the Sundarbans under the 7th Five Year Plan. For this purpose, the Seventh Five-Year Plan proposes a significant increase in the ADP allocations for the ministries dealing with climate change and sustainable development programmes.

Bangladesh remains in a phase of understanding environmental problems, climate change, and associated vulnerability. There had also been cases of specific investments to make things better or prepare the country better to cope with the problems. This is also important for Bangladesh's planning towards achieving the Sustainable Development Goals (SDGs), as Goal 13 sets targets for various climate actions.

1.5 Linkage with Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009

Different projects under this single evaluation study encompass project-based objectives; however, those are either linked with (or serving the purposes of) the broader targets of the six thematic areas of the BCCSAP 2009. The BCCSAP theme-wise compiled project objectives are as follows, while the project-specific objectives are presented in Table 1.1 beforehand.

i) Food Security, Social Protection and Health

There were eight projects (included in this package) implemented under this theme, and those comprises the following objectives:

- Support climate adaptive farm productivity of pulses, maize and oil seed crops and improve soil health in the char lands.
- Produce saline tolerant rice, lentils, and oil seed crops and drought tolerant rice and wheat seeds including processing, preservation, and distribution of seeds to the farmers.
- Employment generation through promoting off-season crops for ensuring the food security of ever-increasing population and nutritional needs, and floating vegetable and spices cultivation in the waterlogged areas.
- Assisting unused water hyacinths as a means of crop production due to lack of cultivable land in the water-logged areas.
- To assist people in producing crops in adverse climate condition such as floods, supply seed preservation pots to preserve seeds during floods to face Monga (extreme hunger).
- Increase awareness through distributing (leaflet, poster, booklet, information sheet) among the professionals, primary stakeholders on climate change impacts on agricultural sector adaptation needs and options
- Ensure safe drinking water supplies during emergencies by installing deep tubewells.
- Facilitate increased navigation facilities and recharging groundwater by keeping rainwater through re-excavated canals and small riverine flows.
- Increase availability of surface water for irrigation and drinking purposes in the water-logged areas.
- Improve overall environment/climate change adaptation by creating a green belt through community plantation/afforestation.

ii) Comprehensive Disaster Management

As far as included in the evaluation package, there was a single project implemented under this theme, and the project encompassed the following objectives:

- Minimize the loss of lives and properties of the coastal belt community through dissemination of early warning system, rescue operation and providing shelter, first aid and relief activities by trained and dedicated volunteers.

- Provide skill development training to 14,502 CPP Volunteers and 5,400 sea going fishermen.
- Provide early warning equipment, volunteer gears, emergency response vehicle to CPP Volunteers including demonstration on the usage of equipment.

iii) Infrastructure

The highest number of projects i.e., 23 projects were implemented under this theme. The compiled objectives of the projects are:

- Improve drainage systems of Municipalities and City Corporations to overcome water logging problem during excessive rainfall and floods
- Protect people, assets, crops, livestock etc. from risks of storm surge due to cyclones and floods through rehabilitation and construction of flood shelter, multipurpose cyclone shelter and building households for the poor
- Protect people from landslides through construction of retaining walls with RCC
- Increase freshwater availability to tackle waterborne diseases
- Protect river erosion, salinity intrusion, longevity of the sea dikes and reduce disaster vulnerability through strengthening embankments, construction, and renovation of protective walls
- Bring barren lands under cultivation ensuring irrigation by re-excavating canals and surrounding water bodies
- Increase crop production through increasing availability of irrigation facility and create green belts at the foot of the hills and creating options for fishery in the water bodies
- Increase sustainable rural and semi-urban transportation networks and facilities through construction and maintenance of roads, culverts, raising plinth of embankments, etc.
- Re-suction of flood control embankments for protecting lives and properties of the people
- Reduce greenhouse gas emission by increased use of renewable energy for electrification used for household and commercial purposes
- Eliminate water logging, increase productive lands, and create a habitable/congenial environment for the people

iv) Research and Knowledge Management

There were three (3) projects implemented under this theme, and those comprised the following objectives in a brief:

- Test and invent climate adaptive (drought and salinity tolerant) seeds, location specific crop management model by examining the effect of weather on yield and growth of different crops for sustainable crop production and management
- Build capacity of farmers and other stakeholders on invented crop management models and managing the pilot production of invented crops
- Analyze and spatial temporal pattern of salinity and salinity induced drought utilizing state of the art geospatial tools and techniques for characterizing genetic resources having potential salt tolerant genes available in the saline affected areas incorporating potential salt tolerant genes into agronomically superior varieties to establish a pilot genetic resource center dedicated to higher education and research in the field of stress breeding.

v) Mitigation and Low Carbon Development

There were nine (9) projects taken and implemented under this theme, complied objectives of those projects are presented hereunder:

- Contribute to reduction of greenhouse gas emission through enforcing 3R (reduction, re-use and recycle of waste) management of waste, increasing awareness, and earning revenues through selling Certified Emission Reduction/Voluntary Emission Reduction
- Produce and promote composting and using them in improving soil fertility
- Ensure the in-situ and ex-situ conservation of different plant species in the hill forest, and conserve nature to create scope for establishing seed sources and gene bank of the existing, rare and endangered forest tree species to bring in species diversity and thus biodiversity and thus biodiversity of the natural forests
- Facilitate development of eco-tourism on the available forest lands at the outskirt places
- Develop carbon sink by mobilizing local people for promoting nursery and collecting pulp wood to improve the socio-economic condition of the poor and the ethnic minorities.
- Increase awareness of the people on climate change effect and adaptation
- Support increased use of alternative fuels, renewable energy and power, organic fertilizers, biogas towards reduction of greenhouse gas emission

vi) Capacity Building and Institutional Strengthening

There was a single project (included in the evaluation package) implemented under this theme, and objectives of the project are briefed below:

- To prepare GIS database of all forest departments using high resolution satellite images, which will support assessing the vulnerability of forests and find appropriate tool of GIS & Remote Sensing for mapping and monitoring
- Capacity strengthening of BFD officials in the field of mapping, monitoring related to climate change including ICT strengthening of MoEFCC and BFD

In similar ways, the purposes of different projects were evaluated differently, but the findings are clustered and presented linking with the thematic targets as set out in the BCCSAP. Besides, the evaluation findings are showcased separately focusing on how they are supported in contributing to the overall achievement of the broader thematic goals of the national climate change strategy and action plan.

1.6 Implementation of Projects

The BCCT, considered 45 projects to implement specified under the six thematic areas of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009. The following six thematic areas are termed as the pillars of the BCCSAP:

- 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

The Government of Bangladesh roughly allocated Tk 2,900 crore BDT (till 2017) from its revenue budget to implement projects/programmes under the BCCSAP for climate change mitigation and adaptation through the Climate Change Trust Fund (CCTF). This sum was distributed across seven years, from fiscal years 2009-10 to 2016-17. The BCCT has approved 560 projects till December 2017. Out of those 560 projects, this evaluation consultancy assignment was awarded for 45 projects/programmes (of which 8 projects

under theme I, one project under theme II, 23 projects under theme III, 3 projects under theme IV, 9 projects under theme V, and one project under theme VI). More specifically the impacts that are created through these 45 project/programme interventions were planned to be evaluated by the independent consultants. Following a rigorous public procurement process, the evaluation task was awarded to a Joint Venture (JV) of PMID & HV Associates Limited, Dhaka.

These projects were awarded to address different issues of climate change and aligned with the six thematic areas/pillars of the BCCSAP and implemented by different government agencies, departments, and organisations in different areas of the country. However, the evaluation was grossly aimed to assess, review, and analyze the relevance and effectiveness of the projects implemented, review and analyze impacts created, and to diagnose strengths, weaknesses, opportunities, and threats of the projects implemented. It will also help for the formulation of future projects and could be leveraged from this evaluation findings, especially from lessons learned, and the implementation of the projects further undertaken can be done in a more effective and efficient manner.

The list of projects under this evaluation package are presented in Table 1.1, containing key information such as project titles, name of the implementing agencies/departments, relevant ministries, period of implementation, project locations/areas, and the project objectives.

Table 1.1 *Brief of Projects under this Evaluation*

SL. Project introduction in brief	
<i>Theme I: Food Security, Social Protection and Health</i>	
1	Project title: Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts Name of the implementing Agency: Bangladesh Agricultural Research Institute (BARI) Relevant Ministry: Ministry of Agriculture Implementation Period: May 2010 to April 2012 Project locations: Jamalpur and Sherpur districts Project objectives: (i) cope up with the climate change, enhancing farm productivity of the char lands, (ii) introduce modern cultivars of pulses and oil crops to exploit the potentiality of the productive char lands, (iii) maintain soil health and environment friendly production practices of maize and pulses in the char areas, and (iv) ensure food security, social protection, and health of small farmers of char lands.
2	Project title: প্রতিকূলতা সহিষ্ণু ধান, গম, ডাল ও তৈল বীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প Name of the implementing Agency: Bangladesh Agricultural Development Corporation (BADC) Relevant Ministry: Ministry of Agriculture Implementation Period: June 2011 to December 2013 Project locations (districts): 25 districts -Jamalpur, Sherpur, Tangail, Mymensingh, Kishoreganj, Netrokona, Faridpur, Gopalganj, Sirajganj, Bogura, Rajshahi, Dinajpur, Thakurgaon, Rangpur, Barishal, Patuakhali, Satkhira, Joshore, Feni, Noakhali, Chattogram, Cox's Bazar, Bhola, Borguna, and Sunamganj

SL.	Project introduction in brief
	Project objectives: (i) produce saline tolerant rice, lentils, and oil seeds and drought tolerant rice and wheat seeds, (ii) processing, preservation, and distribution of produced seeds to the farmers, and (iii) supervise farmers closely to ensure high yield.
3	Project title: বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প Name of the implementing Agency: Department of Agricultural Extension (DAE) Relevant Ministry: Ministry of Agriculture Implementation Period: July 2013 to December 2017 Project locations (districts): 6 districts - Bagerhat, Barishal, Bhola, Khulna, Patuakhali and Satkhira Project objectives: (i) promote floating vegetable and spices cultivation in the water logged areas as climate adaptation strategy, (ii) ensure supply of food and generate employment through best use of water logged areas and introducing off season crops for meeting the food security of ever increasing population, the nutrition needs and increasing national income, (iii) assist unused hyacinths as a means of crop production due to lack of cultivable land in the water logged areas, (iv) assist people in producing crops in adverse climate condition such as floods to face Monga (extreme hunger), (v) supply seeds reservation pots to preserve seeds during floods as they have to harvest rice at the shortest possible time, and (vi) increase awareness through distributing (leaflet, poster, booklet, information sheet) among the professionals, primary stakeholders on climate change effects, adaptation, and impacts on agriculture.
4	Project title: জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প Name of the implementing Agency: Department of Public Health Engineering (DPHE) Relevant ministry: Local Government Division of MLGRDC Implementation period: January 2017 to June 2019 Project locations (districts, upazilas etc.) : Barisal Project objectives: To ensure safe drinking water by installing deep tube well for the people of Babuganj and Muladi Upazila
5	Project title: জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প (২য় পর্যায়) Name of the implementing Agency: Department of Public Health Engineering (DPHE) Relevant ministry: Local Government Division of MLGRDC Period of implementation: January 2017 to December 2019 Project locations (districts, upazilas etc.): Bhola Project objectives: To ensure safe drinking water for the coastal people under the project area
6	Project title: জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় গোপালগঞ্জ জেলার কোটালীপাড়া উপজেলায় খাল পুনঃখনন প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources

SL.	Project introduction in brief
	Period of implementation: May 2013 to December 2016 Project locations (districts, upazilas etc.): Gopalganj Project objectives: (i) facilitate recharging the ground water through keeping rainwater in the re-excavated canals, (ii) increase rainfall through creating green belt on both sides of the re-excavated canals, and (iii) reduce the warming due to climate change effects
7	Project title: জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় মাদারীপুর জেলার মাদারীপুর সদর ও রাজৈর উপজেলায় খাল পুনঃখনন প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: December 2013 to December 2016 Project locations (districts, Upazilas etc.): Madaripur Project objectives: (i) increase the availability of surface water and recharging the ground water sources, (ii) eliminate the crisis of irrigation and drinking water in the surrounding area, (iii) eliminate water logging, (iv) increase agricultural production through increasing the availability of surface water and irrigation facility, (v) create navigability in the canals, and (vi) improve the overall environment by creating a green belt through plantation
8	Project title: জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় শেরপুর জেলার নালিতাবাড়ি উপজেলাধীন চেল্লাখালী নদীতে রাবার ড্যাম নির্মাণ প্রকল্প Name of the implementing Agency: Bangladesh Agricultural Development Corporation (BADC) Relevant ministry: Ministry of Agriculture Period of implementation: April 2014 to April 2016 Project locations (districts, upazilas etc.): Sherpur Project objectives: (i) avail surface water for irrigation during post monsoon season, (ii) ensure irrigation to 500 hectare of land through proper management and best use of water resources, (iii) produce additional 2250 Mt. Ton of crops through improving irrigation system and using modern and appropriate technology, (iv) strengthen O&M of Rubber Dam through forming a water users association, and (v) improve socio-economic condition of the area and preparing them to be adaptive climate change effects through generating employment and reduction of poverty
<i>Theme II: Comprehensive Disaster Management</i>	
9	Project title: Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change Name of the implementing Agency: Cyclone Preparedness Programme (CPP) Relevant ministry: Ministry of Disaster Management and Relief Period of implementation: January 2013 to December 2015 Project locations (districts, upazilas etc.): 5 districts- Bhola, Pirojpur, Chittagong, Cox's Bazar and Noakhali Project objectives: (i) minimize the loss of lives and properties of the coastal belt community through dissemination of early warning signal, rescue sheltering, first aid and relief activities by trained and dedicated volunteers, (ii) provide skill development training to 14502 CPP volunteers and 5400 sea going fishermen, (iii) provide warming equipment, volunteer gears, purchase of an emergency response

SL.	Project introduction in brief
	vehicle, and (iv) organize two Orientation workshops and 13 Cyclone field demonstration
<i>Theme III: Infrastructure</i>	
10	Project title: Establishment of Khagrachair Pourashavas as a Climate Resilient Town Name of the implementing Agency: Khagrachari CHT Pourashava Relevant ministry: Ministry of CHT Affairs Period of implementation: January 2012 to December 2012 Project locations (districts, upazilas etc.): Khagrachari Project objectives : (i) improve drainage system of Khagrachhari Pourashava to overcome water logging problem during excessive rainfall and floods, (ii) protect people from wind risk of flood through establishment of flood shelters, and (iii) protect from landslides through construction of RCC retaining wall.
11	Project title: Development of Infrastructure to Tackle Climate Change Impacts in Patuakhali Pourashava Name of the implementing Agency: Patuakhali Pourashava Relevant ministry: Local Government Division of MLGRDC Period of implementation: July 2012 to June 2013 Project locations (districts, upazilas etc.): Patuakhali Pourashava Project objectives: (i) to improve drainage system of Patuakhali Municipality to overcome water logging problem, and (ii) increase freshwater availability to tackle waterborne diseases.
12	Project title: ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগ সহনশীল গৃহ নির্মাণ প্রকল্প Name of the implementing Agency: Department of Disaster Management (DDM) Relevant ministry: Ministry of Disaster Management and Relief Period of implementation: July 2013 to December 2014 Project locations (districts, upazilas etc.): Brahmanbaria Project objectives: To rehabilitate Cyclone 20 13 affected poor households in Brahmanabaria district by building disaster adaptive house for 100 families.
13	Project title: পিরোজপুর জেলার ৪টি শিক্ষা প্রতিষ্ঠান কাম সাইক্লোন সেন্টার নির্মাণ প্রকল্প Name of the implementing Agency: Local Government Engineering Department (LGED) Relevant ministry: Local Government Division of MLGRDC Period of implementation: January 2015 to December 2018 Project locations (districts, upazilas etc.): Pirojpur Project objectives: (i) construct educational institute – cum shelters and provide safe shelter to human being and their livestock from super cyclones, (ii) create facilities for primary / other education and thereby facilitate education for all, and (iii) create direct short term employment opportunities through construction works and a few regular employments through other use of the shelters.

SL.	Project introduction in brief
14	Project title: চট্টগ্রাম জেলার বিভিন্ন উপজেলায় কর্ণফুলী, হালদা, ইছামতি নদী ও শিলক খাল এবং ইহাদের শাখা নদীর বিভিন্ন ভাঙ্গন কবলিত অংশে প্রতিরক্ষামূলক অবকাঠামো নির্মাণ কাজ/প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: July 2010 to June 2014 Project locations (districts, upazilas etc.): Chattogram Project objectives: (i) build protective walls at the river erosion areas to reduce vulnerabilities of disasters, (ii) strengthen the embankment for protecting saline water of the tidal wave getting into the shore, and (iii) build protective walls for saving the longevity of the Sea Dikes
15	Project title: চট্টগ্রাম জেলার মিরশরাই উপজেলার উপকূলবর্তী এলাকায় সেচ ও যোগাযোগ ব্যবস্থার উন্নয়ন এবং মুহুরী এক্রিটেড এলাকায় সিডিএসপি বেড়ীবাধ উন্নয়ন প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: March 2011 to December 2015 Project locations (districts, upazilas etc.): Chattogram Project objectives: (i) bringing barren lands under irrigation by re-excavating the canals and surrounding water bodies for cultivation, (ii) increase crop production through availability of irrigation facility, (iii) creating a green belt at the foot of the hills and creating options for fishery in the water bodies, and (iv) protecting school, colleges and other establishments from the Feni River erosion
16	Project title: খুলনা জেলার রূপসা উপজেলার অন্তর্গত রামনগর-রহিমনগর এলাকায় বাধ পুনঃনির্মাণ ও নদীতীর সংরক্ষণ প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: December 2012 to June 2016 Project locations (districts, upazilas etc.): Khulna Project objectives: (i) reintroduction of polder system to reduce the loss of riverbank due to disaster, (ii) facilitate better agricultural production by saving the cultivable land from salinity, and (iii) ensure social security of the people in the surrounding areas through employment generation
17	Project title: মেঘনা নদীর ভাংগন হতে বরিশাল জেলার মেহেন্দিগঞ্জ উপজেলার উলানিয়া গোবিন্দপুর এলাকা রক্ষা প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: February 2013 to June 2015 Project locations (districts, upazilas etc.): Barishal Project objectives: (i) protect the embankment from the erosion and changing the course of river due to climate change effect, (ii) protect climate change effect through forestry, and preserving forest resources and improving the environment, (iii) protect crops, households, and other establishment from river erosion, (iv) reduce poverty through employment generation and eradicating unemployment, and (v) improve socio-economic condition of the area

SL.	Project introduction in brief
18	Project title: মুন্সিগঞ্জ জেলার লৌহজং উপজেলার পশ্চিম গাঁওদিয়া জামে মসজিদ হতে বেজগাঁও পূজামন্দির ভায়া খানকা শরীফ পর্যন্ত সড়ক কাম বেড়িবাধী নির্মাণ প্রকল্প Name of the implementing Agency: Local Government Engineering Department (LGED) Relevant ministry: Local Government Division, MLGRDC Period of implementation: July 2013 to December 2016 Project locations (districts, upazilas etc.): Munshiganj Project objectives:(i) improve the Pashchim Gaondia Jame Masjid to Bejgaon Puja Mandir via Khanka Sharif embankment cum road to climate standard, (ii) sustain livelihood of the poor of Pashchim Gaondia and Bejgaon village of Lauhaganj Upazila from river flooding, (iii) improve rural transportation network at climate resilient standard for year round marketing of agriculture commodities, (iv) create short and long term employment for the rural poor of Lauhaganj Upazila, and (v) protect local people from recurrent floods and thereby assist rural poor of selected areas of Lauhaganj Upazila of Munshiganj District to improve their livelihood
19	Project title: জলবায়ু পরিবর্তনের ঝুঁকি নিরসনকল্পে নোয়াখালী জেলার সুবর্ণচর ও হাতিয়া উপজেলার গাবতলী মুইস সংলগ্ন মেঘনা নদীর তীর সংরক্ষণ প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: April 2013 to June 2015 Project locations (districts, upazilas etc.): Noakhelai Specific objectives: (i) protect Gabtoali Sluice for saving Brarchar from flood, cyclone, high tidal wave, and (ii) protect people, assets, crops inside the polder due to climate change effects.
20	Project title: ঢাকা জেলার করানীগঞ্জ উপজেলাধীন শুভাঢ্যা হতে আগানগর পর্যন্ত শুভাঢ্যা খাল পুনঃখনন ও তীর সংরক্ষণমূলক কাজ বাস্তবায়নের মাধ্যমে পরিবেশের ভারসাম্য রক্ষাকরণ প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: July 2013 to June 2017 Project locations (districts, upazilas etc.):Dhaka Project objectives: (i) maintain navigability and ecological balance through re-excavating the Shuvaddaya canal, (ii) rescue the canal from illegal occupants, (iii) increase irrigation facility and eliminate water logging, (iv) protect erosion of the canal banks through protective works, and (v) improve socioeconomic condition of the area by generating employment opportunities
21	Project title: জলবায়ু পরিবর্তনের প্রভাব হতে ভোলা সদর উপজেলার পশ্চিম ইলিশা ইউনিয়নের গাজীবাড়ি ও জাঙ্গালিয়া এলাকা রক্ষা প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: November 2015 to June 2018 Project locations (districts, upazilas etc.): Bhola Project objectives:(i) protect the left side of the Tentulia riverbank from Gazibari of Pashchim Ilisha Union to Jangalia Bazar permanently, (ii) protect different public

SL.	Project introduction in brief
	and private establishment including schools, colleges, business entity, cropland from the erosion of the Tentulia river, (iii) improve the socioeconomic condition of the islanders by increasing crop production, (iv) create employment opportunities, and (v) reduce the number of victims due to river erosion
22	Project title: টাংগাইল জেলার মির্জাপুর উপজেলাধীন হাট ফতেহপুর নামক স্থানে বংশাই নদীর তীর সংরক্ষণ প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: October 2012 to December 2015 Project locations (districts, upazilas etc.): Tangail Project objectives: (i) protect the banks of the Bangshai river through protective works especially in certain places of the flood control embankment, (ii) re-suctioning the flood control embankment for protecting lives and properties of the people, and (iii) protect educational institutions, market laces beside the riverbank by undertaking protective works
23	Project title: জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় চট্টগ্রাম জেলার রাউজান উপজেলার দেওয়ানজীঘাট, মোকামিপাড়াসহ হালদা নদীর বাম তীরের বিভিন্ন এলাকায় প্রতিরক্ষামূলক কাজ/প্রকল্প Name of the implementing Agency: Bangladesh Water Development Board (BWDB) Relevant ministry: Ministry of Water Resources Period of implementation: November 2016 to June 2019 Project locations (districts, upazilas etc.): Chattogram Project objectives: (i) protect the areas of the left side of the Halda river from erosion, (ii) protect the riverbanks and other moveable and immovable properties from landslide permanently, (iii) create employment opportunity for the marginalized people, (iv) improve the socioeconomic condition of the people through reducing unemployment and poverty, (v) facilitate increased agricultural production and income generating activities, and (vi) protect lives and properties from floods.
24	Project title: ভান্ডারিয়া উপজেলার বাঁধ কাম সড়কের স্লোপ প্রটেকশনসহ উন্নয়ন প্রকল্প Name of the implementing Agency: Local Government Engineering Department (LGED) Relevant ministry: Local Government Division, MLGRDC Period of implementation: April 2014 to June 2015 Project locations (districts, upazilas etc.): Pirojpur Project objectives: To protect road cum embankment of Bhandaria Upazila from the effects of Climate Change.
25	Project title: জলবায়ুর পরিবর্তনের প্রভাবে উপকূলীয় অঞ্চলে ক্ষতিগ্রস্ত সড়ক নির্মাণ/পুনঃনির্মাণ/পুনর্বাসন প্রকল্প (ভোলা জেলা) Name of the implementing Agency: Local Government Engineering Department (LGED) Relevant ministry: Local Government Division, MLGRDC Period of implementation: January 2016 to June 2017 Project locations (districts, upazilas etc.): Bhola Project objectives: To (i) remove bottlenecks and reduce costs of rural transportation and marketing, and (ii) reduce poverty through crating short and

SL.	Project introduction in brief
	long-term employment opportunities both in agriculture and nonagricultural sectors
26	Project title: ভোলা জেলার সদর উপরজলাধীন জলবায়ু পরিবর্তন সহিষ্ণু সড়ক নির্মাণ প্রকল্প Name of the implementing Agency: Local Government Engineering Department (LGED) Relevant ministry: Local Government Division, MLGRDC Period of implementation: December 2015 to June 2017 Project locations (districts, upazilas etc.): Bhola Project objectives: (i) improve rural road connectivity, (ii) rural employment generation, and (iii) ensure sustainable livelihoods of rural people
27	Project title: জলবায়ু পরিবর্তনজনিত ঝুঁকি মোকাবেলার জন্য মঠবাড়িয়া পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প Name of the implementing Agency: Mothbaria Pourashava, Pirojpur Relevant ministry: Local Government Division, MLGRDC Period of implementation: April 2014 to March 2017 Project locations (districts, upazilas etc.): Pirojpur Project objectives: (i) quickly drain the logged water of heavy rain due to climate change effects, (ii) reduce Green House Gas emission by increased use of energy saving and environment friendly bulbs, (iii) quickly drain logged water due to heavy rain by building drainage system and procuring modern drain cleaning apparatus, (iv) reduce global warming and amount of carbon dioxide through plantation, and (v) increased awareness among the people on clean environment
28	Project title: জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কমলগঞ্জ পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প Name of the implementing Agency: Komolganj Pourashava, Moulvibazar Relevant ministry: Local Government Division, MLGRDC Period of implementation: March 2015 to December 2016 Project locations (districts, upazilas etc.): Moulvibazar Project objectives: To ensure quick drainage of waterlogging due to heavy rainfall as an effect of climate change
29	Project title: জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কালিয়াকৈর পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প Name of the implementing Agency: Kaliakoir Pourashava, Gazipur Relevant ministry: Local Government Division, MLGRDC Period of implementation: October 2016 to June 2018 Project locations (districts, upazilas etc.): Gazipur Project objectives: To drain logged rainwater quickly due to heavy rainfall due to climate effects, and to keep the urban dwellers safe from water borne diseases
30	Project title: রাজশাহী সিটি কর্পোরেশনের ২৮নং ওয়ার্ডের জলাবদ্ধতা নিরসনে অবকাঠামো উন্নয়ন প্রকল্প Name of the implementing Agency: Rajshahi City Corporation (RCC) Relevant ministry: Local Government Division, MLGRDC

SL.	Project introduction in brief
	Period of implementation: March 2016 to June 2018 Project locations (districts, upazilas etc.):Rajshahi Project objectives: To eliminate water logging through building drainage system, and to facilitate walkways for the citizens.
31	Project title: লালমোহন পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প (২য়পর্যায়) Name of the implementing Agency: Lalmohan Pourashava, Bhola Relevant ministry: Local Government Division, MLGRDC Period of implementation: June 2016 to December 2017 Project locations (districts, upazilas etc.): Bhola Project objectives: (i) drain logged rainwater quickly due to heavy rainfall due to climate effects, (ii) eliminate waterlogging due to heavy rainfall and flood, (iii) face climate change effects, and (iv) facilitate creating a habitable environment for the people.
32	Project title: জলবায়ু পরিবর্তনজনিত সৃষ্ট দুর্ঘটনা মোকাবেলায় ভোলা পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প Name of the implementing Agency: Bhola Pourashava Relevant ministry: Local Government Division, MLGRDC Period of implementation: August 2014 to June 2016 Project locations (districts, upazilas etc.):Bhola Project objectives: To eliminate water logging problem of Bhola town and to improve the overall environment of the town
<i>Theme IV: Research and Knowledge Management</i>	
33	Project title: জলবায়ু পরিবর্তনের প্রভাব মোকাবিলায় খরাপ্রবণ ও উপকূলীয় লবণাক্ত এলাকার জন্য টেকসই ফসল ব্যবস্থা উন্নয়ন প্রকল্প Name of the implementing Agency: Bangladesh Agricultural Research Institute (BARI) Relevant ministry: Ministry of Agriculture Period of implementation: September 2010 to April 2017 Project locations (districts, upazilas etc.): Dhaka Project objectives: To (i) collect and primary test of climate adaptive (drought and salinity adaptive) seeds invented locally by different research institutes, (ii) field test agricultural region specific crop management techniques, (iii) invent location specific crop management model by examining the effect of weather on yield and growth of different crops, (iv) invent developed and sustainable crop management model adaptive to drought and salinity, (v) train farmers and other stakeholders on invented crop management model adaptive to drought and salinity, and (vi) include as many farmers in managing the pilot production of invented crops
34	Project title: বাংলাদেশের জলবায়ু ঝুঁকিপূর্ণ অঞ্চলে জন্মানোর লক্ষ্যে উপকূলীয় এলাকার কৌলিসম্পদ ব্যবহার করে লবনসহিষ্ণু ডাবলড হ্যাণ্ডয়েড জাতের উদ্ভাবন প্রকল্প Name of the implementing Agency: Bangabandhu Sheikh Mujibur Rahman Agricultural University, Shalna, Gazipur Relevant ministry: Ministry of Education

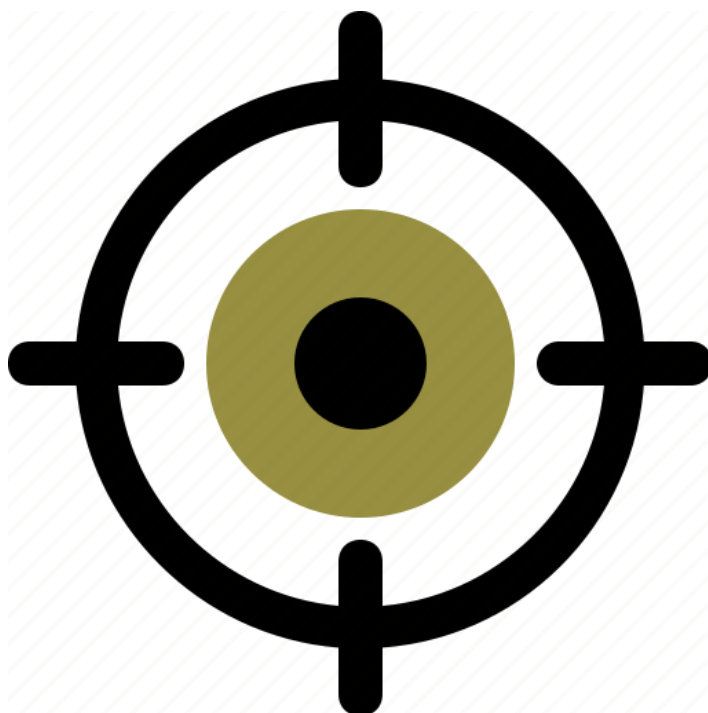
SL.	Project introduction in brief
	Period of implementation: July 2016 to June 2019 Project locations (districts, upazilas etc.): 3 districts -Cox's Bazar, Moulvibazar, Sylhet Project objectives: To (i) analyze and spatial temporal pattern of salinity and salinity induced drought utilizing state of the art geospatial tools and techniques, (ii) assess loss and damage of crops due to salinity and salinity induced drought, (iii) characterize genetic resources having potential salt tolerant genes available in the saline affected area, (iv) incorporate potential salt tolerant genes into agronomically superior varieties, and (v) establish a pilot genetic resource center dedicated to higher education and research in the field of stress breeding
35	Project title: পরমাণু কৃষি গবেষণার মাধ্যমে জলবায়ু পরিবর্তনশীল জাত/প্রযুক্তি উদ্ভাবন ও বিভিন্ন প্রতিবেশ অঞ্চলে অভিযোজন প্রকল্প Name of the implementing Agency: Bangladesh Institute of Nuclear Agriculture (BINA) Relevant ministry: Ministry of Agriculture Period of implementation: July 2014 to June 2017 Project locations (districts, upazilas etc.): 14 districts -Barisal, Chapai Nawabganj, Cumilla, Gopalganj, Jamalpur, Khagrachhari, Magura, Mymensingh, Noakhali, Pabna, Rangpur, Satkhira, Sherpur, and Sunamganj Project objectives: To (i) introduce climate adaptive varieties invented by BINA through physical development of mutant line of the crops, production, economic analysis, and monitoring of production in different ecological conditions, and (ii) increased awareness of the farmers on climate adaptive technology/varieties
<i>Theme V: Mitigation and Low Carbon Development</i>	
36	Project title: সমগ্র বাংলাদেশের শহরগুলোর (পৌরসভা/মিউনিসিপ্যালিটি) জৈব আবর্জনা ব্যবহার করে প্রোগ্রাম্যাটিক সিডিএম শীর্ষক প্রকল্প Name of the implementing Agency: Department of Environment (DoE) Relevant ministry: Ministry of Environment, Forests and Climate Change (MoEFCC) Period of implementation: April 2010 to June 2019 Project locations (districts, upazilas etc.): 4 districts -Cox's Bazar, Gazipur, Mymensingh, and Narayanganj Project objectives: To (i) reduce Green House Gas emission, (ii) enforce 3R (reduction, re-use and recycle of waste) in Bangladesh, (iii) increase awareness of the citizens in the advantage of recycling and isolation of waste at source, (iv) promote clean and habitable city, (v) make waste as resources and generating employment for the poor in cities, (vi) earn revenue through selling Certified Emission Reduction (CER)/ Verified Emission Reduction (VER), and (vii) produce compost and use them to improve soil fertility
37	Project title: Eco-Restoration of Hill Forests, Cox's Bazar Name of the implementing Agency: Bangladesh Forest Department (BFD) Relevant ministry: Ministry of Environment, Forests and Climate Change (MoEFCC) Period of implementation: July 2012 to June 2015

SL.	Project introduction in brief
	Project locations (districts, upazilas etc.): Cox's Bazar Project objectives: To (i) fight back the prevailing threats and impacts of climate changes already experienced in this region, (ii) ensure the in-situ and ex-situ conservation of different plant species in the hill forest, (iii) conserve nature to create scope for establishing seed sources and gene bank of the existing, rare and endangered forest tree species to bring in species diversity and thus biodiversity and thus biodiversity in the natural forest stands of Bangladesh, (iv) facilitate Eco-tourism on the available forest lands at the outskirts places to the City of Cox's Bazar, (v) create job opportunities for the local people, and (vi) create scopes of research for the interested research students or institutions from home and abroad.
38	Project title: কাপ্তাই এলাকায় বাগান সৃষ্ণনের মাধ্যমে কার্বন সিংক তৈরী প্রকল্প Name of the implementing Agency: Bangladesh Forest Department (BFD) Relevant ministry: Ministry of Environment, Forests and Climate Change (MoEFCC) Period of implementation: November 2012 to June 2015 Project locations (districts, upazilas etc.): Rangamati Project objectives: To (i) plant soft wood trees to keep continuing supply of raw materials for the Karnafuli Paper Mill as well as developing Carbon Sink, (ii) mobilize local people for promoting nursery, maintenance of the same, and for collecting pulp wood to improve the socio-economic condition of the poor and the ethnic minorities, (iii) reduce the impact of climate change effects, and (iv) increase awareness of the people on climate change effect and adaptation.
39	Project title: বায়োগ্যাস প্রযুক্তি সম্প্রসারণের মাধ্যমে কার্বন নিঃসরণ হ্রাস ও বিকল্প জ্বালানি ব্যবহার বৃদ্ধিকরণ প্রকল্প (২য়পর্যায়) Name of the implementing Agency: Institute of Fuel Research and Development (IFRD) Relevant ministry: Ministry of Science and Technology Period of implementation: March 2014 to February 2016 Project locations (districts, upazilas etc.): 15 districts -Bagerhat, Barisal, Chapa Nawabganj, Gaibandha, Jamalpur, Jessore, Joypurhat, Madaripur, Magura, Naogaon, Natore, Nilphamari, Rajshahi, Shariatpur, and Sherpur Project objectives: To (i) increase the use of alternative fuel, (ii) increased use of organic fertilizer replacing chemical fertilizer, (iii) reduce emission of greenhouse gas (GHG), (iv) ensure mother and child health through controlling internal air pollution, and (v) employment generation through increasing the use of Biogas
40	Project title: সিংড়া পৌর এলাকায় সৌর বিদ্যুতায়িত সড়কবাতি স্থাপন শীষক প্রকল্প Name of the implementing Agency: Singra Pourashava, Natore Relevant ministry: Local Government Division, MLGRDC Period of implementation: July 2016 to December 2017 Project locations (districts, upazilas etc.): Natore (Singra Pourashava) Project objectives: To (i) reduce reliance on electricity usage due to solar power, illuminate the road through solar power to increase the use of renewable energy for reducing greenhouse gases, especially carbon dioxide and methane gas emission, and (ii) reduce carbon dioxide emissions from thermal power generation by using solar power

SL.	Project introduction in brief
41	Project title: নোয়াখালী জেলার হাতিয়া উপজেলাধীন জাহাজ্জার চর এলাকায় নবায়নযোগ্য শক্তি নির্ভর ১ মেগাওয়াট ক্ষমতাসম্পন্ন বিদ্যুৎকেন্দ্র স্থাপন প্রকল্প Name of the implementing Agency: Bangladesh Army Relevant ministry: Ministry of Defense Period of implementation: March 2017 to June 2018 Project locations (districts, upazilas etc.): Noakhali (Hatiya Upazila) Project objectives: To install an environment friendly power station through using renewable energy to create access to power to the people at the remotest corner of the country
42	Project title: Introduction of Solar Powered Irrigation Pump as well as Power Management and Distribution System to Mitigate Energy Crisis and Climate Change Name of the implementing Agency: Rural Electrification Board (REB) Relevant ministry: Ministry of Power, Energy and Mineral Resources Period of implementation: April 2010 to April 2012 Project locations (districts, upazilas etc.): 8 districts -Chapai Nawabganj, Gazipur, Jhenaidah, Kurigram, Mymensingh, Rangpur, Satkhira, and Tangail Project objectives: To (i) convert 20 diesel pumps to solar powered irrigation pump and at the off season of irrigation, and (ii) distribute the power produced from the plant to the nearby consumers
43	Project title: Electrification in Local Area (Upazila Complex) by using Solar Energy Name of the implementing Agency: Rural Electrification Board (REB) Relevant ministry: Ministry of Power, Energy and Mineral Resources Period of implementation: July 2012 to November 2014 Project locations (districts, upazilas etc.): 15 districts -Bagerhat, Chittagong, Cox's Bazar, Faridpur, Gopalganj, Habiganj, Khulna, Kishoreganj, Madaripur, Mymensingh, Nawabganj, Netrokona, Pabna, Sirajganj, and Sunamganj Project objectives: To (i) ensure uninterrupted power supply to the Upazila complexes and government remises, and (ii) save significant electricity from the main grid supply
44	Project title: Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System Name of the implementing Agency: Palli Daridro Bimochon Foundation (PDBF) Relevant ministry: Rural Development Division, MLGRDC Period of implementation: July 2017 to March 2019 Project locations (districts, upazilas etc.): 4 districts -Kurigram, Lalmonirhat, Nilphamari, and Panchagarh Project objectives: To (i) increase access to sources of renewable energy among the rural poor people, (ii) promote use of electronic appliances at rural areas through solar power and increase access to communication tool like mobile phones, (iii) promote income generating activities using renewable energy, (iv) support having a quality life for the people living in enclaves in Bangladesh, and (v) grow awareness

SL.	Project introduction in brief
	among the people for plantation to reduce carbon dioxide emission in the atmosphere
<i>Theme VI: Capacity Building and Institutional Strengthening</i>	
45	Project title: Forest Information Generation and Networking System Name of the implementing Agency: Bangladesh Forest Department (BFD) Relevant ministry: Ministry of Environment, Forests and Climate Change (MoEFCC) Period of implementation: April 2011 to March 2013 Project locations (districts, upazilas etc.): Dhaka (for allover country) Project objectives: To (i) prepare GIS database of all forest department controlled are using high resolution satellite images, which will assist to assess vulnerability of forest to climate change, (ii) find derive appropriate tool of GIS & Remote Sensing for mapping and monitoring, (iii) capacity strengthening of DF officials in the field of mapping, monitoring related to climate change, and (iv) ICT strengthening of MoEFCC and BFD

Section 2. Scopes and Objectives



2.1 Scopes and Objectives of Evaluation

The BCCT issued a list of broader scope of works along with the list of projects to be evaluated. Upon reviewing these documents, the consultant team has arrived at an understanding of the evaluation study of 45 projects funded by BCCT and those were implemented by different government agencies. The range of implementation period of the projects, as abstracted from the project documents, is from March 2010 to December 2019.

By following the Guidelines, [for the Project formulation, Processing, Approval, Amendment, Implementation, Fund Disbursement and Utilization by the government, semi-government, and autonomous organisations under the Climate Change Trust Fund (CCTF) circulated on 9 April 2012] all 45 projects under this evaluation study were formulated and implemented. These projects grossly contained (i.e., were formulated with) their development objectives in line with the 6 (six) thematic areas of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009, and hence, the Consultants were suggested to undertake and present the evaluation study findings in the similar fashion.

These six thematic areas of the BCCSAP and the number of projects under each of those thematic areas are presented below in Table 2.1.

Table 2.1 Number of projects under different BCCSAP thematic areas

No.	BCCSAP Thematic Areas	No. of Projects
1	Food security, Social Protection and Health	8
2	Comprehensive Disaster Management	1
3	Infrastructure	23
4	Research and Knowledge Management	3
5	Mitigation and Low Carbon Development	9
6	Capacity Building and Institutional Strengthening	1
Total Projects:		45

Agency-wise project implementation, as per the single package consisting of 45 projects under this evaluation, was done as below (Table 2.2).

Table 2.2 Number of projects implemented by the single agency

No.	Implementing agency	Affiliated ministry	No. of Projects
1	Bangladesh Water Development Board (BWDB)	Ministry of Water Resources	11
2	Municipalities (Patuakhali, Mothbaria, Komolganj, Kaliakoir, Lalmohon, Bhola, and Singra)	Local Government Division of MLGRDC	7
3	Local Government Engineering Department (LGED)	Local Government Division of MLGRDC	5
4	Bangladesh Forest Department (BFD)	Ministry of Environment, Forests and Climate Change (MoEFCC)	3

No.	Implementing agency	Affiliated ministry	No. of Projects
5	Bangladesh Agricultural Research Institute (BARI)	Ministry of Agriculture	2
6	Bangladesh Agricultural Development Corporation (BADC)	Ministry of Agriculture	2
7	Department of Public Health Engineering (DPHE)	Local Government Division of MLGRDC	2
8	Bangladesh Rural Electrification Board (BREB)	Power Division, Ministry of Power, Energy and Mineral Resources	2
9	Bangladesh Army	Ministry of Defense	1
10	Khagrachari CHT Pourashava	Ministry of CHT Affairs	1
11	Department of Agricultural Extension (DAE)	Ministry of Agriculture	1
12	Bangladesh Institute of Nuclear Agriculture (BINA)	Ministry of Agriculture	1
13	Cyclone Preparedness Programme (CPP)	Ministry of Disaster Management and Relief	1
14	Department of Disaster Management (DDM)	Ministry of Disaster Management and Relief	1
15	Rajshahi City Corporation (RCC)	Local Government Division of MLGRDC	1
16	Palli Daridra Bimochon Foundation (PDBF)	Rural Development Division of MLGRDC	1
17	Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU)	Ministry of Education	1
18	Department of Environment (DoE)	Ministry of Environment, Forests and Climate Change (MoEFCC)	1
19	Institute of Fuel Research and Development (IFRD)	Ministry of Science and Technology	1

2.2 Evaluation Objectives

The overall objectives of the evaluation study are (a) critically observe and review the background, objectives, approval/revision status, cost, implementation period, and (b) year-wise fund allocation according to CCTF rules, expenditure against the allocation and all other relevant information of the projects.

2.3 Scope of Work

Based on the overall evaluation objectives, as narrated above, the specific scopes of consultancy services were to:

- Critically observe and review the background, objectives, approval or revision status, cost, and implementation period, year-wise fund allocation according to CCTF

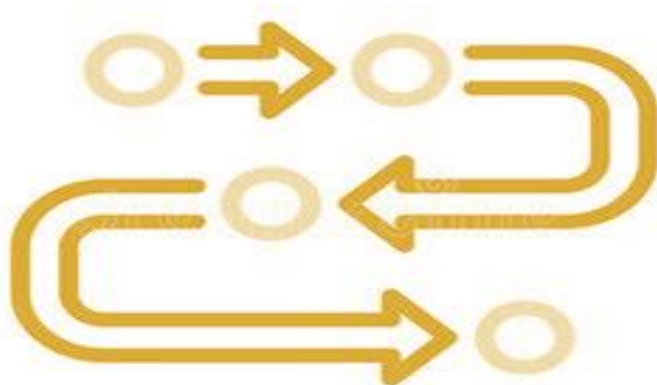
rules, expenditure against the allocation and all other relevant information of the projects;

- b) Collect, review, analyze, and present with graphical/tabular form of data in regards to overall and component-wise implementation progress (physical and financial) of the projects;
- c) Review and describe the progress in achieving project objectives and provide opinions on whether the planned activities were making the projects effective;
- d) Examine and review the tender documents (invitation to tender, evaluation of the tender, approval procedures, contract awards, etc.) to verify whether the existing procurement acts and rules (PPA-2006/PPR-2008) were followed in procuring goods, works, and services to implement the projects;
- e) Examine and review the status of procured goods, works, and services, their maintenance, and the performance of concerned staff;
- f) Monitor whether implementation of the projects or any of the components was delayed in terms of financing, procuring goods, managerial inefficiency, which caused increased project cost or delayed in implementation period and identify/analyze the reasons/responsibility for the delay;
- g) Analyze the relevance and effectiveness of the main activities done under the project, and highlight on the success stories, if any;
- h) Analyze the strengths, weaknesses, opportunities, and threats (SWOT) of the project, and appropriate recommendations to overcome the weaknesses and challenges;
- i) Provide expert opinions on the exit plan of the projects;
- j) Verify the duplication or similarities among activities of this project and with other projects in the same locality;
- k) Verify whether the quality and quantity of the works were done as per approved design and specifications,
- l) Review the studies conducted under the projects, if any;
- m) Review and make opinion on the socio-economic impacts of the projects;
- n) Provide recommendations based on observations;
- o) Review the sustainability of the projects and activities;
- p) Analyze and make comments on how the projects relate to the thematic areas of BCCSAP 2009, and
- q) To provide projects monitoring and evaluation tools.

2.4 Duration of the Study

The consultancy services for the evaluation task (i.e., evaluation of BCCT financed 45 projects implemented by different government agencies) was for a period of six (6) months after awarding the contract. That covered the calendar period of July to March 2024.

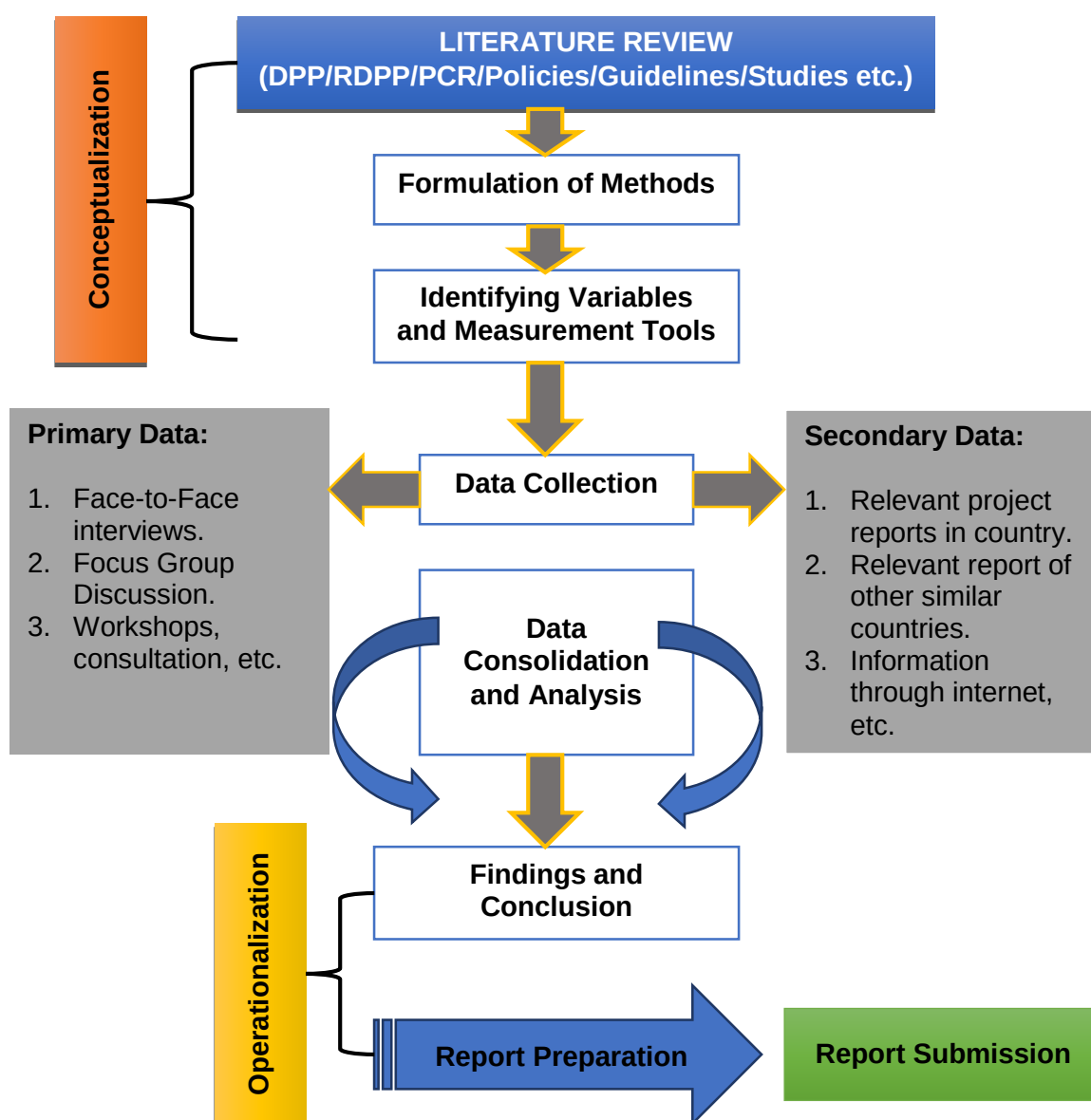
Section 3. Approach and Methodology



3.1 Overall Approach

The overall approach of the evaluation study was highly participatory, exploratory, and adaptive because of the complex nature of the assignment (for example, 45 different and diversified projects were under a single evaluation task/assignment). This approach was similarly adopted for undertaking evaluation of all 45 projects. Although a few projects (8 out of 45) were evaluated using a combination or mix of quantitative and qualitative methods, the remaining 37 projects were evaluated using qualitative methods only. The use of qualitative methods or a combination or mix of qualitative and quantitative methods for evaluation was considered depending on whether the projects had a direct impact on households and/or communities. The projects those were most likely to have an impact at the community level evaluated solely through qualitative methods, while the remaining projects that were most likely to have an impact at the household level evaluated through a combination or mix of quantitative and qualitative methods. The overall methodological approach and steps/process deployed for undertaking the evaluation study is schematically shown in figure 3.1 below.

Figure 3.1: Overall Approach used the Purpose of the Evaluation Study



The evaluation task was completed in a major four (4) steps. The detailed steps undertaken for the completion of the evaluation task as are illustrated below.

Step I: Planning

- Planning/Inception meeting with BCCT
- Collect and review relevant project documents, policies, circulars, acts, ordinances, rules etc.
- Preparation of study design and program planning including design and development of digital toolkit-based questionnaire for data collection
- Design and develop work plan for impact evaluation
- Submission and presentation of Inception Report
- Methodology design and validation workshop
- Finalization of Inception Report incorporating comments and feedback obtained from BCCT
- Pre-testing and finalization of data collection tools/instruments through field testing, feedback incorporation and BCCT's approval
- Orientation training of field level data collection team
- Field mobilization and staff deployment in the field for data collection (both quantitative and qualitative)

Step II: Data Collection

- Collection of data for impact evaluation through questionnaire and checklists
- Supervision and quality control of data collection activities
- One central (Dhaka) level and four local level (Bhola, Mymensingh, Chittagong and Dhaka) consultation workshops for SWOT analysis of the projects
- Identification of issues and formulation of recommendations

Step III: Data cleaning, processing and analysis

- Data encoding (for open-ended questions), gathering, cleaning and database development
- Qualitative data transcription and compilation
- Data processing and tabulation
- Data analysis followed by generating output tables and infographics for report writing

Step IV: Findings Validation and Report Development

- Draft report preparation and submission
- Draft report presentation to the Technical Committee
- Draft final report preparation and submission
- Draft final report presentation to the Technical Committee
- Evaluation findings validation workshop at central level
- Evaluation findings dissemination workshop at national level
- Preparation of final report and printing
- Submission of the final report (in English)

Any deviation in methodological approaches and steps, as required, were adequately and appropriately consulted with the Client (i.e., BCCT) and finalized upon mutually agreed basis. Therefore, such changed decisions were applied at the subsequent stages of the evaluation including field implementation, data collection and processing, report development, validation of findings, finalization, and dissemination.

3.2 Methodology

As already mentioned, the evaluation study on BCCT-funded 45 projects implemented by different government agencies was conducted using a mix of qualitative and quantitative methods and data collection tools. These are further elaborated hereunder.

3.2.1 Quantitative

Quantitative methods and data collection tools and instruments (DCTs) used for the evaluation study include the following:

1. Desk review of project-related documents⁵
2. Semi-structured Questionnaire for Quantitative Data Collection
3. Project observation and physical verification (PO&PV) for the projects having physical or infrastructure components



Beneficiary interview by a Data Enumerator



Beneficiary interview by a Data Enumerator

⁵ Documents include: a) the project proposal (DPP/RDPP), b) the project completion report (PCR), c) the project implementation manual, d) the procurement documents (invitation to tender, evaluation of the tender, approval procedures, contract awards, etc.) of the packages (goods, works, and services), and e) any progress reports, studies, etc. (f) monitoring reports, (g) Bangladesh Climate Change Strategy and Action Plan 2009 (h) Climate Change Trust Act 2010, Climate Change Trust Fund Policy 2010, (i) Bangladesh Climate Change Trust Guidelines and Principles (Nitimala), 2012; (j) SDGs, 6th and 7th Five Year Plans of GoB, (k) Perspective plan, (l) Delta Plan, among others



Consultant's observation of F2F interviewing at field



Beneficiary interview by a Data Enumerator

3.2.2 Qualitative

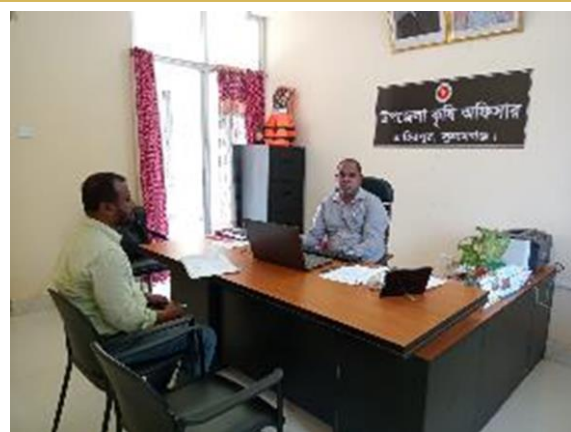
A set of qualitative methods and data collection tools were designed and developed for the purpose of the evaluation study. These tools were used for both types of projects, whether they had or did not have tangible impacts on communities and households (related to climate change). The set of qualitative data collection tools (DCTs) included the following:

a) Key informant interviews (KIIs)

As part of qualitative methods and tools, a set of KII checklists, as well as documentation and reporting guidelines, were designed and developed (please see Annex 10.2). These were finalized and approved through appropriate consultation with the BCCT before field-level



Key Informant Interview at Boda, Panchagarh



Key Informant Interview at Tahirpur, Sunamganj

application. KIIs were organized and conducted with project-related key knowledgeable persons (i.e., informants) such as project directors, managers, frontline implementing staff, and higher authorities of the implementing agencies to obtain and, in some cases, validate or triangulate important information about the implemented projects. KIIs were also performed with the following respondents depending on the nature of the project: the Upazila Chairman, UNO, Municipality Mayor, Counsellors, Chief Executive Officers of Municipalities, Assistant Officials, and the staff who were directly involved in the

implementation of projects. That means these KII sessions were held both at the central and local levels.



Key Informant Interview



Group picture after Key Informant Interview of PDBF Officer

b) Focus Group Discussion (FGD)

FGDs were planned to facilitate small-group discussions (ideally between 6-8 participants with anonymous backgrounds and interests) with the targeted groups of common interests. Those were applied mainly to the direct beneficiaries of the projects and, if applicable, to some of the indirect beneficiaries at the grass-roots level. Like other tools, a separate set of FGD facilitation, documentation, and reporting guidelines were designed and developed.

Depending on the nature of the project, FGDs were held with targeted project beneficiaries (male and female), such as school-teachers, local religious leaders, community-level influential and elite persons, CPP volunteers and coastal fishermen, Upazila Disaster Management Committees, Union Disaster Management Committees, Shelter Management Committees, Town Development Committees and others.



After FGD session at Patgram, Lalmonirhat



FGD session at Sherpur

b) Case Studies (using IDIs i.e., in-depth interviewing method)

Case studies were conducted at household and community levels upon the tangible impacts of project interventions (related to climate change) observed during field visits carried out by the consultants. The candidates for "Case Studies" were purposefully selected based on spot observation findings. Particular "cases of either successes or failures" were selected and thoroughly studied through in-depth interviews with individuals or groups of

individuals at the household or community levels who were directly impacted by the projects implemented. The distribution of target numbers of case studies was proportionate to the number of projects implemented under each of the BCCSAP thematic areas, and the reporting was also done accordingly.

c) Observation and Physical Verification

In total, 106 observations were conducted for 45 projects following the observation checklist, which was prepared and finalized through appropriate consultation with BCCT. Physical observations covered canals, drains, solid waste disposal systems, dumping places, cyclone/flood shelters, and other infrastructure, demonstration plots, forest sites, biogas plants, streetlamps, solar-powered irrigation pumps, solar systems, forest information generation, and networking systems, and household conditions in terms of their livelihoods among relevant others depending on the nature of the project.



Physical observation of Meghna riverbank protective work by Consultant at Noakhali



Physical observation of Chellakhali river rubber dam irrigation project by Consultant in Sherpur

d) Regional and Central level consultative workshops with key project stakeholders for SWOT analysis

Regional and central level stakeholder workshops were organized with the support of BCCT and the implementing agencies for undertaking SWOT analyses (strengths, weaknesses, opportunities, and threats) of the implemented projects. The project managers, frontline staff, and volunteers who were directly involved in the implementation process were the participants of the consultative SWOT analysis workshops.



Photo: Central Workshop at BCCT Conference Room at Dhaka with the presence of Managing Director of BCCT

e) National level validation workshops

A national-level stakeholder workshop was organized and facilitated jointly by the consultants and BCCT to validate the evaluation findings. This was done prior to the finalization, printing, and formal dissemination of the study findings at the national level.

3.3 Sampling Estimates, Distribution and Sample Selection

The sampling sizes for quantitative surveys of eight selected projects were estimated based on 95% confidence level, for which the value of Z is 1.96, with a permissible error margin of $\pm 5\%$ (0.05), and a certain level of design effect ranging between 1.15 and 1.75. The final estimation of sample sizes was determined using a standard statistical formula, which is as shown below:

$$n = \frac{Z^2 p(1-p)}{e^2} \times D_{ef}$$

Where:

n = the required sample size

p = the parameter to be estimated from the sample,

Z = the value of abscissa of standard normal variate denoting the confidence level of the estimated parameter,

e = the permissible error margin or precision rate, and

D_{ef} = Design Effect

According to the estimation used for each of the relevant projects, the sampling sizes vary greatly because of their geographic differences as well as beneficiary coverage. Notable is that there were no projects found with their targeted population sizes. However, considering that every project under sampling estimation has an infinite population, the estimated sampling size for the projects is as shown in Table 3.2. Further details of sample distribution among all 45 projects are presented in Annex 11.6.

Table 3.2 Overview of Qualitative and Quantitative Data Collection

Sl.	Method	Sample sizes by categories of tools
1	Sample size for Household Survey covering 8 projects	4,135
2	Key Informant Interview (KII) for all 45 projects	195
3	FGDs for all 45 projects	98
4	Case studies for all 45 projects	36
5	Observation and physical verification for all 45 projects	106
6	Study design workshop	1
7	Local level workshop including SWOT analysis	4
8	National and central level workshop	2

The following sampling distribution was made and planned, and it was based on a multistage stratified random sampling basis:

Stage 1: Sampling of project districts (at least 30% of project districts were taken) was done using a simple random sampling strategy.

Stage 2: As sampling frames were unavailable during the evaluation, distribution of estimated project-wise samples among the sampled districts was made equally upon receipt of such sampling frames; the distribution of samples might have been different.

According to the table presented above, quantitative sampling was done for 8 (eight) out of 45 projects under the evaluation study. The following are the projects containing sample sizes assigned against each of them for household survey conduction:

No.	Name of Project(s)	Sample size (quantitative)
1	Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts implemented by BARI under the BCCSAP Theme I	500
2	Climate-tolerant rice, wheat, lentils, and oil seed production, processing, and distribution project implemented by BADC under BCCSAP theme I	704
3	DAE implemented a floating vegetable and spice production technology extension project in flood and waterlogged areas as a climate change adaptation strategy under BCCSAP theme I	504
4	DPHE implemented safe water supply projects in climate affected Babuganj and Muladi upazilas of Barishal district under BCCSAP theme I	430
5	Safe water supply project in climate-affected Monpura and Charfason upazilas of Bhola district—Phase II carried out by DPHE under BCCSAP Theme I	430
6	CPP's Enhancing the Capacity of CPP Volunteers and Costal Fishermen to Cope with Climate Change Project was carried out under the BCCSAP Theme II	705
7	The construction of climate-resilient houses for the Tornado 2013 affected helpless people in Brahmanbaria district, a project implemented by DDM under the BCCSAP theme III	430
8	Providing Electricity Facilities to the Households of Former Enclaves in Bangladesh through the Solar System Project implemented by PBDF under the BCCSAP theme V	432

Apart from the projects listed above, all other projects were evaluated using qualitative methods and data collection tools. But all projects are physically verified; particularly of those have infrastructure components.

Stage 3: Sample sizes at ultimate sampling units were distributed downward to the targeted households using a cluster random sampling technique for each of the projects, since none of the projects had their sampling frames. The Kobo Toolkit was used to collect quantitative data.

3.4 Triangulation

Triangulation in social science research refers to the blending of data or approaches that allows the generation of answers to research questions from a variety of perspectives. As it provides a comprehensive understanding of the research issues, it aids in mitigating the biases associated with utilizing a single perspective in a research or evaluation project. Furthermore, the integration of various levels of investigators, data, and methods really strengthens the validity and reliability of the evaluation that was carried out. Because several viewpoints and methodologies were employed, the facts and information acquired for the evaluation accurately depict the situation as it is in real life.

As seen in figure 3.2, the current study has placed a strong emphasis on triangulating important findings from observations, workshops, qualitative and quantitative surveys, and document reviews. Therefore, the use of various quantitative and qualitative data collection tools (i.e., household interviews, FGD, KII, and physical observation) as well as stakeholders' opinions obtained through participatory workshops held at the national and local levels have greatly enhanced the quality and reliability of data and subsequent analysis used to draw conclusions in the evaluation.

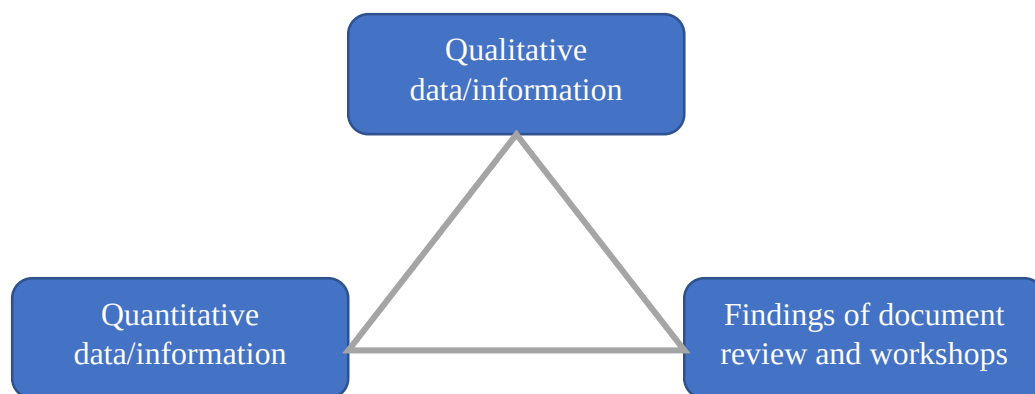


Figure 3.2 Triangulation process of the assignment

The methodologies and data collection tools for undertaking the evaluation study were planned, designed, and developed following a rigorous exercise on a broader evaluation framework initially formulated by the consultants and later consulted with and agreed upon by BCCT, which is presented in Table 3.1. This framework was prepared based on the scope of work delineated in the TOR.

Table 3.1 The Evaluation Framework for the Consultancy

Key Considered issues	Specific evaluation scopes	Areas of investigation/ origins of RQs	Method	Data Source	Defined targets under six thematic areas of BCCSAP 2009 (linked to projects)
Specific to individual projects or/in case it is applicable to a group of projects under each thematic area	1) Observe and review (critical) – summarized description added by critical analysis of key issues	- Project background - Objectives - Components (of major activities) - Approval/revision status - Cost (allocated budget Vs. actual expenditure) - Implementation period - Year wise fund allocation according to CCTF rules	Desk review of the relevant document	Secondary	ThemeI: Food security, social protection, and health–Targets: 1.1 Increase the resilience of vulnerable groups, including women and children, through development of community-led adaptation, livelihood diversification, better access to basic services and social protection (e.g., safety net) and scaling up 1.2 Develop climate resilient cropping systems, fisheries, and livestock systems, to ensure local and national food security 1.3 Implement surveillance systems for existing and new disease risks and ensure that health systems are geared up to meet future demand 1.4 Implement drinking water and sanitation programmes in areas at risk from CC. Theme II: Comprehensive Disaster Management – Targets: 2.1 Strengthen the government’s capacity and that of civil society partners and communities to manage natural disasters, and ensure that appropriate policies, laws and regulations are in place. 2.2 Strengthen community-based adaptation programmes and establish them in each of the disaster-prone parts of the country. 2.3 Strengthen cyclone, storm surge and flood early warning systems to enable more accurate short, medium, and long-term forecasts. Theme III: Infrastructure – Targets: 3.1 Repair and rehabilitate existing infrastructure and ensure effective O&M of the systems. 3.2 Plan, design and construct urgently needed new infrastructure to meet the changing conditions expected with CC.
	2) Collect data, review, analyze, and present	Physical (against planned activities): - Overall progress - Component wise implementation progress Financial (against allocated budget): - Overall expenditure (deviations, if any) - Component wise expenditure (deviations if any)	Document desk review KII with PD/DPD and others directly relevant with projects	Primary and secondary	
	3) Assess/review and describe progress/give opinion on/ achievements	- Planned activities - Project objectives - Whether those made the project effective	desk review of relevant docs Household SQS KII	Primary and secondary	
	4) Examine and review tender documents	- Invitation of tenders - Evaluation of tenders - Approval procedures - Contract awards	desk review of relevant docs KII	Secondary and primary	

Key Considered issues	Specific evaluation scopes	Areas of investigation/ origins of RQs	Method	Data Source	Defined targets under six thematic areas of BCCSAP 2009 (linked to projects)
		- Procurement of goods and services, etc. to verify whether those are done according to GoB procurement rules i.e., PPA 2006, PPR 2008			3.3 Undertake strategic planning of future infrastructure needs, considering the likely (a) future patterns of urbanization and socioeconomic development; and (b) the changing hydrology of the country, because of CC.
	5) Examine and review	- Status of procured goods/works/services and its maintenance - Performance of concerned staff	Physical verification. KII. desk review of relevant docs.	Secondary and/primary	Theme IV: <i>Research and Knowledge Management</i> – Targets: 4.1 Model CC scenarios for Bangladesh by applying global CC models and methodologies at regional and national levels. 4.2 Model the likely hydrological impacts of CC on the Ganges-Brahmaputra-Meghna system to assess likely future system discharges and river levels to derive design criteria for flood protection embankments. 4.3 Monitor and research the impacts of CC on the macro-economy of Bangladesh and key sectors and contribute to developing a climate-proof national development plan. 4.4 Research the linkage between (a) CC, poverty, and vulnerability and (b) CC, poverty and health in order to identify possible interventions to increase the resilience of poor and vulnerable HHs to CC. 4.5 Establish a Centre for Research and Knowledge Management on CC (or a network of centers) to ensure Bangladesh has access to the latest ideas and technologies from around the world and ensure that data is widely and freely available to researchers. Theme V: <i>Mitigation and Low Carbon Development</i> – Targets: 5.1 Develop a strategic energy plan and investment portfolio to ensure national energy security and lower greenhouse gas emissions.
	6) Thoroughly monitor and identify/review/ PCR cross-check	- Whether implementation of project or any of the components was delayed in terms of financing, procuring goods, managerial inefficiency, which caused increased project cost or delayed in implementation - Identify and analyze the reasons/responsibility (if so relevant) for such delays	desk review of relevant docs. KIIs	Secondary/primary	
	7) Assess and analyze relevance and effectiveness of	- The main activities implemented under the project (highlighting on success stories, if any)	Household SQS. FGD. Case study. desk review of relevant docs.	Primary/secondary	
	8) Analyze and recommend	- SWOT for each project - Appropriate measures to overcome the	Field based Consultative /participatory	Primary	

Key Considered issues	Specific evaluation scopes	Areas of investigation/ origins of RQs	Method	Data Source	Defined targets under six thematic areas of BCCSAP 2009 (linked to projects)
		weaknesses and challenges - Expert opinions on the exit plan/pathways	stakeholder workshop		5.2 Expand the social forestry programme on government and community lands throughout the country. 5.3 Expand the 'greenbelt' coastal afforestation programme with mangrove planting along the shoreline. 5.4 Seek the transfer of state-of the art technologies from developed countries to ensure that we follow a low-carbon growth path. 5.5 Review energy and technology policies and incentives and revise these, where necessary, to promote efficient production, consumption, distribution, and use of energy.
	9) Verify and present	- Duplication/overlapping or similarities among activities of the project with other projects in the same locality	Mapping of similar projects. KII. FGD	Primary/ Secondary	
	10) Physical verification of	- Whether the quality and quantity of the works are done as per approved design and specifications	Checklist based physical verification	Primary	
	11) Review	- Studies conducted under the project if any	KII. Doc review	Secondary	Theme VI: <i>Capacity Building and Institutional Strengthening</i> – Targets: 6.1 Review and revise relevant government policies to ensure that they take full account of CC and its impacts. 6.2 Mainstream CC in national, sectoral, and spatial development planning and ensure that impacts on vulnerable groups and women are prioritized. 6.3 Build the capacity of key government ministries and agencies to take forward CC adaptation. 6.4 Build the capacity of the government to undertake international and regional negotiations/cooperation on CC. 6.5 Build the capacity of the government, civil society and the private sector on carbon financing to access various global market-based climate funds. 6.6 Build the capacity for education and training of climate migrants and facilitate their migration to other countries and integration in new societies.
	12) Assess, review, and make opinions on	- Socioeconomic impacts of the project	HH SQS. FGD. Case study	Primary	
	13) Review and provide	- Issues identified, and - Recommendations based on observations. - Sustainability of the project and its activities	KIIs. Professional judgement based on findings;	Primary and secondary	
	14) Provide number of	- Beneficiaries (direct and indirect) of the project	desk review of relevant docs. KII	Secondary	
	15) Analyze and make comments on	- How the project relates to the thematic areas of BCCS&AP 2009	desk review of relevant docs	Secondary	

The following few pages captured a photo gallery that includes photographs of inception workshop for validation of study design and methodologies, Consultants' staff training, BCCT based findings sharing and validation workshops, and related others.



Photo 1 – Inception Workshop at BCCT with the presence of Managing Director, BCCT



Photo 2 – Inauguration of Consultants' Staff Training by Director, M&E of BCCT



Photo 3 – Consultants' Staff Training



Photo 4 – Consultants' Staff Training



Photo 5: Presentation discussion of draft evaluation report findings at BCCT Conference Hall



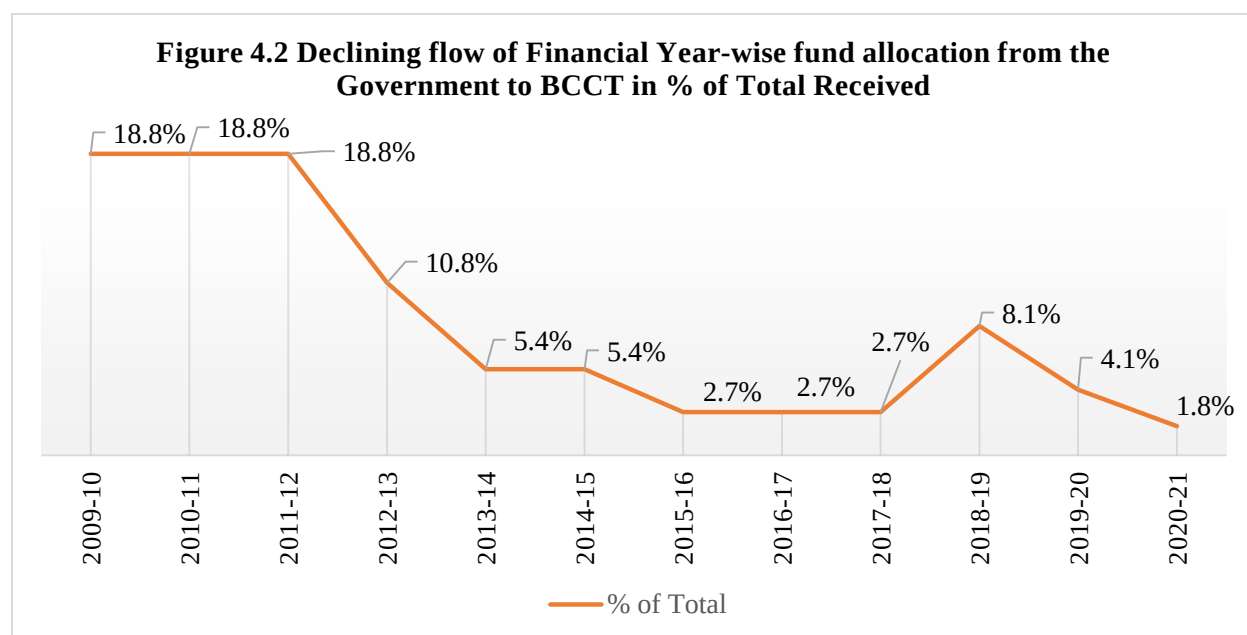
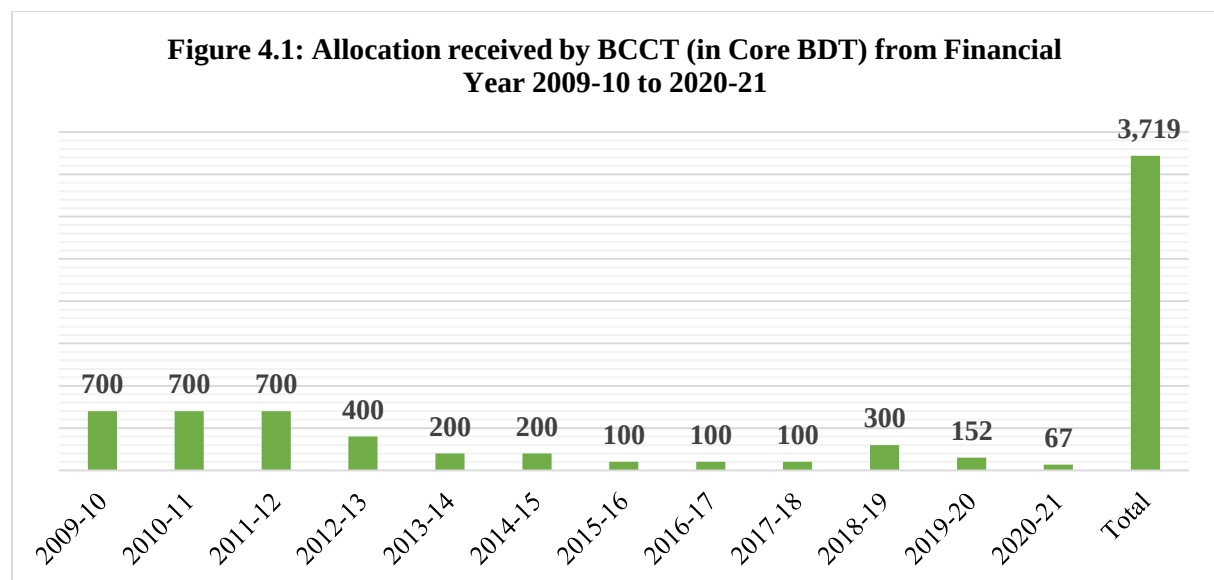
Photo 6: Consultants at Draft Report Findings Presentation at BCCT Conference Hall

Section 4. Evaluation Findings



4.1 The BCCT and its Statutory Roles in Project Financing

Bangladesh Climate Change Trust (BCCT) is a statutory body (i.e., agency) under the Ministry of Environment, Forest, and Climate Change (MoEFCC) created through the enactment of the Climate Change Trust Act 2010. A Climate Change Trustee Board and a Technical Committee are also created by the Act, to which the BCCT provides secretarial support and oversees all relevant activities to make the best use of the funds it receives from the government. The BCCT had received a total of Tk. 3,719 crore in revenue since its inception by the end of fiscal year 2020-21. In the first three years, the BCCT received a total of 2,100 crores (700 crores each year); therefore, it started declining to 400 crores in the fiscal year 2012-13, 200 crores each for 2013-14 and 2014-15, and then 100 crores each for 2015-16, 2016-17, and 2017-18. Further, the fund flow increased to an amount of 300 crores in 2018-19 and afterwards started falling to 152 crores in 2019-20 and only 67 crores in the last fiscal year of 2020-21. Please refer to figures below.



According to the Climate Change Trust Act 2010, the BCCT spent 66% of the funds received for the purpose of the implementation of projects through government departments and agencies, whilst the remaining 34% of funds were kept deposited (e.g., FDR) into different

government and private banks to be used as a "revolving fund" in the future. The legal provision allows BCCT to explore and leverage foreign aid and opportunities from sources abroad as well, but, till now, it has not yet been leveraged. All these are done in accordance with the Climate Change Trust Fund Utilization Guidelines.

The BCCT generally does not notify or call for proposals from the interested ministries and their statutory bodies, i.e., departments and agencies, to prepare and submit project proposals. Occasionally, they used to circulate notifications among the ministries about the availability of funding opportunities when sufficient responses were not received. Typically, from within the government system, ministries and agencies concerned get to know the funding availability and opportunities at the BCCT. Therefore, interested ministries and their agencies prepare and submit their proposals to the BCCT for funding using standard government procedures as illustrated in the gazette notification on the project preparation, submission, and implementation policy (i.e., Niteemala). A general overview of the process of project or programme preparation and submission to, and therefore, funding by, the BCCT is schematically shown in figure 4.3.

BCCT as a statutory body is directly accountable to the Parliamentary Standing Committee on Environment, Forest and Climate Change. The accounts of BCCT are subject to be audited by the Comptroller and Auditor General, and it prepares Annual Reports on the organization's performances submitted directly to the Trustee Board.

The following steps are taken by BCCT in respect of monitoring and evaluation: PIC and PSC are formed.. Project directors need to submit monthly and quarterly reports to the director. BCCT monitors 45% of the running projects under the Annual Performance Agreement. Quarterly meetings are held with the Projects Directors presided over by the Managing Director. Monitoring is done twice by the implementing ministry and completion report must be submitted before the 4th installment is released.

A Citizen Charter is prepared by BCCT, and which remain dynamic (updating continues) and encompasses mechanism of client (and people of the country) grievance redressing (a Dropbox is placed for submitting complaints pertinent to BCCT's performance and projects being implemented at field, and for which a separate committee are formed and remain functional to review and redress public complaints, if dropped any) as well as ensuring people's right of accessing to BCCT's information through effective implementation of RTI Act of the Government.

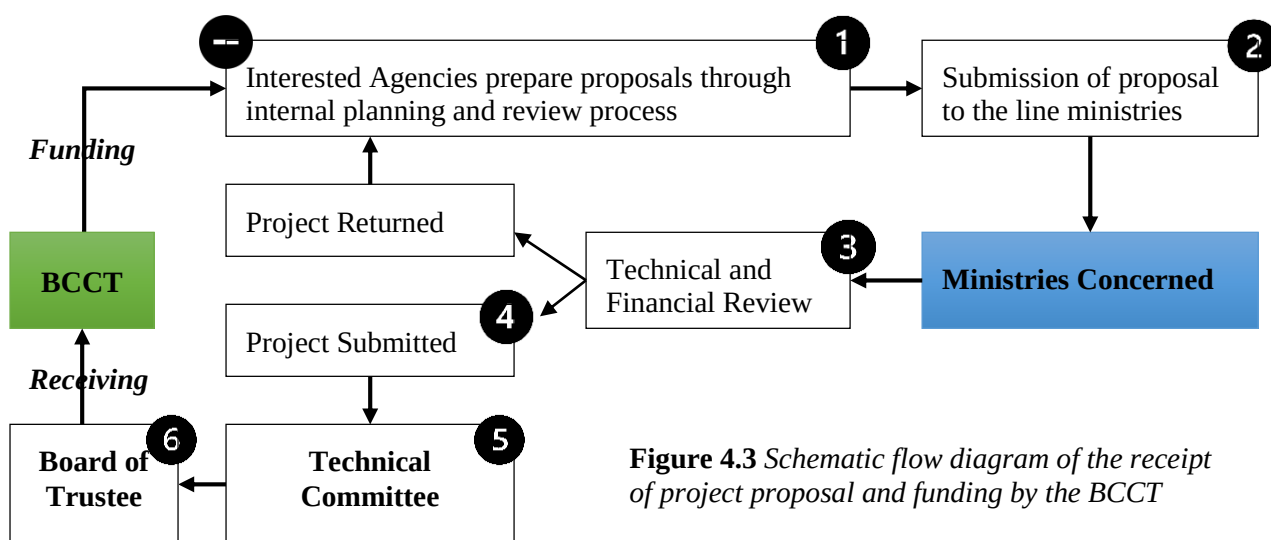


Figure 4.3 Schematic flow diagram of the receipt of project proposal and funding by the BCCT

4.2 Project Funding by Thematic Areas of BCCSAP 2009

BCCT funding of projects and/or programmes is guided by the core guidance of the BCCSAP. This strategy directs BCCT in such a way that the needs of the poor and vulnerable, including women and children, shall be prioritized in all activities implemented under the Climate Change Action Plan 2009. BCCSAP comprises immediate, short-term, medium-term, and long-term programmes. The Bangladesh Climate Change Trust (BCCT) Act 2010, on the other hand, entrusts the BCCT with raising funds (primarily from revenue sources) and supporting projects and/or programmes undertaken by government departments and agencies covering six thematic areas, i.e., pillars, of the BCCSAP 2009.

As agreed by the stakeholders involved, BCCSAP is to be implemented under the overall guidance of the National Environment Committee, chaired by the Honorable Prime Minister, and it is to be coordinated by the Ministry of Environment, Forest and Climate Change (MoEFCC). The BCCT-funded projects will be implemented by the concerned ministries or their agencies, with the participation of civil society and private sector organizations as needed.

According to the guidelines and principles of the BCCT and BCCSAP 2009, there were 45 projects that received funds from the BCCT and were implemented by different agencies and departments in different locations and time periods. These projects were categorized into six thematic areas, and as such, the evaluation findings of the projects in a single package are synthesized and presented in a similar fashion. However, 45 different fact sheets are prepared based on the evaluation findings (one for each of the projects included in this evaluation package) and thus annexed to this report to reassure the readers (different projects from different agencies) by serving their areas of interest.

4.3 Process of Project Formulation, Appraisal, and Implementation

A BCCT-prescribed format was used by the respective agencies in the formulation of the projects, which were revised by the technical committees of the ministries concerned before official submission for the subsequent review (by the Technical Committee), approval (by the Trustee Board), and financing by the BCCT. The BCCT prescribed format encompasses all required fields of information and planning for the purpose of implementation in the field. Out of those, there were some key fields like Result Framework, Operation and Maintenance (O&M), Expected Socioeconomic Impacts of the Interventions, Exit Plan, and Sustainability that were either not adequately or appropriately filled in by most of the projects under this evaluation. While all projects had gone through a robust process and procedures of review, appraisal, and approval by the appropriate bodies and authorities before being financed by the BCCT and their implementation in the field, the evaluation findings reveal a few but important weaknesses regarding the issues and fields at the level of implementation. Those are:

- a) **Result framework:** Most of the implementing agencies in their project documents under evaluation, did not provide elaborate information regarding the project activities in relation to the project activities. Besides, it has not provided a SMART framework, which would have enabled the relevant implementing agencies to develop more detailed individual project-based monitoring and evaluation plans and their effective field implementation. This has also limited the ability of implementing agencies to participate in the M&E process for the projects they implemented and BCCT has struggled to hold implementing agencies accountable for projects.
- b) **Operation and Maintenance (O&M):** This was immensely important, especially for the projects having infrastructure components. It is worth noting that 37 of the 45 projects in the evaluation package included bulk infrastructure; almost every agency did not specify how they would ensure proper O&M of the infrastructure facilities after the completion of the project. In this field of the project proposal, it has almost universally been stated that the agencies will ensure infrastructure

operations and maintenance with their own revenue funds, leaving the specifics of where and how those funds will come in unspecified work. This has had a negative impact on the project infrastructures, which were mostly identified in this evaluation.

- c) **Expected Socioeconomic Impacts:** Most of the projects used narration and a brief description of the socioeconomic impacts of project interventions. In most cases, these appeared to be out of line with the interventions, mostly like general statements, and thus could not be measured.
- d) **Exit Plan and Sustainability:** These two terms are interrelated, given that if there are clearly defined and well-detailed exit plans, there is great potential for the project activities and impacts to be sustainable. Most projects are found to have no detailed exit plan or any idea how they will make sure that project activities will carry forward and will be sustainable.

Given the inherent flaws in the project formulation, the issues of post-project technical review and appraisal have become a challenging proposition. This leads to rethinking the approval process and revisiting the measures taken for monitoring and follow-up during implementation.

4.4 Thematic Area I: Food Security, Social Protection and Health

The goal as set forth under this theme of the BCCSAP is to ensure that the poorest and most vulnerable in society, including women and children, are protected from climate change and that all programmes focus on the needs of this group for food security, safe housing, employment, and access to basic services, including health. There were eight (8) projects implemented under this theme, and the list of projects, including the names of respective implementing agencies and the period of implementation, is as below.

Ref. No.	Project particulars
1.1	Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts implemented by BARI during May 2010 to April 2012
1.2	প্রতিকূলতা সহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প implemented by BADC during June 2011 to December 2013
1.3	বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প implemented by DAE during July 2013 to December 2017
1.4	জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প implemented by DPHE during January 2017 to June 2019
1.5	জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহপ্রকল্প (২য়পর্যায়) implemented by DPHE during January 2017 to December 2019
1.6	জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় গোপালগঞ্জ জেলার কোটালীপাড়া উপজেলায় খাল পুনঃখনন প্রকল্প implemented by BWDB during May 2013 to December 2016
1.7	জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় মাদারীপুর জেলার মাদারীপুর সদর ও রাইজের উপজেলায় খাল পুনঃখনন প্রকল্প implemented by BWDB during December 2013 to December 2016
1.8	জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় শেরপুর জেলার নালিতাবাড়ি উপজেলাধীন চেল্লাখালী নদীতে রাবার ড্যাম নির্মাণ প্রকল্প implemented by BADC during April 2014 to April 2016



Photo 7 : Picture shows BADC & BARI projects on seed production of climate tolerant crop varieties and firm productivity



Photo 8 : Vegetable productive in floating beds – demonstrated by DAE in Gopalganj district (below)

Evaluation findings:

4.4.1 Year-wise fund allocation and expenditure by the projects

The following table entails the year-wise BCCT fund allocation to and expenditures incurred by the projects (8) under Theme 1 (ref.: PCRs). Figures in the table are in lakh BDT.

P. SL	Year-1		Year-2		Year-3		Year-4		Year-5	
	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.
1.1	52.26	48.65	47.19	23.18						
1.2	673.12	671.40	1769.88	1757.03						
1.3	Data unavailable									
1.4	200.00	43.95	None	124.98	None	31.07				
1.5	NA	NA	133.96	41.86	33.49	125.59	0.00	41.86		
1.6	NA	NA	898.98	898.98	149.83	148.78	NA	NA	149.83	58.88
1.7	NA	NA	351.0	351.0	349.0	103.73				
1.8	NA	NA	1194.00	1101.24						

P. SL = Project Serial; NA = Not Available

These are included into the PCRs in tabular format only having no further clarifications relevant. During the consultants' field visit sitting officials of the implementing agencies couldn't clarify the pattern of the allocations and expenditures as well.

4.4.2 Objectives and component wise achievements

There were eight projects implemented under this theme, and those comprised the following (compiled) objectives:

- Supporting climate adaptive farm productivity enhancement of modern cultivars of pulses, maize, and oil crops and soil health in the char lands
- Producing saline tolerant rice, lentils, and oil seeds and drought tolerant rice and wheat seeds including processing, preservation, and distribution of seeds to the farmers
- Employment generation through promoting off-season crops for meeting the food security of ever-increasing population and nutritional needs, and floating vegetable and spices cultivation in the waterlogged areas
- Using unused hyacinths as a means of crop production alternate to cultivable land due to lack of cultivable land in the water-logged areas
- Assisting people in producing crops in adverse climate condition such as floods, and supply seeds preservation pots to preserve seeds during floods
- Increasing awareness through distribution (of leaflet, poster, booklet, information sheet) among the professionals, primary stakeholders on climate change impacts (in different sectors) and probable measures
- Ensuring safe drinking water supplies during emergencies by installing deep tubewells
- Facilitating increased navigation facilities and recharging groundwater by keeping rainwater through re-excavated canals and small riverine areas
- Increasing availability of surface water for irrigation and drinking purposes in the water-logged areas
- Improving overall environment and increasing the carbon sink by creating a green belt through community plantation/afforestation.

The implementing agencies were: (1) Bangladesh Agricultural Research Institute (BARI), (2) Bangladesh Agricultural Development Corporation (BADC), (3) Department of Agricultural Extension (DAE), (4) Department of Public Health Engineering (DPHE), and (5) Bangladesh Water Development Board (BWDB) under different ministries of the Government of Bangladesh.

The major activities of the projects implemented were:

- a) Research and training on farm productivity and food security enhancement
- b) Demonstration of technology
- c) Distribution of seed and fertilizer
- d) Seed production, processing, and distribution (of aman rice, boro rice, wheat, oil-mustard and soyabean and mung, khesari and falcon seeds)
- e) Bringing fellow land under water and employment creation for local people
- f) Support flood tolerant agricultural production to cope with climate change and awareness raising
- g) Installation of handpump deep tube-wells (38mm dia) with raised platforms
- h) Re-excavation of canals and rivers for irrigation facility improvement, and
- i) Construction of rubber dam structure with related works including WMCA office building and inlet-outlet

Relevance with the Thematic Targets of the BCCSAP

The following table is used to draw and link the project objectives (implemented under this theme) with the thematic targets as set forth in the BCCSAP theme I:

No.	Thematic target(s)	Relevance of the project objectives
1.1	Increase the resilience of vulnerable groups, including women and children, through the development of community-level adaptation, livelihood diversification, better access to basic services and social protection (e.g., safety nets, insurance), and scaling up	A few awareness raising programmes are undertaken scatteredly in different programmes for increasing the resilience of vulnerable farmers and other community groups. However, the initiative to scale up is rarely found.
1.2	Develop climate change resilient cropping systems (e.g., agricultural research to develop crop varieties that are tolerant of flooding, drought, and salinity, and based on indigenous and other varieties suited to the needs of resource-poor farmers), fisheries and livestock systems to ensure local and national food security	Most projects address this thematic target; however, those are mainly focused on agriculture, not much on fisheries and livestock systems. In fact, projects targeted for the fisheries and livestock sectors are very limited
1.3	Implement surveillance systems for existing and new disease risks and ensure health systems are geared up to meet future demands	There was no project undertaken to introduce and improve the surveillance systems to improve the health systems in the future.
1.4	Implement drinking water and sanitation programmes in areas at risk from climate change (e.g., coastal areas, flood-and drought-prone areas)	Two out of eight projects were implemented to address the water and sanitation issues.

Financial Progress:

A clustered brief narrative on the projects' introduction and overall financial progress (i.e., burn rates) made against the set target is presented hereunder.

SL	Name of Project	Financial Progress in BDT		
		Budget (lakh)	Spent (lakh)	Burn Rate
1	Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts implemented by Bangladesh Agricultural Research Institute (BARI)	156.26	99.46	63.7%
2	প্রতিকূলতাসহিষ্ণু ধান, গম, ডালও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প implemented by BADC	2,443.00	2,428.43	99.4%
3	বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প implemented by Department of Agricultural Extension (DAE)	1,380.00 increased to 1,500.00	1,500.00	100.0%
4	জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প implemented by DPHE	200.00	190.26	95.0%
5	Safe Water Supply Project in Climate change affected Manpura and Charfashion Upazila under Bhola District (2 nd phase) implemented by DPHE	162.45	141.83	87.3%
6	Re-Excavation of Khals in Upazilla: Kotalipara, District- Gopalganj to mitigate the adverse impact of Climate Change Project implemented by BWDB	1,198.64	1,106.64	92.3%
7	Re-Excavation of Khals in Upazilla Madaripur Sadar & Rajoir, District- Madaripur to mitigate the adverse impact of Climate Change Project implemented by BWDB	700.00	454.73	64.7%
8	জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় শেরপুর জেলার নালিতাবাড়ি উপজেলাধীন চেল্লাখালী নদীতে রাবার ড্যাম নির্মাণ প্রকল্প implemented by BADC	1,486.00	1,181.00	79.5%
Overall:		7,846.35	7,102.35	90.5%

Overall fund utilisation rate of the projects under this theme one is 90.5% (BDT 7,102.35 lakh against BDT 7,846.35 lakh).

4.4.3 Projects' relevance and effectiveness

The projects carried out under this BCCSAP theme were relevant to local contexts and community demands. The areas where the projects were implemented were found to be moderately to highly vulnerable to climate change (i.e., waterlogged, saline, and drought-prone areas), and coincidentally, those were spread across the climate-vulnerable community groups. Therefore, the projects addressed some of the local community's needs for climate adaptation, livelihood diversification, and better access to basic services and social protection. These have certainly contributed to the local community's capacity to adapt to climate change impacts, particularly in the case of food production and social security.

The effectiveness of the projects implemented was also reasonably moderate to high, according to the opinions of community members and local stakeholders. New crop varieties were developed, farmers received increased yields from their farms, and those were climate-tolerant (e.g., salinity, waterlogging, and drought). These allowed farmers to cultivate year-round and use fallen lands for agricultural production, which brought them additional financial income. People in the project areas now have more access to safe

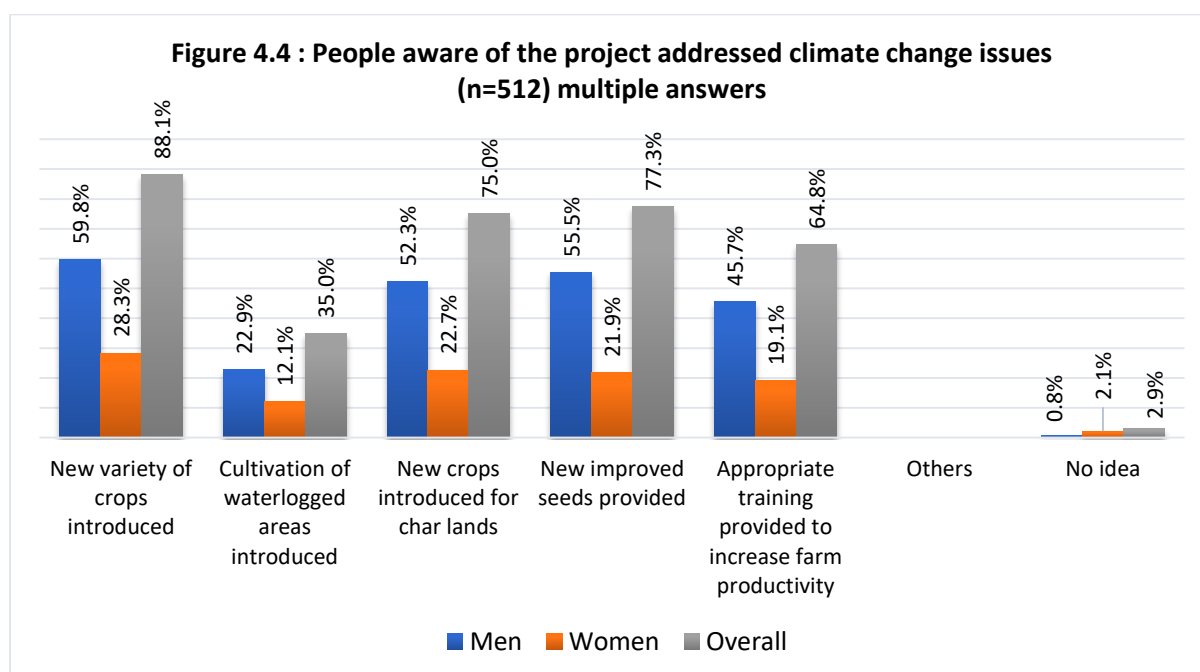
drinking water during, and after disasters. Installation of disaster-resilient water supply facilities (such as deep tube wells with raised platforms) have increased the water security. These have together resulted in increased food security, social protection, and health in the communities where the projects were implemented. Several projects, however, were carried out by scaling up initiatives while demanding that others do the same.

4.4.4 Socio-economic impacts and sustainability of the projects

The socioeconomic impacts of the project were remarkable in terms of increasing food security, social protection, and health. Farmers in the project areas have been longing for solutions to climate-affected farming losses, and they have begun (on their own initiative) cultivating new crop varieties that are waterlogging, salinity, and drought tolerant. Such new cropping systems have brought them opportunities for increased income and restored their livelihoods. However, evaluation efforts were made to determine how those innovative initiatives would be sustained. In some cases, particularly for agricultural innovation, it was found that farmers themselves took immense interest in carrying forward the initiatives on their own, while there were no such institutional mechanisms that had been established and kept functioning. Instead, reportedly, the respective implementing agencies kept themselves responsible for ensuring the sustainability of the initiatives on their own (by replicating and scaling up the models), which seems optimistic.

The analytical facts and figures (% peoples/beneficiary opinions) of the projects (quantitative) those were reflective of the above thematic findings, as for example, are presented below.

Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts implemented by BARI



The project beneficiaries were found aware of project interventions that addressed climate change issues in a significant magnitude. Considering the climate induced hazards like drought, increasing salinity intrusion into ground water, water logging and others, about 88% respondents opined that new variety of crops for all affected areas is introduced by the project, while 75% opined that new crops are introduced for char lands, and for those newly introduced crop varieties to be cultivated by farmers 77% opined that improved climate tolerant seeds are provided by the project. Apart farmers under project target are being provided with appropriate training to increase farm productivity (as per 65% respondents).

Figure 4.5: Peoples' perception on crop productivity as a result of project interventions (n=512)

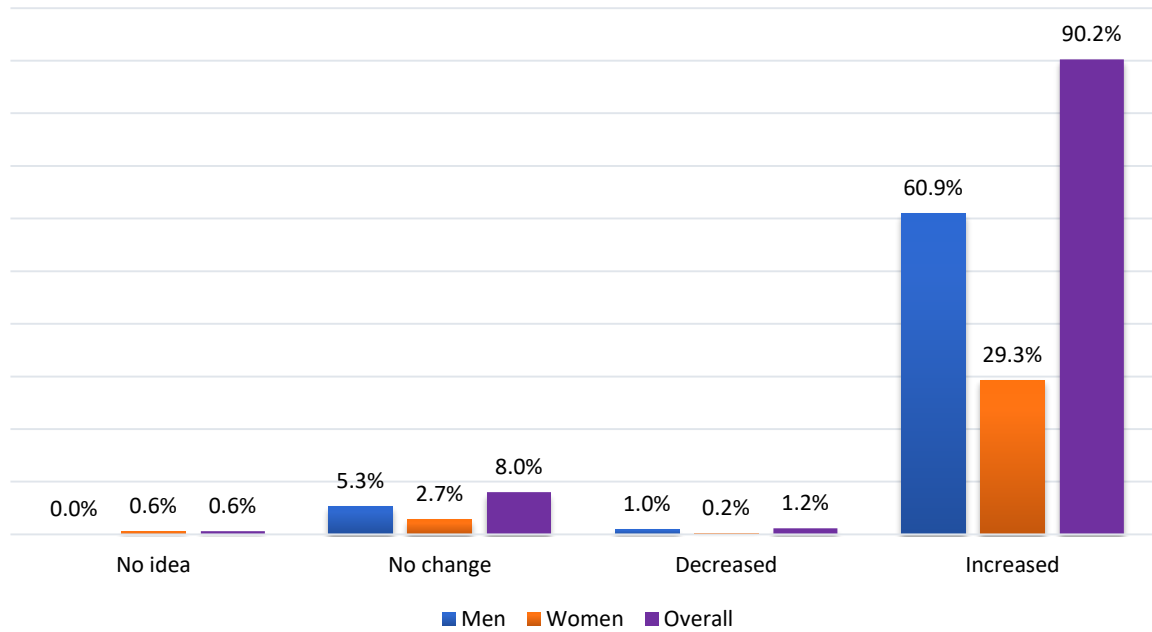
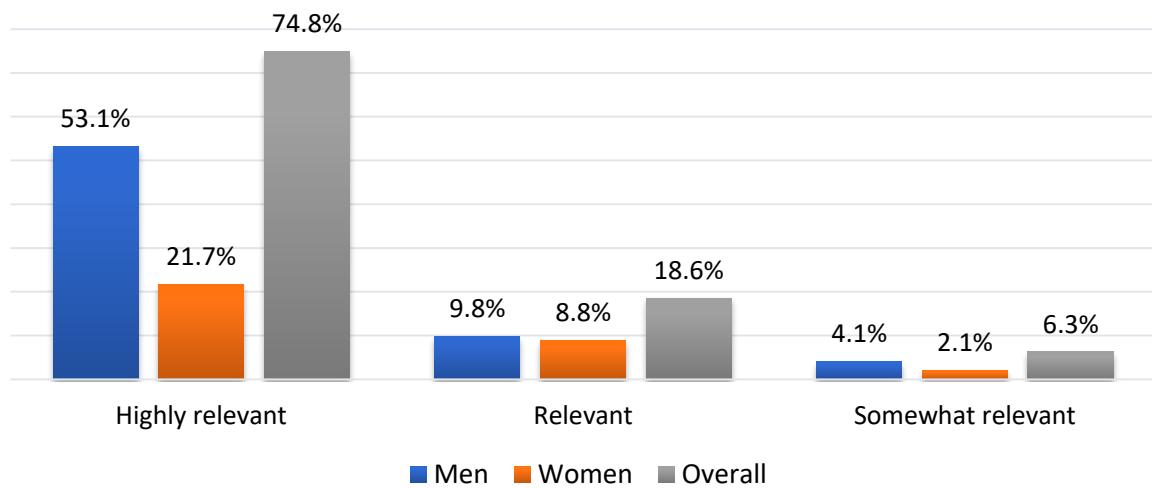
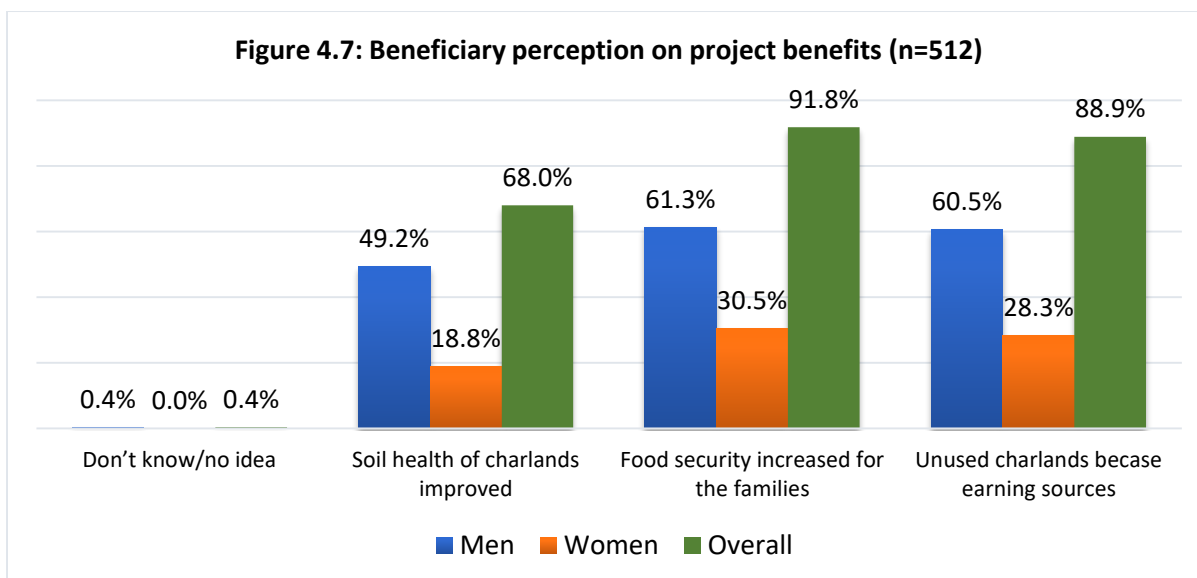


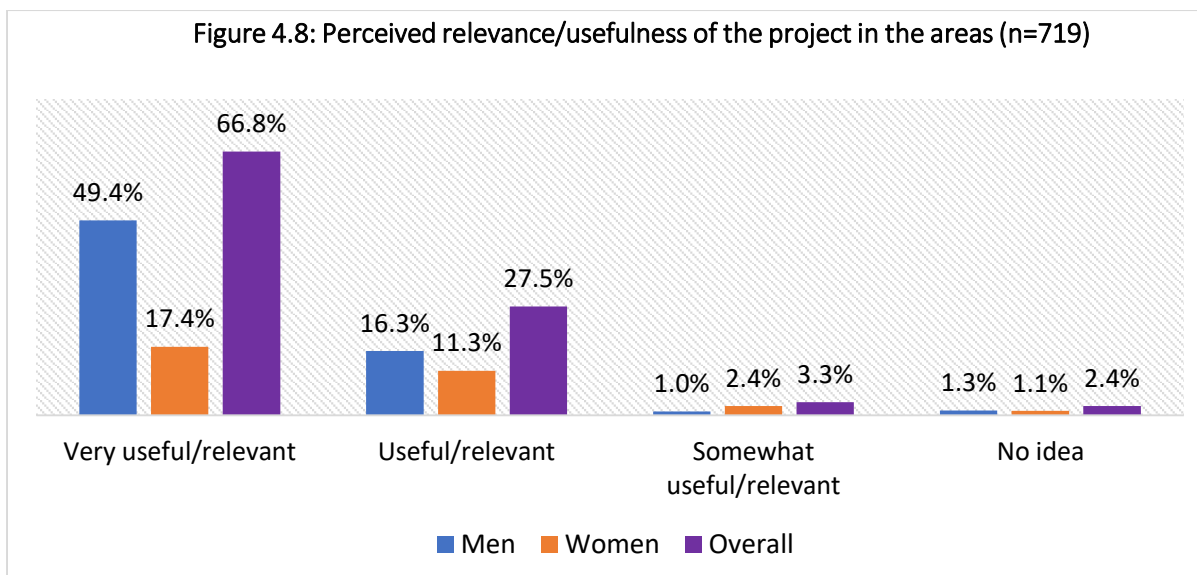
Figure 4.6: Perceived project relevance/usefulness (n=512)





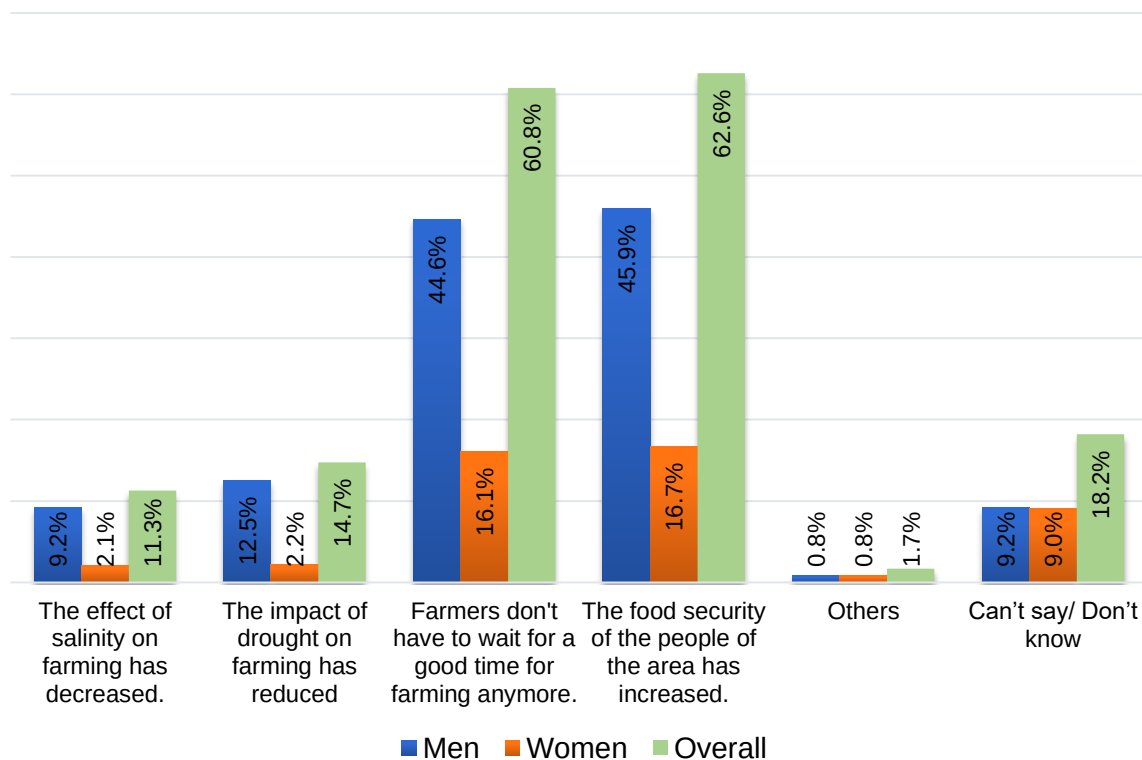
About 75% respondents opined that the project undertaken was highly relevant. While about 90% respondents opined that crop/farm productivity has been increased as a result of project interventions. Grossly related to project benefit (i.e., outcome), about 27% opined that soil health of charlands is improved, 37% opined that overall food security is increased for the communities, and 36% opined that unused or fellow charlands have become earning sources for the local farmers.

প্রতিকূলতা সহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প implemented by BADC



Most target beneficiaries of BADC's project (67%) were found to be having a changed perception that the project interventions were highly relevant to local context and useful for the communities; while 28% opined that those were somewhat relevant and useful.

Figure 4.9: People's perception on benefits of project interventions (n=719) multiple



About 36% respondents opined that as a result of project interventions now local farmers do not need to wait for favorable time for farming – meaning they can cultivate throughout the year. About 37% opined that the project has resulted in increased food security of the local communities.

বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প implemented by DAE

Figure 4.10: Peoples' perception on climate change effects on their livelihoods (n=803) multiple

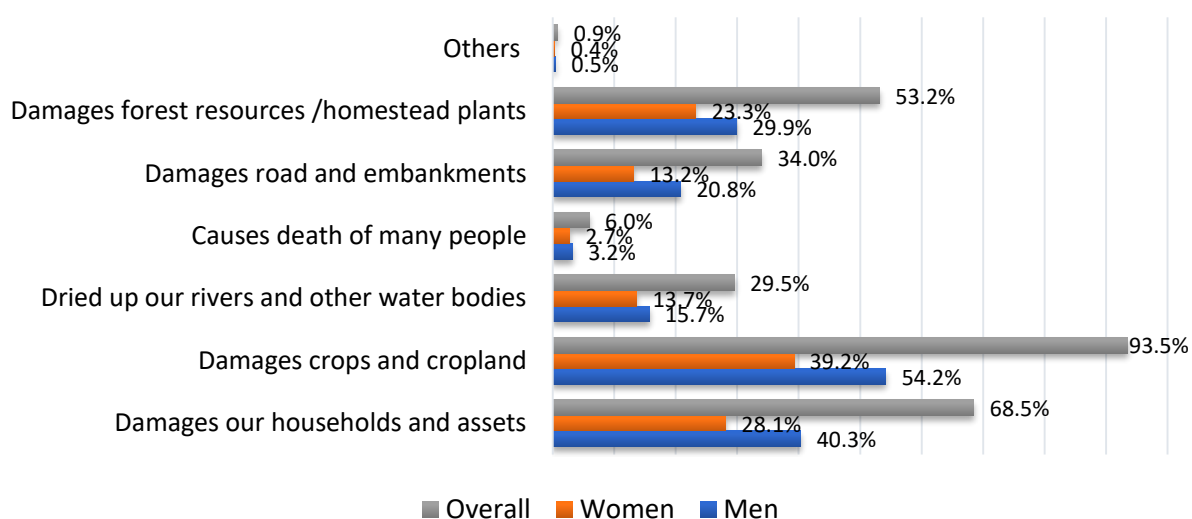
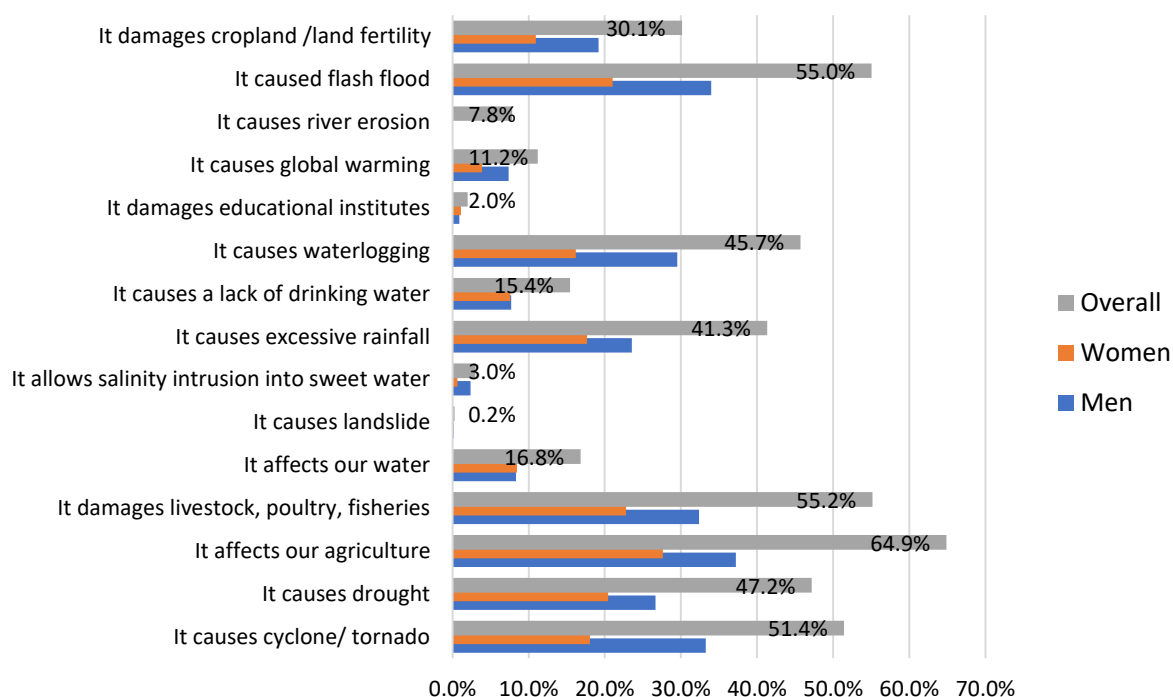


Figure 4.11: Peoples' awareness on climate change effects as a whole (n=803) multiple



The quantitative study findings reveal that a large segment of people of the project areas become aware of climate change effects on their lives and livelihoods. Top most group (64%) perceived that climate change has impacted more on agricultural practices, while 55% understand that livestock, poultry and fisheries are impacted badly, and 55% opined that it caused increased flash flood and waterlogging (45%), among others.

Figure 4.12: Peoples' perception on climate adaptive measures taken by the project (n=803) multiple

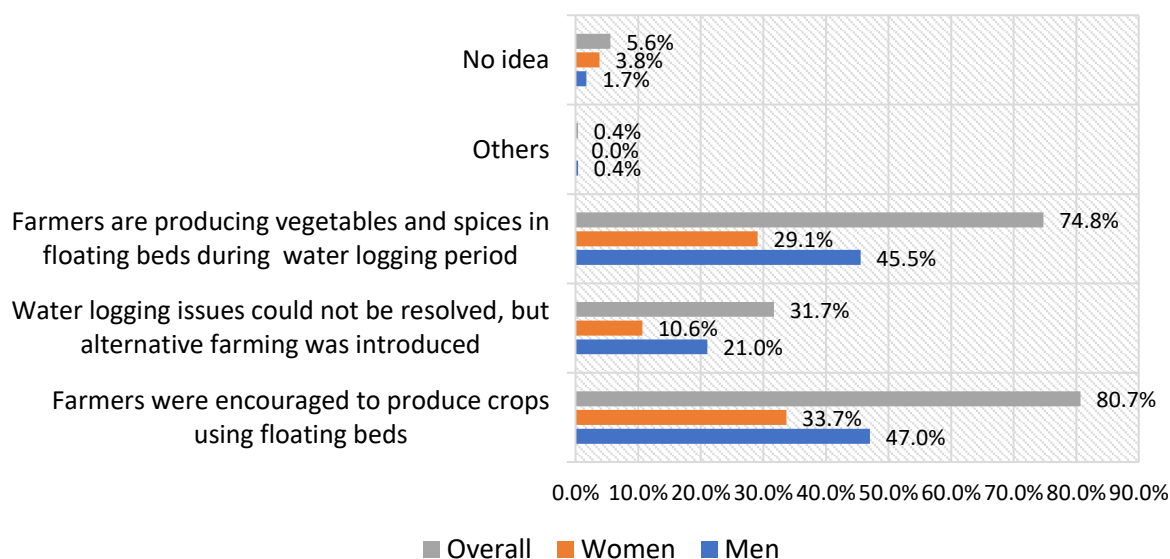
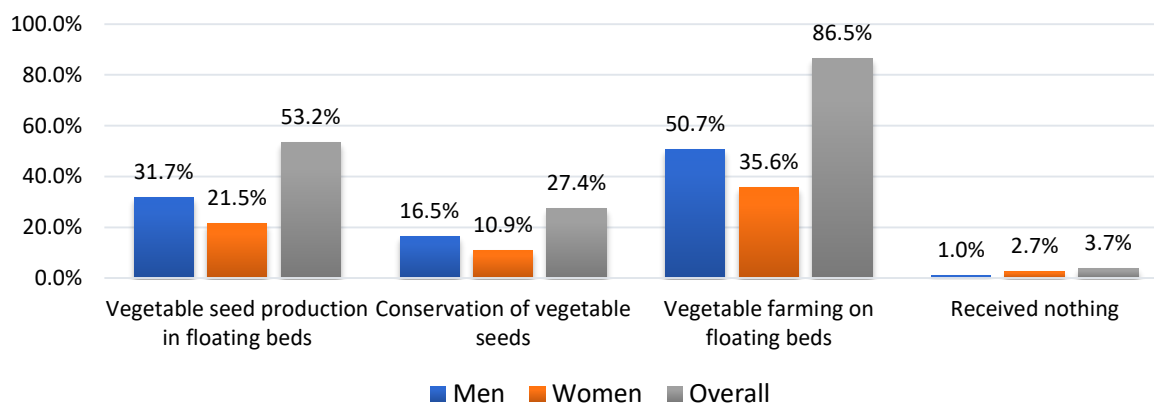


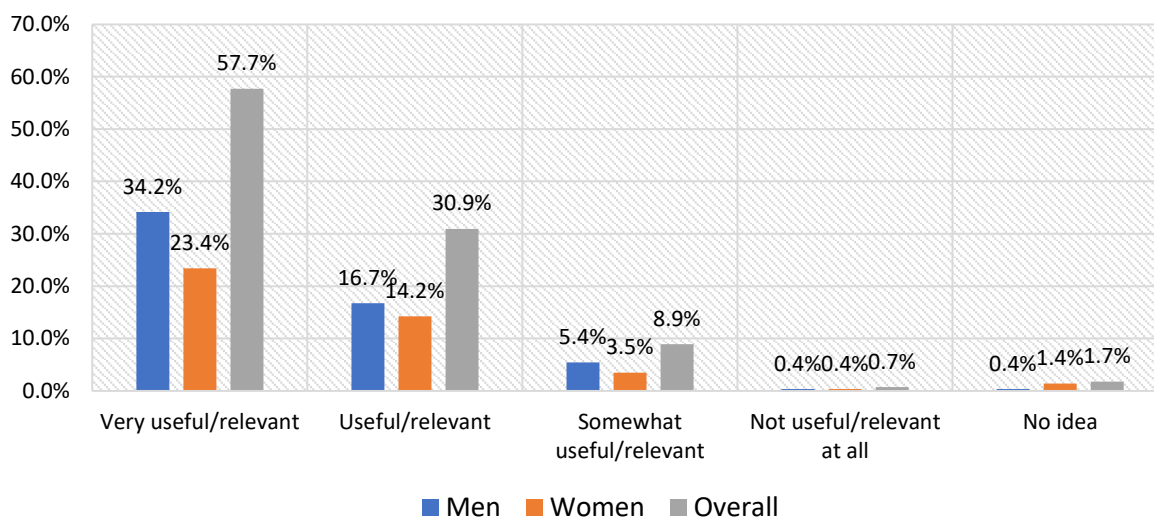
Figure 4.13: Farming technology received by farmers through the project (n=808) multiple

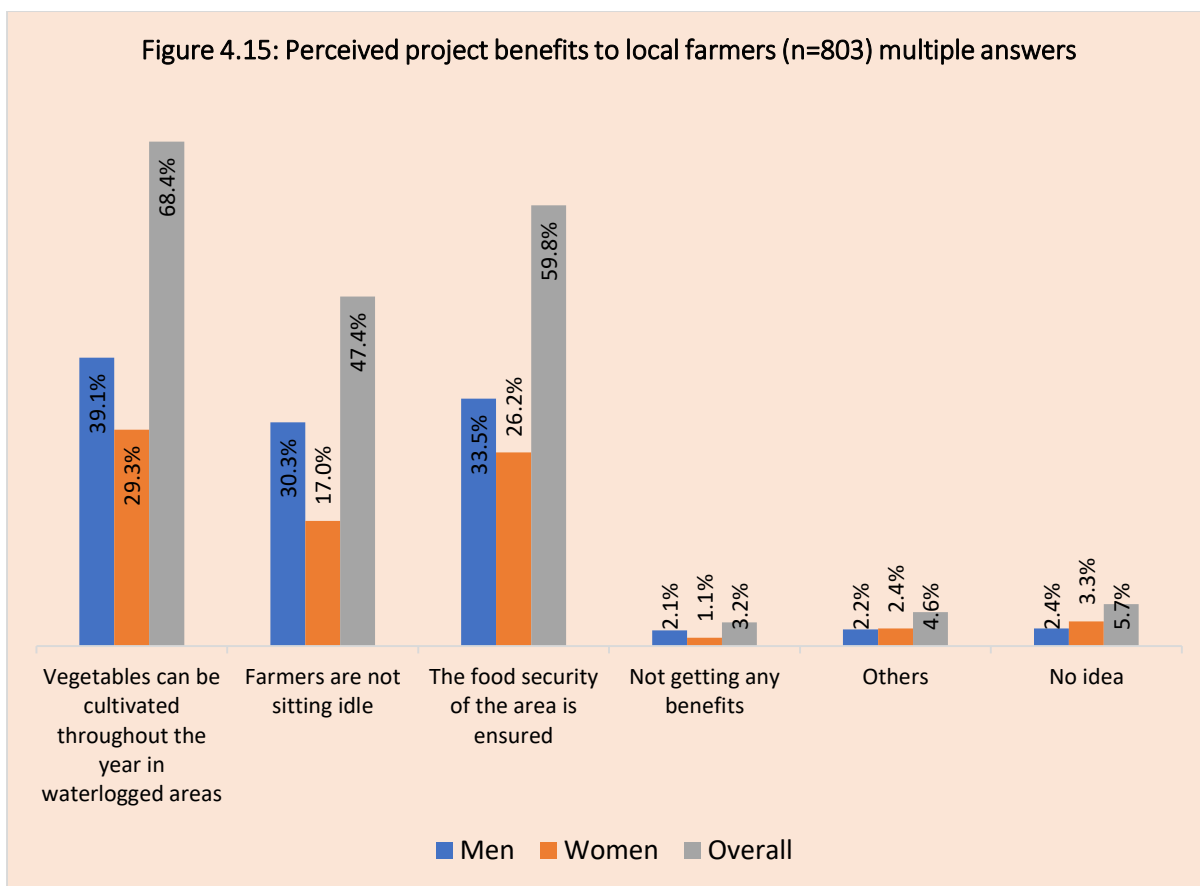


About 81% respondents opined that because of the project interventions local farmers are encouraged to produce crops using floating beds across the waterlogged areas. Quite significantly, about 32% opined that water logging problem cannot be resolved but alternative farming is introduced, and about 76% expressed views that farmers are now being able to produce vegetables and spices in floating beds during waterlogging period.

In terms of receiving farming technology, 31% farmers got trained on vegetable seed production in floating beds, 16% are trained on conservation of vegetable seeds, and 51% are trained on vegetable farming on floating beds.

Figure 4.14: Peoples' perception on usefulness/relevance of the project (n=803) multiple answers





জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলা নিরাপদ পানি সরবরাহ প্রকল্প implemented by DPHE

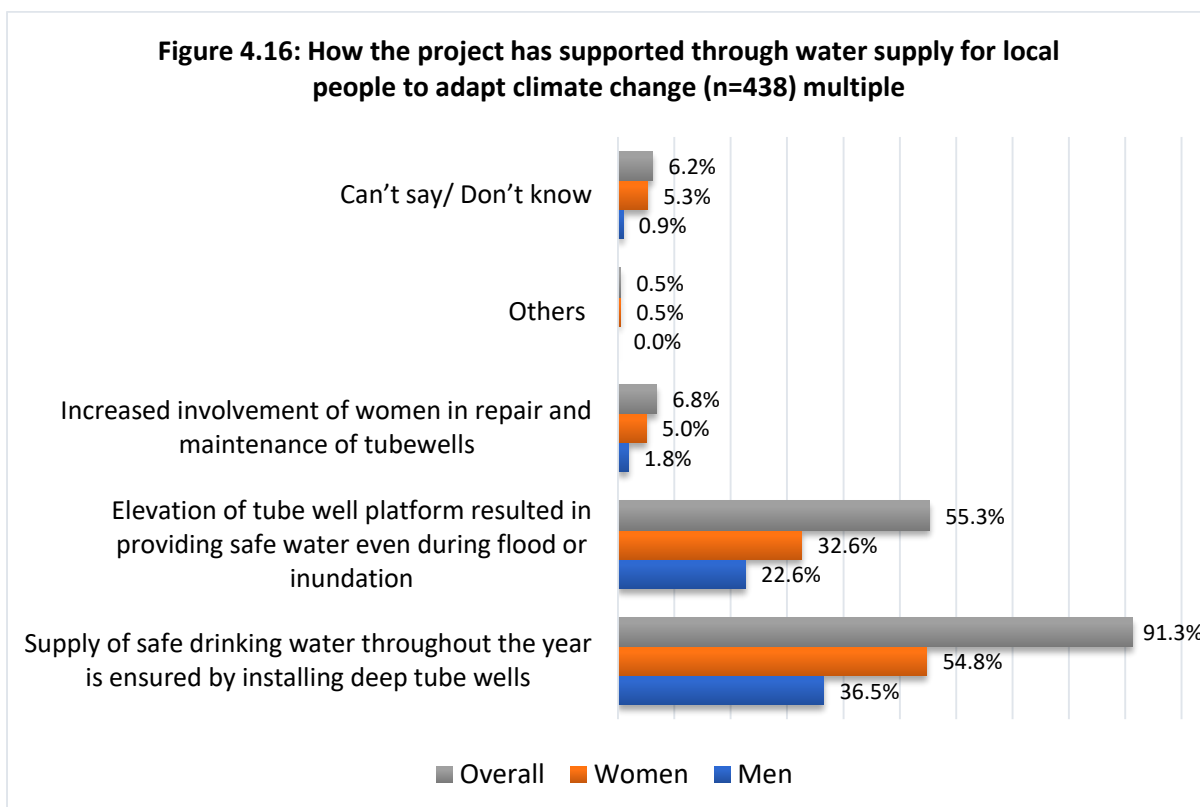
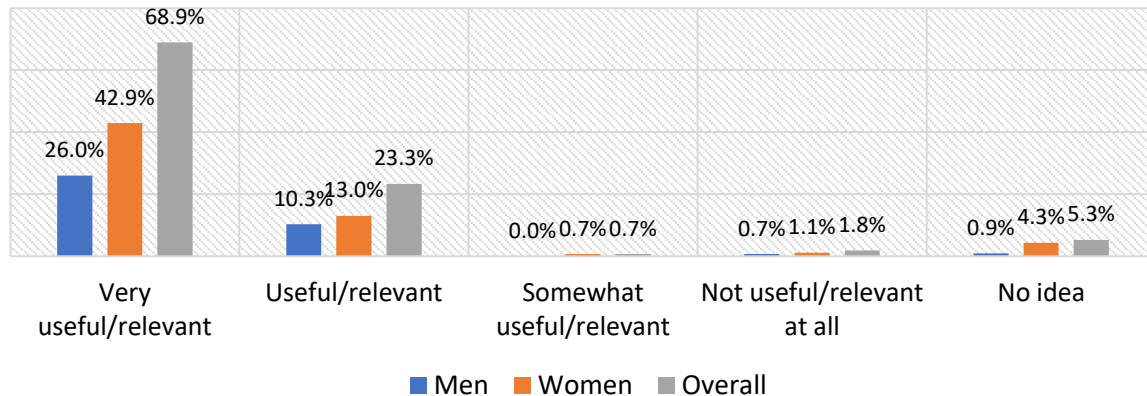
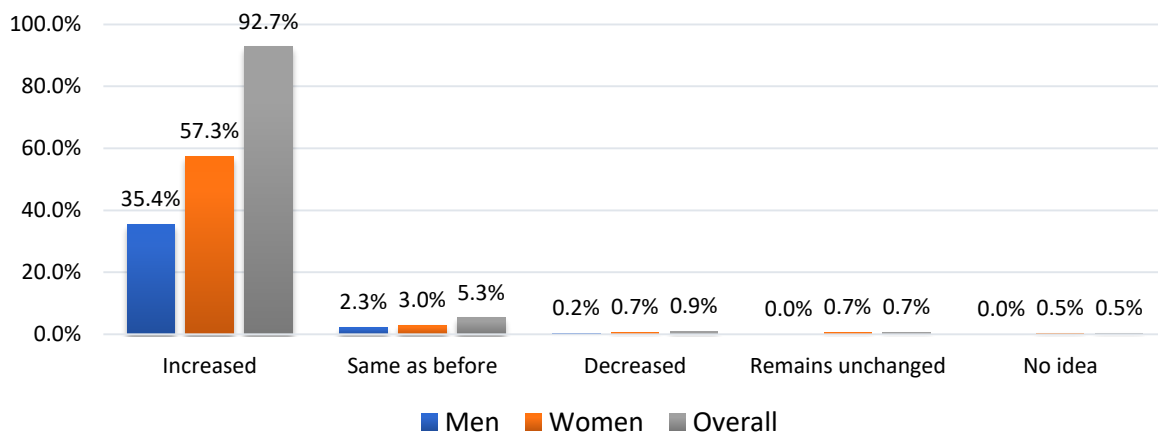


Figure 4.17: People's perception on usefulness/relevance of the project in the local context (n=438)



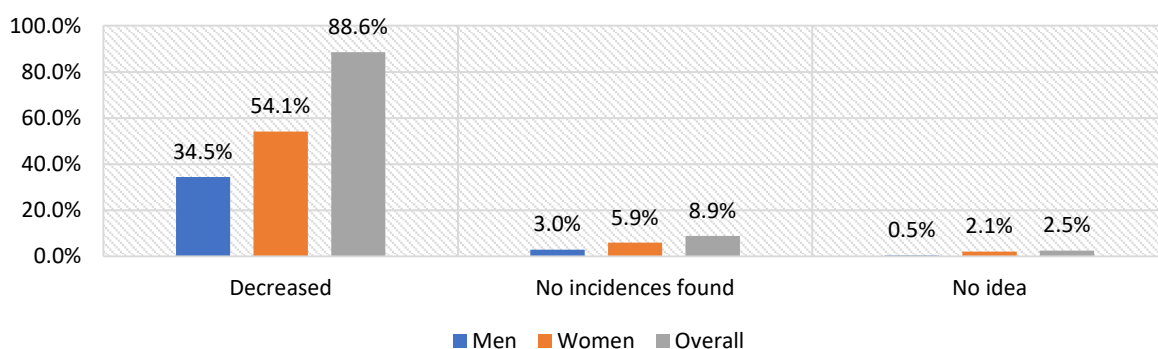
About 69% of respondents remarked that the project implemented was highly relevant to local context and community demand, while 23 % opined that those were somewhat relevant and useful.

Figure 4.18: People's perception on accessibility to safe drinking water (n=438)



Most respondent (93%) said that community access to safe drinking water has significantly increased.

Figure 4.19: Current prevalence of water-borne diseases in the project areas (n=438)



The DPHE project on safe drinking water supply has resulted in remarkable outcome based on the opinion of the target beneficiaries e.g., 89% said that prevalence of waterborne diseases is decreased.

Safe Water Supply Project in Climate change affected Manpura and Charfashion Upazila under Bhola District (2nd phase) implemented by DPHE

Figure 4.20: How climate change affects lives and livelihoods of local communities (n=430) multiple

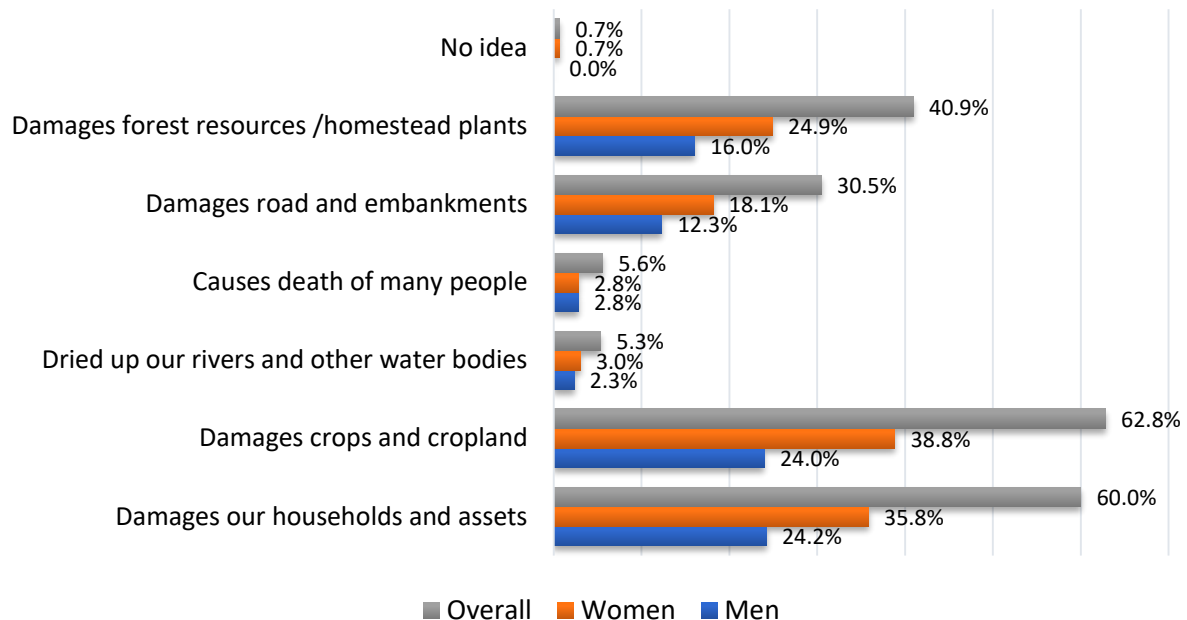
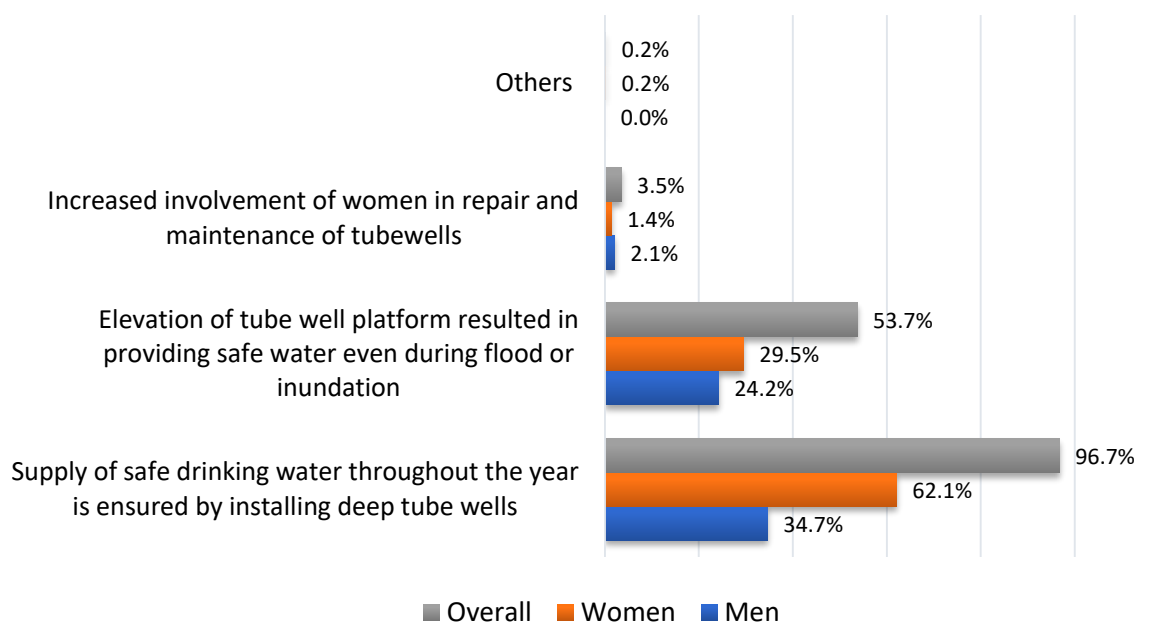
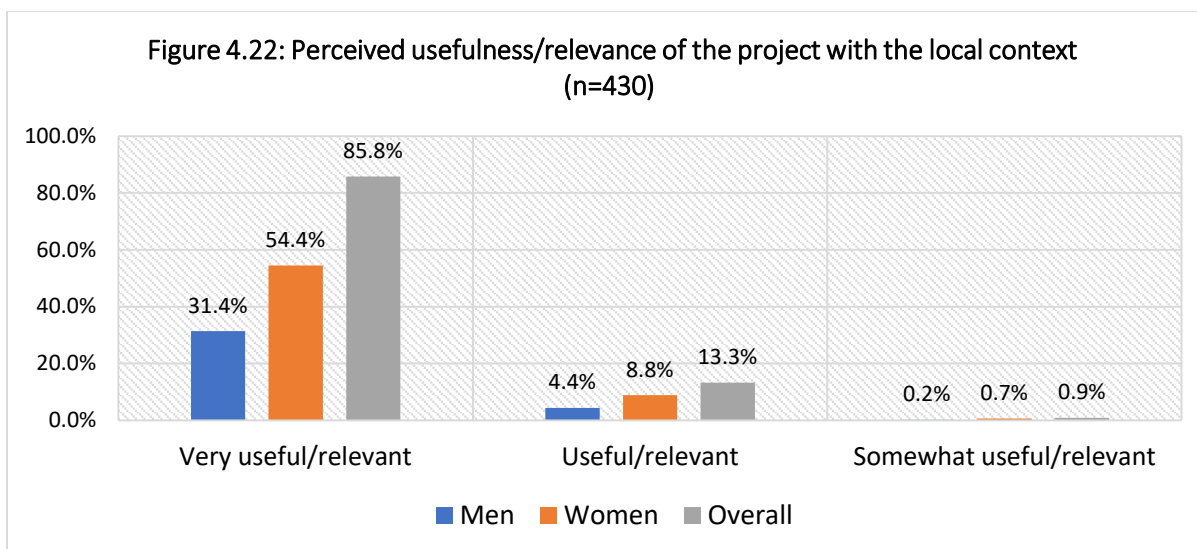
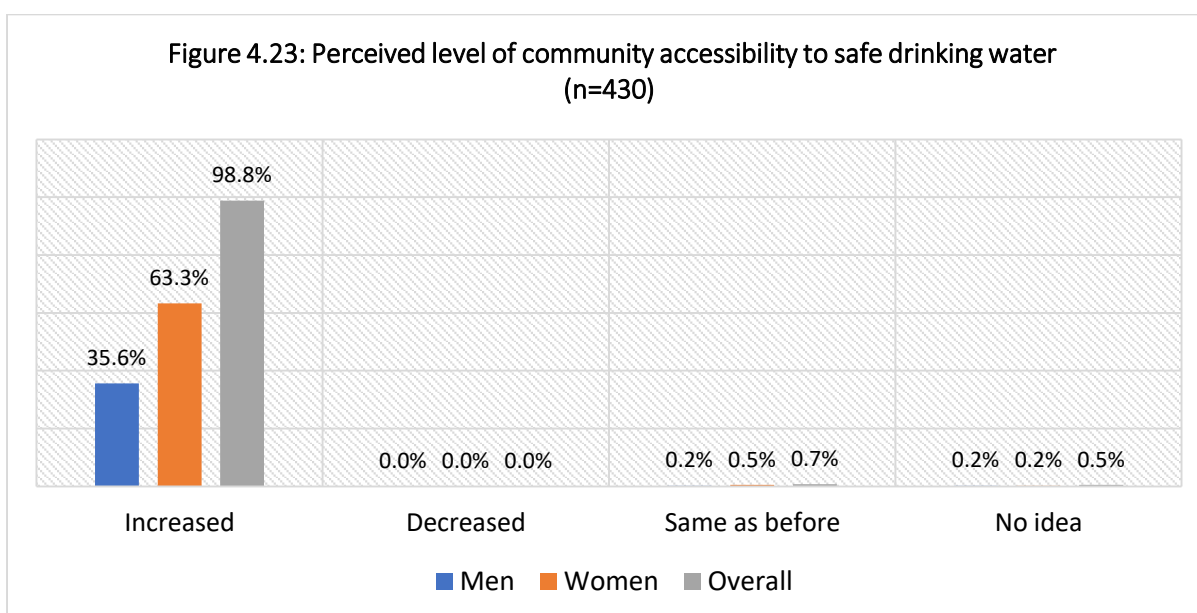


Figure 4.21: How the project supported local people to adapt with climate change (n=430) multiple





About 85% respondents opined that the DPHE project was highly relevant to local context and community demand, while only 14% said that it was somewhat relevant/useful.



Most (about 98% respondents opined that due to project interventions (i.e., supply of safe drinking water) community access to safe drinking water has been increased.

4.4.5 Thematic conclusion

The projects implemented under this theme were found to be directly contributing to target numbers 2 and 4 (developing climate-resilient cropping systems and safe drinking water supplies) of the thematic goal. Target 1 (increase the resilience of vulnerable groups, including women and children), was found to be reached fragmentarily (as a result of interventions) by the projects. Target 3 of the theme (implement a surveillance system for existing and new disease risks) was found not to be addressed as there were no projects undertaken to address the issues of surveillance system for existing and new disease risk.

Case Study 1

Floating Bed farming has changed the fate of Janu Mia

Md. Janu Mia is a farmer who hails from the village of Shukri Bari, Jhalhati, under the Ajmiriganj Upazila of Habiganj district. He was one of the pioneer farmers who participated in the floating vegetable farming introduced by the Department of Agricultural Extension (DAE) under a project entitled "Extension of Floating Bed Technology as an Adaptation Strategy in the Flood and Waterlogging Prone Areas," funded by the CCTF. Janu Mia's hard work and perseverance earned him support from the project in three phases.

In 2014, Md. Janu Mia received support for setting up 30 vegetable beds in the government owned Hatia Beel. He has successfully cultivated vegetables and spices in those 30 beds. Based on his early success, in the second phase, in 2015, he was provided with support to set up another 20 beds, and again he proved his worth by producing vegetables and spices from those floating beds. In the third stage, in 2016, he received support for 40 more beds. So far, he has successfully produced vegetables and spices from 90 floating beds.

A floating bed is typically 3 feet long and 3 feet wide, and it floats in bodies of water where land is scarce due to water logging or prolonged flooding. Under the project, DAE provided Tk. 5,000 for each bed to cover the costs of labor, bamboo, fertilizer, and other essentials in the early stages. He cultivated **Malabar spinach**, water spinach, stem spinach, red spinach, okra, potatoes, pumpkins, chilies, onions, garlic, broccoli, cabbage, carrots, etc. He gave 20% of the vegetables to office employees or neighbors, kept 10% for family consumption, and sold 70% of the vegetables at the market. Janu Mia has made a profit of Tk. 3 lakh by selling his floating bed products from 2014 to 2022. He has expressed his sincere appreciation for the support extended to him for the floating bed cultivation.

In his area, flash flooding frequently damages floating beds because they have little time to protect themselves. The farmers have to work a lot to get those vegetable beds in an appropriate shape again. Moreover, it is a labor-intensive work; the beds require nursing every day, including trimming of weeds, and to be checked to see if they get damaged by the flow of water. However, Janu Mia wishes to participate in any future project related to floating bed farming. In fact, floating bed technology as an adaptation strategy has proven to be sustainable as an extension strategy on the one hand and profitable for marginal farmers on the other.

Janu Mia is from Shukri Bari village of Ajmiriganj Upazila in Habiganj district and can be reached at 0172 160 0884.

4.5 Thematic Area II: Comprehensive Disaster Management



The goal as set forth under this theme of the BCCSAP is to further strengthen the country's already proven disaster management practices to adapt to frequent and severe climate change-induced natural calamities.

There was only one project titled “Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change” implemented under this theme by the Cyclone Preparedness’ Programme (CPP) during January 2013 to December 2015 in 5 coastal districts.

← *CPP Volunteers – ready to go*

Evaluation findings:

4.5.1 Year-wise fund allocation and expenditure by projects

The following table entails the year-wise BCCT fund allocation to and expenditures incurred by the project (1) under Theme 2 (ref.: PCRs). Figures in the table are in lakh BDT.

P. SL	Year-1		Year-2		Year-3		Year-4		Year-5	
	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.
1	435.50	288.37	592.83	367.31	536.10	908.75				

P. SL = Project Serial; NA = Not Available

These are included into the PCRs in tabular format only having no further clarifications relevant. During the consultants’ field visit sitting officials of the implementing agencies couldn’t clarify the pattern of the allocations and expenditures as well.

4.5.2 Objectives and component wise achievements

As far as what was included in the evaluation package, there was a single project implemented under this theme, and the project encompassed the following objectives:

- Minimize the loss of lives and property in the coastal belt community through the dissemination of early warning signals, rescue sheltering, first aid, and relief activities by trained and dedicated volunteers.
- Provide skill development training to 14,502 CPP volunteers and 5,400 seagoing fishermen, and
- Provide early warning equipment, volunteer gear and an emergency response vehicle to CPP volunteers, including demonstrations on the usage of equipment.

The major activities of the projects implemented are:

1. Four-day combined skill development training for 14,205 CPP Volunteers on disaster management, early warning, search and rescue, and earthquake and first aid in 13 different upazilas
2. Provide training to sea-going fishermen.
3. Conduct orientation workshops and cyclone field demonstrations, and
4. Community awareness raising using posters and leaflets.

Relevance with the Thematic Targets of the BCCSAP

The following table is used to draw and link the project objectives (implemented under this theme) with the thematic targets as set forth in the BCCSAP theme II:

No.	Thematic target(s)	Relevance of the project objectives
2.1	Strengthen the government's capacity and that of civil society partners and communities to manage natural disasters, and ensure that appropriate policies, laws and regulations are in place	Partially addressed i.e., government's capacity and that of civil society partners and communities to manage disasters is strengthened
2.2	Strengthen community-based adaptation programmes and establish them in each of the disaster-prone parts of the country	Community based adaptation was strengthened (partially among the seagoing fishermen community) across the coastal belt disaster-prone districts
2.3	Strengthen our cyclone, storm surge and flood early warning systems to enable more accurate short, medium and long term forecasts	Short-term early warning systems are enabled and strengthened but not for medium and long term forecasts

Financial Progress:

The approved project budget was BDT 1,564.43 lakh against which the actual expenditure was BDT 1,219.16 lakh. This provides fund utilization rate of the project under this theme was about 78%.

4.5.3 Projects' relevance and effectiveness

The project implemented was highly relevant to the local context and community demand. This has been supported by the facts that 88% community households opined that the project was very useful, and 11% opined as useful.

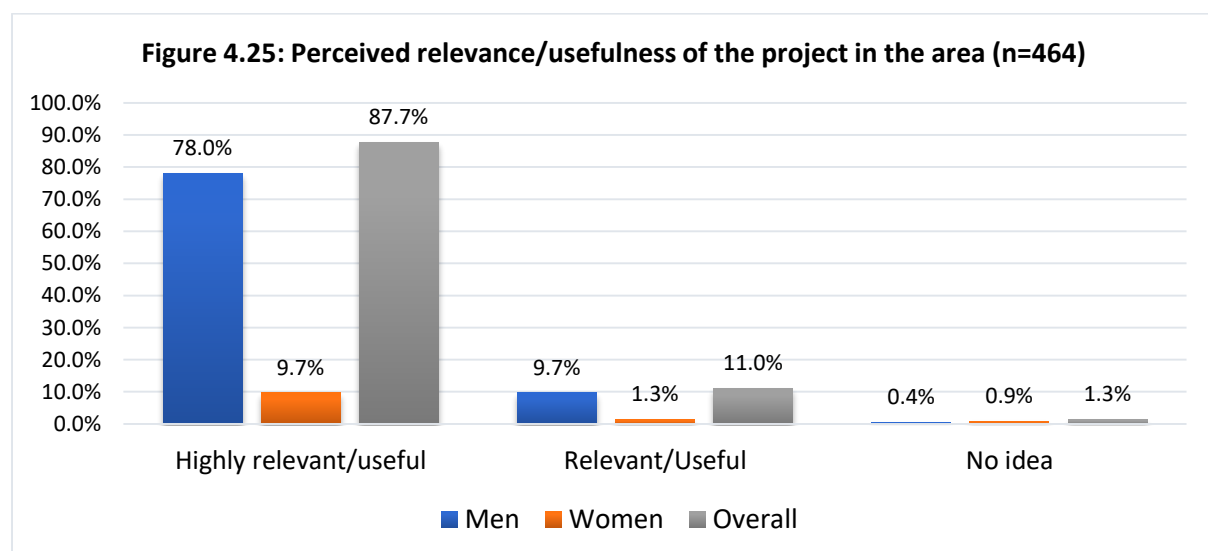
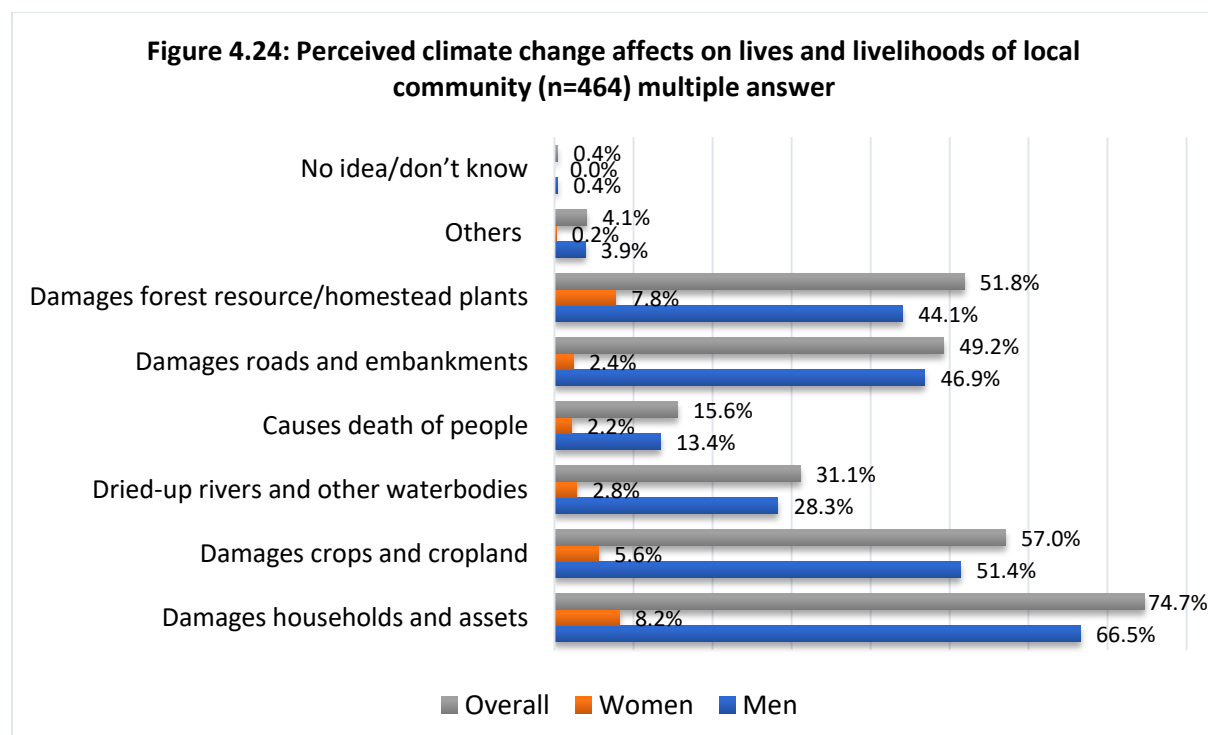
While considering from the effectiveness point of views, 87% people perceived that the capacity of CPP volunteers is significantly increased, similar percentage of people perceived that the capacity of seagoing fishermen is increased which have enabled them to cope with natural disasters. Besides the volunteers' capacity, almost everyone (99%) recognized that the early warning system has been improved.

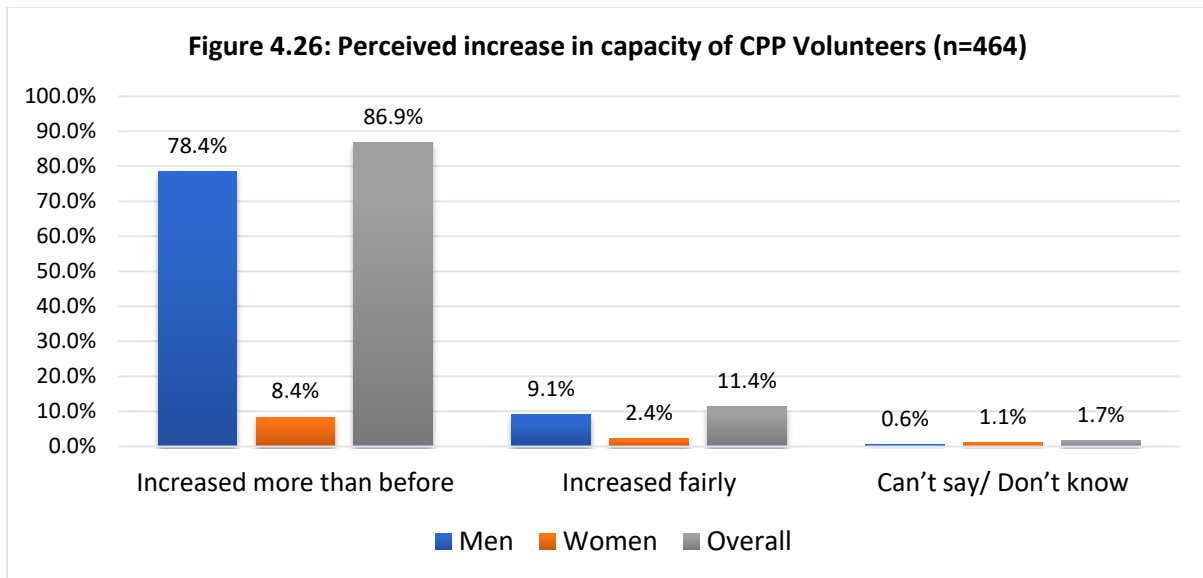
Aside from improving the volunteers' capacity and early warning system, the project's implementation was assumed to be effective based on evidence that approximately 39% of people believe that the capacity of the CPP Volunteers enabled them to rescue and relocate survivors to shelters, 40% believe that volunteers can provide early warning of any natural disasters in the project areas, and 20% believe that CPP Volunteers are now more capable of managing emergency situations.

4.5.4 Socioeconomic impacts and sustainability of the projects

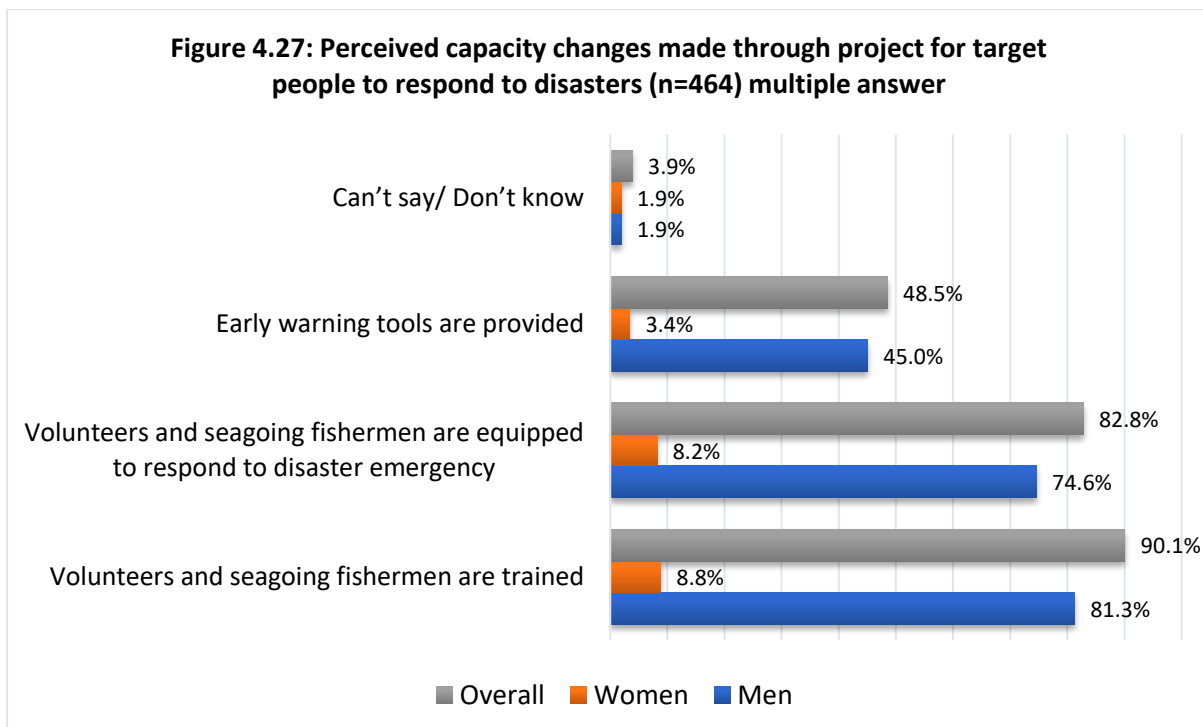
Enhanced capacities of the CPP volunteers and seagoing fishermen, as the most vulnerable community segments, along with an improved early warning system, have contributed to reducing damages and losses of houses, infrastructure, plant resources, domestic pets and animals, and human lives. Ultimately, these have supported local communities to be at ease with disaster preparedness and management, saving assets and lives, and reducing worries related to natural calamities. While the sustainability of the project activities and their claimed impacts are being ensured through CPP's continued presence and community-level engagement across the coastal regions of the country.

The facts and figures come out of the quantitative study undertaken for the project below are reflected in the thematic findings presented above.





The CPP project has resulted into significant increased in the capacity building of Community Volunteers as well as of seagoing fishermen, as 87% respondents' opinion support the statement.



4.5.5 Thematic conclusion

This project tangibly contributed towards strengthening the country's already proven disaster management practices to adapt to frequent and severe climate change-induced natural calamities. The project has only weaknesses that can be further overcome by developing capacities for medium- and long-term weather forecasting and delivering warning services.

4.6 Thematic Area III: Infrastructure

The goal as set forth under this theme of the BCCSAP is to ensure that existing assets (e.g., coastal and river embankments) are well-maintained and fit-for-purpose and that urgently needed infrastructure (e.g., cyclone shelters and urban drainage) is put in place to deal with the likely impacts of climate change.

There were 23 (twenty-three) projects implemented under this theme, and the list of project particulars, including the period of implementation, is as below.

Ref. No.	Project particulars
3.1	Establishment of Khagrachari Pourashavas as a Climate Resilient Town implemented by Khagrachari CHT Pourashava during January 2012 to December 2012
3.2	Development of Infrastructure to Tackle Climate Change Impacts in Patuakhali Pourashava implemented by Patuakhali Pourashava during July 2012 to June 2013
3.3	ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগ সহনশীল গৃহ নির্মাণ প্রকল্প implemented by Department of Disaster Management (DDM) during July 2013 to December 2014
3.4	পিরোজপুর জেলার ৪টি শিক্ষা প্রতিষ্ঠান কাম সাইক্লোন সেন্টার নির্মাণ প্রকল্প implemented by LGED during January 2015 to December 2018
3.5	চট্টগ্রাম জেলার বিভিন্ন উপজেলায় কর্ণফুলী, হালদা, ইছামতি নদী ও শিলক খাল এবং ইহাদের শাখা নদীর বিভিন্ন ভাঙ্গন কবলিত অংশে প্রতিরক্ষামূলক অবকাঠামো নির্মাণ কাজ/প্রকল্প implemented by BWDB during July 2010 to June 2014
3.6	চট্টগ্রাম জেলার মিরশরাই উপজেলার উপকূলবর্তী এলাকায় সেচ ও যোগাযোগ ব্যবস্থার উন্নয়ন এবং মুহুরী এক্রিটেড এলাকায় সিডিএসপি বেড়ীবাধ উন্নয়ন প্রকল্প implemented by BWDB during March 2011 to December 2015
3.7	খুলনা জেলার রূপসা উপজেলার অন্তর্গত রামনগর-রহিমনগর এলাকায় বাধী পুনঃনির্মাণ ও নদীতীর সংরক্ষণ প্রকল্প implemented by BWDB during December 2012 to June 2016
3.8	মেঘনা নদীর ভাংগন হতে বরিশাল জেলার মেহেন্দিগঞ্জ উপজেলার উলানিয়া গোবিন্দপুর এলাকা রক্ষা প্রকল্প implemented by BWDB during February 2013 to June 2015
3.9	মুন্সিগঞ্জ জেলার লৌহজং উপজেলার পশ্চিম গাঁওদিয়া জামে মসজিদ হতে বেজগাঁও পূজামন্দির ভায়া খানকা শরীফ পর্যন্ত সড়ক কাম বেড়ীবাধী নির্মাণ প্রকল্প implemented by LGED during July 2013 to December 2016
3.10	জলবায়ু পরিবর্তনের ঝুঁকি নিরসনকল্পে নোয়াখালী জেলার সুবর্ণচর ও হাতিয়া উপজেলার গাবতলী সুইস সংলগ্ন মেঘনা নদীর তীর সংরক্ষণ প্রকল্প implemented by BWDB during April 2013 to June 2015
3.11	ঢাকা জেলার কেরানীগঞ্জ উপজেলাধীন শুভাঢ্যা হতে আগানগর পর্যন্ত শুভাঢ্যা খাল পুনঃখনন ও তীর সংরক্ষণমূলক কাজ বাস্তবায়নের মাধ্যমে পরিবেশের ভারসাম্য রক্ষাকরণ প্রকল্প implemented by BWDB during July 2013 to June 2017
3.12	জলবায়ু পরিবর্তনের প্রভাব হতে ভোলা সদর উপজেলার পশ্চিম ইলিশা ইউনিয়নের গাজীবাড়ি ও জাঙ্গালিয়া এলাকা রক্ষা প্রকল্প implemented by BWDB during November 2015 to June 2018
3.13	টাংগাইল জেলার মির্জাপুর উপজেলাধীন হাট ফতেহপুর নামক স্থানে বংশাই নদীর তীর সংরক্ষণ প্রকল্প implemented by BWDB during October 2012 to December 2015
3.14	জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় চট্টগ্রাম জেলার রাউজান উপজেলার দেওয়ানজীঘাট, মোকামিপাড়াসহ হালদা নদীর বাম তীরের বিভিন্ন এলাকায় প্রতিরক্ষামূলক কাজ/প্রকল্প implemented by BWDB during November 2016 to June 2019
3.15	ভান্ডারিয়া উপজেলার বাঁধ কাম সড়কের স্লোপ প্রটেকশনসহ উন্নয়ন প্রকল্প implemented by LGED during April 2014 to June 2015
3.16	জলবায়ুর পরিবর্তনের প্রভাবে উপকূলীয় অঞ্চলে ক্ষতিগ্রস্ত সড়ক নির্মাণ/পুনঃনির্মাণ/পুনর্বাসন প্রকল্প (ভোলা জেলা) implemented by LGED during January 2016 to June 2017
3.17	ভোলা জেলার সদর উপজেলাধীন জলবায়ু পরিবর্তন সহিষ্ণু সড়ক নির্মাণ প্রকল্প implemented by LGED during December 2015 to June 2017

Ref. No.	Project particulars
3.18	জলবায়ু পরিবর্তনজনিত ঝুঁকি মোকাবেলার জন্য মঠবাড়িয়া পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প implemented by Mothbaria Pourashava, Pirojpur during April 2014 to March 2017
3.19	জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কমলগঞ্জ পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প implemented by Komolganj Pourashava, Moulvibazar during March 2015 to December 2016
3.20	জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কালিয়াকৈর পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প implemented by Kaliakoir Pourashava, Gazipur during October 2016 to June 2018
3.21	রাজশাহী সিটি কর্পোরেশনের ২৮নং ওয়ার্ডের জলাবদ্ধতা নিরসনে অবকাঠামো উন্নয়ন প্রকল্প implemented by Rajshahi City Corporation (RCC) during March 2016 to June 2018
3.22	লালমোহন পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প (২য়পর্যায়) implemented by Lalmohan Pourashava, Bhola during June 2016 to December 2017
3.23	জলবায়ু পরিবর্তনজনিত সৃষ্ট দুর্যোগ মোকাবেলায় ভোলা পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প implemented by Bhola Pourashava during August 2014 to June 2016



Photo 9 : Pictures – urban drainage system for removing logged and wastewater



Photo 10 : Pictures – climate resilient houses



Photo 11: school cum cyclone shelters



Photo 12: embankment



Photo 13 : riverbank protection



Photo 14 : canal re/excavation

Evaluation findings:

4.6.1 Year-wise fund allocation and expenditure by projects

The following table entails the year-wise BCCT fund allocation to and expenditures incurred by the projects (23) under Theme 3 (ref.: PCRs). Figures in the table are in lakh BDT.

P. SL	Year-1		Year-2		Year-3		Year-4		Year-5	
	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.
1	120.36	NA	49.11	NA						
2	NA									
3	321.00	80.25	NA	240.75						
4	300.00	300.00	600.00	600.00	300.00	300.00				
5	25.15	25.15	719.51	719.51	847.01	847.08	402.71	385.35		
6	787.74	787.74	855.09	854.89	19.05	19.25	75.65	75.65		
7	7 years: Y-2 Allo- NA, Exp -598.34; Y-3 Allo-NA, Exp-435.80, Y-4 Allo-NA, Exp-409.51, Y-5 Allo-NA, Exp-82.00, Y-6 Allo-NA, Exp-82.00, Y-6 Allo-NA, Exp-91.50, Y-7 Allo-NA, Exp-1.88 (fund allocation and expenditure is unavailable for Year 1)									
8	1.50	0.00	1603.50	805.00	388.39	1188.39				
9	80.00	80.00	120.00	85.00	0.00	0.00	35.00	34.27	200.00	199.27
10	NA	NA	299.39	299.39	299.39	299.39				
11	1000	333.26	NA	126.80	NA	403.40	NA	136.54		
12	NA	NA	250.00	247.55	249.96	247.52	499.96	495.07		
13	0.00	0.00	100.50	100.50	74.82	74.76				
14	248.75	NA	248.75	248.75	NA	226.19				
15	1000.0	993.34								
16	NA									
17	75.00	75.00	225.00	224.83						
18	580	145	220	436.68	NA	215.32				
19	200.00	100.00	NA	100.00						
20	200.00	200.00								
21	NA	NA	100.00	150.00	100.00	49.97				
22	125.00	125.00	250.00	250.00	125.00	123.9				
23	NA									

P. SL = Project Serial; NA = Not Available

These are included into the PCRs in tabular format only having no further clarifications relevant. During the consultants' field visit sitting officials of the implementing agencies couldn't clarify the pattern of the allocations and expenditures as well.

4.6.2 Objectives and component wise achievements

The highest number (included in the single evaluation package), i.e., 23 projects, were implemented under this theme. The compiled objectives of the projects are:

- Improve the drainage systems of Pourashavas and City Corporations to overcome waterlogging problems during excessive rainfall and floods.
- Protect people, assets, crops, and livestock from the risks of storm surge caused by cyclones and floods by repairing and building flood and multipurpose cyclone shelters, as well as constructing houses for low-income people.
- Protect people from landslides through the construction of RCC retaining walls.
- Increase freshwater availability to tackle waterborne diseases.
- River erosion, salinity intrusion, the longevity of sea dikes, and disaster vulnerability can all be reduced by strengthening embankments and building or renovating protective walls.
- Bring barren lands under irrigation by re-excavating canals and surrounding water bodies for cultivation.
- Increase crop production through the availability of irrigation facilities, create green belts at the foot of the hills, and create options for fisheries in the water bodies.
- Increase sustainable rural and semi-urban transportation networks and facilities through the construction and maintenance of roads, culverts, the plinths of embankments, etc.
- Reconstruction of flood control embankments to protect people's lives and property
- Reduce greenhouse gas emissions by increasing the use of renewable energy for electrification used in household and commercial purchases,
- Eliminate water logging, increase productive lands, and create a habitable environment for the people.

There was a total of 23 (twenty-three) projects implemented under this theme. The implementing agencies were: Khagrachari, Patuakhali, Mothbaria, Kamalganj, Kaliakoir, Lalmohon, Bhola Pourashavas, Rajshahi City Corporation (RCC), the Department of Disaster Management (DDM), Local Government Engineering Department (LGED), Bangladesh Water Development Board (BWDB), and the Bangladesh Agricultural Development Corporation (BADC), the major activities of the projects implemented are:

- a) Construction of R.C.C drains with covered slab and RCC retaining walls
- b) Construction of Flood shelter cum primary school
- c) Construction of houses for tornado affected communities, multipurpose cyclone shelters
- d) Construction of riverbank protection works, plinth raising of embankments
- e) Re-Excavation of Khal and Construction of Regulator including repair of CDSP Embankment
- f) Construction of earth embankments and roads
- g) Construction of river dams
- h) Social afforestation
- i) Construction of slope protection works, and
- j) Construction and development of amusement parks

Relevance with the Thematic Targets of the BCCSAP

The following table is used to draw and link the projects' objectives (implemented under this theme) with the thematic targets as set forth in the BCCSAP theme III:

No.	Thematic target(s)	Relevance of the project objectives
3.1	Repair and rehabilitate existing infrastructure (e.g., coastal embankments, river embankments and drainage systems, urban drainage systems) and ensure effective operation and maintenance systems	3 out of 23 projects were undertaken addressing the target; however, O&M systems are yet to be strengthened
3.2	Plan, design and construct urgently needed infrastructure (e.g., cyclone shelters, coastal and river embankments and water management systems; urban drainage systems, river erosion control works, flood shelters) to meet the changing conditions expected with climate change	The most (i.e., 20 out of 23) projects were implemented as per this target. The O&M of the infrastructure needs to be ensured and strengthened.
3.3	Undertake strategic planning of future infrastructure needs, taking into account the likely (a) future patterns of urbanization and socioeconomic development; and (b) the changing hydrology of the country, because of climate change	No projects are yet undertaken addressing this target

Financial Progress:

Sl.	Project Name and Implementing Agencies	Financial Progress in BDT		
		Budget (lakh)	Spent (lakh)	Burn Rate
1	Establishment of Khagrachari Pourashavas as a Climate Resilient Town by Khagrachari CHT Pourashava	169.47	169.47	100.0%
2	Development of Infrastructure to Tackle Climate Change Impacts by Patuakhali Pourashava	244.28	244.28	100.0%
3	ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগ সহনীয় গৃহ নির্মাণ প্রকল্প by DDM	321.00	320.06	99.7%
4	Construction of 4 (Four) nos. Educational Institute-cum-Cyclone Shelters under Pirojpur District by LGED	1,200.00	1,178.21	98.2%
5	চট্টগ্রাম জেলার বিভিন্ন উপজেলায় কর্ণফুলী, হালদা, ইছামতি নদী ও শিলকখাল এবং ইহাদের শাখানদীর বিভিন্ন ভাগে কবলিত অংশে প্রতিরক্ষামূলক ও অবকাঠামো নির্মাণ কাজ by BWDB	1,994.38	1,977.08	99.1%
6	চট্টগ্রাম জেলার মিরশরাই উপজেলার উপকূলবর্তী এলাকায় সেচ ও যোগাযোগ ব্যবস্থার উন্নয়ন এবং মুহুরী এফ্রিটেড এলাকায় সিডিএসপি বেড়ীবাধ উন্নয়ন প্রকল্প by BWDB	1,756.52	1,737.53	98.9%
7	খুলনা জেলার রূপসা উপজেলার অন্তর্গত রামনগর-রহিমনগর এলাকায় বাধ পুনঃনির্মাণ ও নদীতীর সংরক্ষণ প্রকল্প by BWDB	1,808.03	1,619.03	89.5%
8	Protection of Ulania and Gobidapur area from the erosion of Meghna river in Mehendigonj Upazila under Barisal District by BWDB	1,993.39	1,993.39	100.0%
9	Construction of Road cum Embankment on Paschim Gaondia Jamme Mosque to Bejgaon Puja Mandir via Khanka Sharif at Louhajang Upazila under Munshigonj district Project by LGED	200.00	199.27	99.6%
10	Bank Protective work at the left bank of Meghna River out-fall of Gabtali Sluice at Hatiya Upazilla	598.78	598.53	99.9%

Sl.	Project Name and Implementing Agencies	Financial Progress in BDT		
		Budget (lakh)	Spent (lakh)	Burn Rate
	in the District of Noakhali to mitigate the risk of disaster due to Climate Changeby BWDB			
11	Re-Excavation of Subhadya Khal, including slope Protection work from Subhadya to Aganagar to mitigate the environmental impact in Upazila Keraniganj District Dhakaby BWDB	1,000.00	869.96	87.0%
12	Mitigation of natural disaster by Protection of Gazibari & Jangalia area in West Ilisha union under Bhola Sadar Upazila of Bhola District from erosion of Tentulia River due to climate change impactby BWDB	499.96	495.07	99.0%
13	Riverbank Protective work in Mirzapur Upazila under Tangail District to protection the embankment of Pathakhali-Konaibeel FCD project from the erosion of Bongshai river by LGED	175.32	175.26	99.9%
14	Bank protection work at Dewaji Ghat Hindupara and mokamipara along the left bank of Halda River in Rauzan Upazila under Chittagong District to mitigate the hazards due to Climate Changeby BWDB	500.00	474.91	95.0%
15	Slope protection & improvement of work for road cum embankment of Bhandaria Upazila by LGED	996.91	993.34	99.6%
16	জলবায়ুর প্রভাবে উপকূলীয় অঞ্চলে ক্ষতিগ্রস্ত সড়ক নির্মাণ/পুনঃনির্মাণ/পুনঃবাসন প্রকল্প (ভোলা জেলা) by LGED	995.00	994.66	99.9%
17	Climate Resilient Road Improvement Project at Bhola Sadar Upazila, District: Bhola by LGED	300.00	300.00	100.0%
18	জলবায়ু পরিবর্তনজনিত ঝুঁকি মোকাবেলার জন্য মঠবাড়িয়া পৌরএলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প by Mathbaria Pourashava, Pirojpur	800.00	797.00	99.6%
19	জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কমলগঞ্জ পৌরএলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প by Kamolgonj Pourashava, Moulvibazar	200.00	196.70	98.4%
20	To remove water logging and improve the environmernt of Kaliakair Pourashava, Gazipur by Kaliakair Pourashava, Dist-Gazipur	200.00	200.00	100.0%
21	রাজশাহী সিটি কর্পোরেশনের ২৮ নং ওয়ার্ডের জলাবদ্ধতা নিরসনে অবকাঠামো উন্নয়ন প্রকল্প by Rajshahi City Corporation (RCC)	199.97	199.97	100.0%
22	লালমোহন পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প (২য় পর্যায়) by Lalmohan Pourashava, Bhola	500.00	498.96	99.8%
23	জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য ভোলা পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প by Bhola Pourashava	300.00	Not available	Not available

The overall fund utilization rate for the projects under this theme III is around 95%.

4.6.3 Projects' relevance and effectiveness

All projects implemented under this thematic area met the goals of (1) repairing and rehabilitating existing infrastructure and ensuring effective O&M systems, and (2) planning, designing, and building much-needed new infrastructure to meet the changing conditions predicted by climate change.

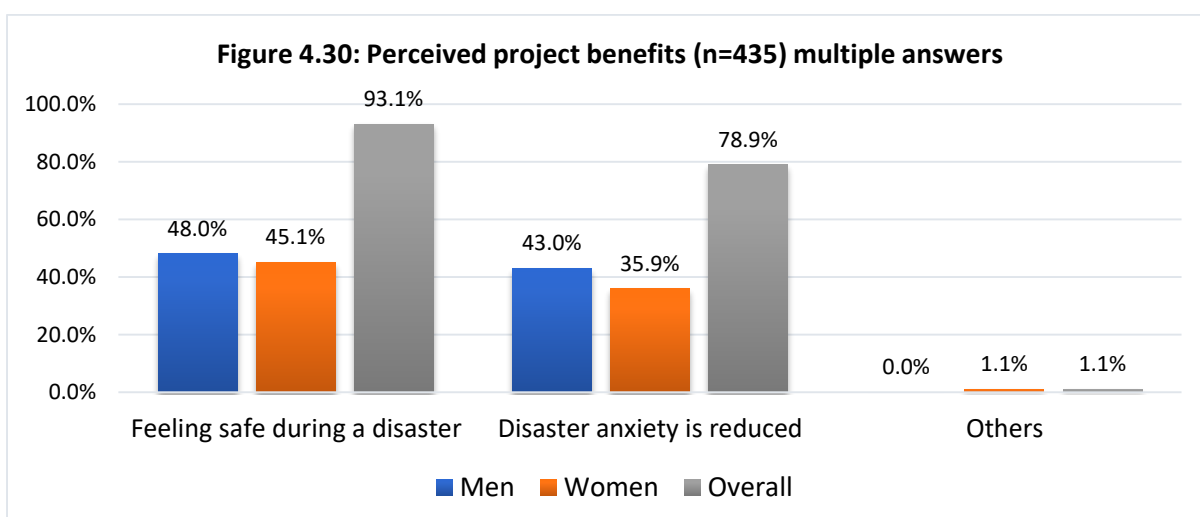
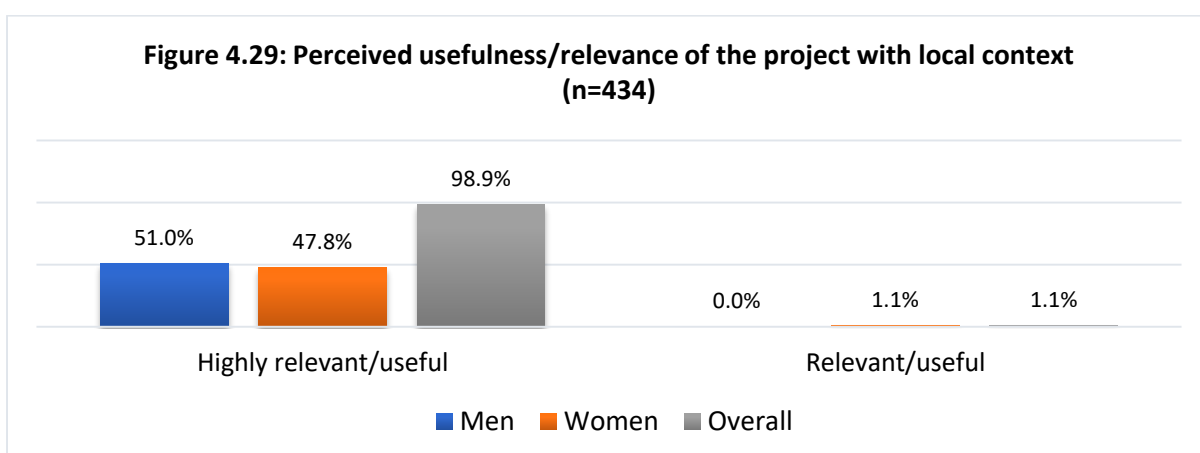
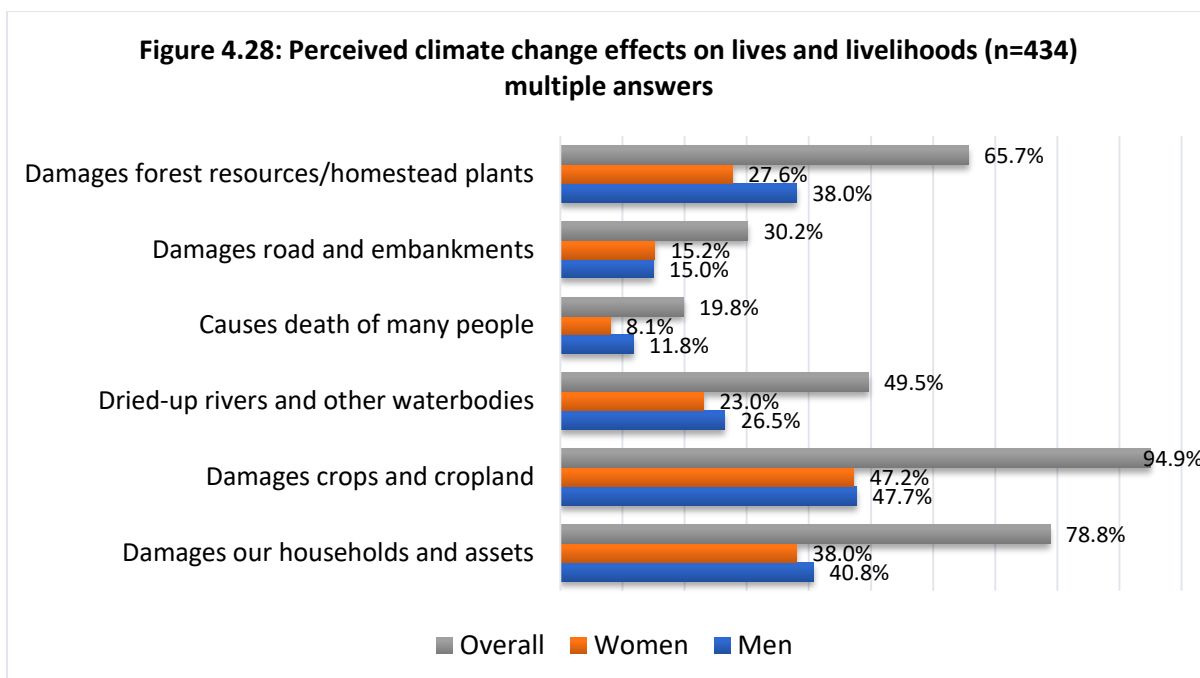
Given the nature of the projects, they had a moderate-to-high level of relevance to the local context and community demand. Major infrastructure that was either repaired or newly built remarkably supported local communities to be able to withstand disasters and their associated risks. Coastal embankments, riverbank protection, canal excavation, and re-excavation were used to serve multiple purposes for the local communities, including protecting them from the risks of natural calamities like cyclones, storm surges, erosion, and flooding. Building and/or renovating urban drainage systems assisted in reducing waterlogging issues as well as public health risks. Those were considered useful and sometimes essential for preventing as well as reducing agricultural productivity losses; increasing irrigation facilities for improving year-round cropping and yields; and protecting lives and assets from the risks of climate change impacts.

4.6.4 Socioeconomic impacts and sustainability of the projects

Community members were also impacted socioeconomically as a result of the projects' implementation. Those who saved agricultural production from disasters, saved family and community assets and lives, supported increasing agricultural productivity through irrigation facility provision, improved navigation, and road transportation facilities, reduced waterlogging risks, etc.

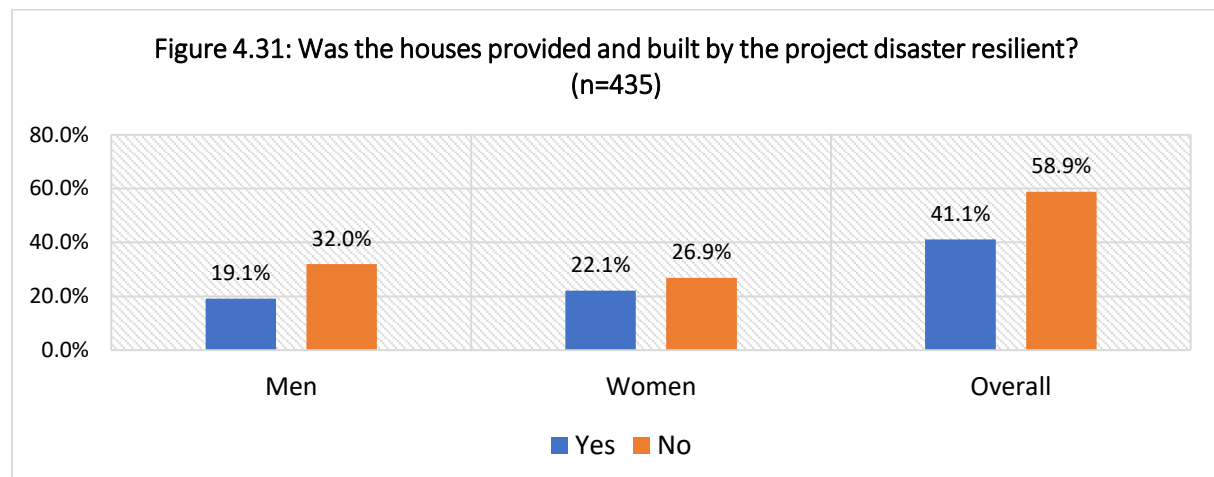
As documented, most projects were supposed to be maintained by the respective implementing agencies beyond the project period. However, as they committed to allocate funds from their own revenue sources to ensure O&M of the infrastructure, it has been found that those were not guaranteed since most of the LGIs that implemented infrastructure projects lack adequate revenue sourcing (rather, they are mostly financially dependent on the central government) and other agencies had no funding provision for the projects that were meanwhile completed.

Quantitative study was conducted for only project under this theme. The project is titled “ব্রাহ্মণবাড়িয়ার জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগ সহনীয় গৃহ নির্মাণ প্রকল্প” and implemented by the Department of Disaster Management (DDM). Some of the specific findings are referred to as presented below.

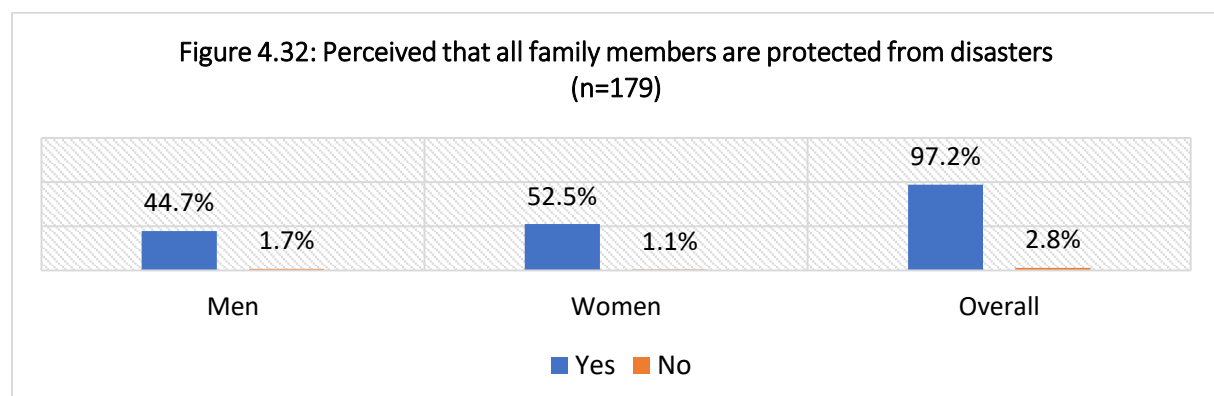


Almost every respondent (99%) unanimously opined that the DDM's project on supporting Tornado affected communities was highly relevant and useful. However, considering the type of physical facilities (i.e., climate resilient houses) provided to the affected

communities, about more that half of the respondents (54%) said that they are feeling safe during disasters, while similar other group of respondents said that anxieties of disaster among them are reduced.



Interestingly, given their feeling of safety, while asked – about 41% respondents considered that houses built and provided to them are disaster resilient, while others (59%) do not think that houses are not resilient to disasters.



From among the respondents who think that houses built and provided by the project are disaster resilient about 97% perceived that all of their family members are now protected from natural disasters like Tornado.

4.6.5 Thematic conclusion

A disaster-stricken country like Bangladesh needs more infrastructural development as part of its effective disaster preparedness and management. Given this condition, the implementation of the projects with such small, medium, and large infrastructure requires advancement in terms of adaptive preparedness and disaster management. These have brought immense outcomes, while most projects were related to the infrastructure, and those were either repaired or newly constructed in the areas highly susceptible to climate change impacts. However, the impacts of these projects could have been even more worthwhile if the BCCT would encourage relevant agencies and ministries to formulate and implement projects related to strategic planning of future infrastructure needs, considering the likely future patterns of urbanization and socioeconomic development and the changing hydrology of the country because of climate change.

Case Study 2

Road cum embankment rehabilitated many families

Narayan Chandra Das spent 25 years of his life in Boro Gaudiya Char. People living in the char lands of the Padma lost everything at that time due to river erosion. Nearly 175 decimals of Narayan's family land were lost in the river. Then he came here in Gaudiya and rebuilt his home on someone else's property. They are four brothers, including him, began cultivating again when the char reappeared 12 years ago. He takes care of his mother, and his brothers live in separate homes.

During that period, there were no dams along the river, and there was a danger of river erosion. Besides, there were problems with floods, waterlogging, and cultivation. Then their lives became miserable, and there was no safety or shelter.

When they lost everything due to river erosion, Narayan began to learn to tailor and use it to maintain his livelihood. After they got the reclaimed land, he and his brothers worked in the fields. Later, Union Parishad hired him as a village policeman. He then gave up tailoring. The river erosion on the horizon could destroy his farm, so he is thinking about tailoring again.

Now, after this project, the area's people have more courage to build houses and do farming. His house is now more secure as a result of the dam. Besides paddy for household consumption, Narayan produces vegetables such as bitter gourd, parwal, etc. Before, it was hard to transport, but it is now easy. Since there has been no renovation work on the dam for a long time, holes have been created in some places, making it unstable.

Narayan said that his life has improved since the dam's construction, as safety and security have increased. He and the people in the area live here more peacefully than before. Narayan mentioned that the people of that area wanted the dam-cum-road made of concrete and cement. It will be good if a water drainage system is constructed as well.

Mr. Narayan Chandra Das (45), of Gaudiya char under Lauhajang Upazila of Munshiganj district, is a beneficiary of the BCCT-funded road embankment construction project.

4.7 Thematic Area IV: Research and Knowledge Management

The goal as set forth under this theme of the BCCSAP is to predict the likely scale and timing of climate change impacts on different sectors of the economy and socioeconomic groups, to underpin future investment strategies, and to ensure that Bangladesh is networked into the latest global knowledge on science and best practices of climate change management.

There were three (3) projects implemented under this theme, and the list of projects including their respectively defined objectives is as below.

Ref. No.	Project Particulars
4.1	জলবায়ু পরিবর্তনের প্রভাব মোকাবিলায় খরাপ্রবণ ও উপকূলীয় লবণাক্ত এলাকার জন্য টেকসই ফসল ব্যবস্থা উন্নয়ন প্রকল্প implemented by BARI during September 2010 to April 2017
4.2	বাংলাদেশের জলবায়ু ঝুঁকিপূর্ণ অঞ্চলে জন্মানোর লক্ষ্যে উপকূলীয় এলাকার কৌলিসম্পদ ব্যবহার করে লবন সহিষ্ণু ডাবলড হ্যাণ্ডয়েড জাতের উদ্ভাবন প্রকল্প implemented by Bangabandhu Sheikh Mujibur Rahman Agricultural University during July 2016 to June 2019
4.3	পরমাণু কৃষি গবেষণার মাধ্যমে জলবায়ু পরিবর্তনশীল জাত/প্রযুক্তি উদ্ভাবন ও বিভিন্ন প্রতিবেশ অঞ্চলে অভিযোজন প্রকল্প implemented by Bangladesh Institute of Nuclear Agriculture (BINA) during July 2014 to June 2017



Photo 15 : BARI project on the development of sustainable drought and salinity prone crop varieties



Photo 16 : BINA innovation of climate tolerant cropping variety and technology using nuclear agriculture



Photo 17 :BSMRAU innovated saline tolerant doubled haploid crop variety

Evaluation findings:

4.7.1 Year-wise fund allocation and expenditure by projects

The following table entails the year-wise BCCT fund allocation to and expenditures incurred by the projects (3) under Theme 4 (ref.: PCRs). Figures in the table are in lakh BDT.

P. SL	Year-1		Year-2		Year-3		Year-4		Year-5	
	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.
1	127.50	118.35	83.06	60.81	102.52	118.97	136.92	127.27	150.0	163.43
2	25.00	24.55	25.00	25.40	NA	NA				
3	55.00	38.60	198.00	114.39	92.00	160.42				

P. SL = Project Serial; NA = Not Available

These are included into the PCRs in tabular format only having no further clarifications relevant. During the consultants' field visit sitting officials of the implementing agencies couldn't clarify the pattern of the allocations and expenditures as well.

4.7.2 Objectives and component wise achievements

There were three (3) projects implemented under this theme, and those comprised the following objectives, in brief:

- Test and invent climate-adaptive (drought and salinity-tolerant) seeds and a location-specific crop management model by examining the effect of weather on the yield and growth of different crops for sustainable crop production and management.
- build the capacity of farmers and other stakeholders on invented crop management models and manage the pilot production of invented crops.
- analyze and interpret the spatial and temporal pattern of salinity and salinity-induced drought using cutting-edge geospatial tools and techniques for characterizing genetic resources with potential salt-tolerant genes available in saline affected areas and incorporate potential salt-tolerant genes into agronomically superior varieties in order to establish a pilot genetic resource center dedicated to higher education and research in the field of stress breeding.

There were three projects implemented under this theme by the agencies, which include (i) BARI, (ii) BSMR Agricultural University, and (iii) BINA, all under the Ministry of Agriculture. The major activities of the projects implemented are:

1. Research on the production of climate-tolerant crop varieties
2. capacity-building, training
3. seminar on different issues for stakeholders, and
4. Awareness-raising on the promotion and use of research products

Relevance with the Thematic Targets of the BCCSAP

The following table is used to draw and link the projects' objectives (implemented under this theme) with the thematic targets as set forth in the BCCSAP theme IV:

No.	Thematic target(s)	Relevance of the project objectives
4.1	Model climate change scenarios for Bangladesh by applying global climate change models and methodologies at regional and national levels	Partially addressed by developing model of cropping pattern innovation and management
4.2	Model the likely hydrological impacts of climate change on the Ganges-Brahmaputra-Meghna system to assess likely future system discharges	None of the projects are related to this target

No.	Thematic target(s)	Relevance of the project objectives
	and river levels in order to derive design criteria for flood protection embankments	
4.3	Monitor and research the impacts of climate change on ecosystems and biodiversity	None of the projects are related to this target
4.4	Research the likely impacts of climate change on the macro-economy of Bangladesh (a Bangladesh 'Stern Report') and key sectors (e.g., livelihoods and food security) and contribute to developing a climate-proof national development plan	All projects were undertaken addressing food security and livelihoods in the face of climate change challenges
4.5	Research the linkages between (a) climate change, poverty and vulnerability and (b) climate change, poverty and health (disease incidence, nutrition, water, sanitation) in order to identify possible interventions to increase the resilience of poor and vulnerable households to climate change	None of the projects are related to this target
4.6	Establish a Center for Research and Knowledge Management on Climate Change (or a network of centers) to ensure Bangladesh has access to the latest ideas and technologies from around the world, and ensure that data is widely and freely available to researchers	None of the projects are related to this target

Financial Progress:

SL	Project Name	Implementing agency	Financial Progress in BDT		
			Budget (lakh)	Spent (lakh)	Burn Rate
1	জলবায়ু পরিবর্তন মোকাবিলায় খরাপ্রবণ ও উপকূলীয় লবণাক্ত এলাকার জন্য টেকসই ফসল ব্যবস্থা উন্নয়ন	BARI	600.00	588.83509	98.1%
2	বাংলাদেশের জলবায়ু ঝুঁকিপূর্ণ অঞ্চলে জন্মানোর লক্ষ্যে উপকূলীয় এলাকার কৌলি সম্পদ ব্যবহার করে লবন সহিষ্ণু ডাবলড হ্যাণ্ডয়েড জাতের উদ্ভাবন	BSMR Agricultural University	50.00	49.9535	99.9%
3	Nuclear Agricultural Research for Varietal/Technological Development Tolerant to Climate Change Effect and their Adaptation to Different AEZ Project	বাংলাদেশ পরমাণু কৃষি গবেষণা ইনস্টিটিউট, ময়মনসিংহ	345.00	313.41	90.8%

Overall fund utilization rate of the projects under this theme IV is around 95%.

4.7.3 Projects' relevance and effectiveness

All the projects implemented under this theme were related to agricultural research and the innovation of climate-tolerant crop varieties by the eminent Bangladeshi research institutions under the Ministry of Agriculture. The stakeholders and project beneficiaries at the grassroots generally opined that the projects were highly relevant to the contexts and community needs where they were implemented. The areas where projects were implemented are mostly waterlogging, drought, or salinity-prone and needed innovative crop patterns to be introduced and scaled up that tolerant varieties.

As the projects were highly relevant, their effectiveness was also commendable. BARI developed drought and salinity tolerant cropping systems, BSMRAU developed saline tolerant double haploid species for local farmers, and BINA conducted nuclear agricultural research for climate tolerant agricultural varieties and production technologies by the end of the projects. These have had an impact on local farmers by providing them with agricultural varieties that can withstand disaster risks while also being socioeconomically beneficial.

4.7.4 Socioeconomic impacts and sustainability of the projects

The projects undertook initiatives to test and invent climate-adaptive (drought and salinity-tolerant) seeds and location-specific crop management models by examining the effect of weather on yield and growth of different crops for sustainable crop production and management. These were also used to train farmers and other stakeholders on novel crop management models and to manage the pilot production of novel crops. These enabled local farmers to cultivate crops all over the year and achieve high yields of production, ultimately benefiting them financially. However, the project PPCCTF did not explicitly state how the initiatives will be scaled up and/or sustained. Most projects expect farming communities and the benefits of innovative agricultural cropping to entice others to replicate the models. There were no specific plans and/or institutional setups established for the purpose of ensuring the sustainability of projects.

4.7.5 Thematic conclusion

Only one of the six thematic targets was addressed by the projects, and none of the projects addressed most of the targets under the theme. It was found that there was a wider scope for undertaking projects towards - (1) modeling climate change scenarios for Bangladesh by applying global climate change models and methodologies at regional and national levels, (2) modeling the likely hydrological impacts of climate change on the Ganges-Brahmaputra-Meghna system to assess likely future system discharges and river levels in order to derive design criteria for flood protection embankments, (3) monitoring and researching the impacts of climate change on ecosystems and biodiversity, (4) undertaking research on the linkages between (a) climate change, poverty, and vulnerability and (b) climate change, poverty, and health (disease incidence, nutrition, water, and sanitation) in order to identify possible interventions to increase the resilience of poor and vulnerable households to climate change, (5) establishing a Center for Research and Knowledge Management on Climate Change (or a network of centers) to ensure Bangladesh has access to the latest ideas and technologies from around the world and that data is widely and freely available to researchers.

Case Study 3

Huzaifa becomes a content farmer

Huzaifa Rahman is a farmer by tradition. His father and grandfather were both farmers. He has completed his studies in the Madrasa (Islamic school) up to high school level. Since his childhood, Huzaifa helped his father with farming. In fact, all the family members contribute to family farming to meet up their livelihoods.

As a farmer, he used to maintain a relationship with Mr. Monjurul Kadir, the Chief Scientific Officer at the Agricultural Research Institute. Sometimes, he met him and discussed improving farming practices. Mr. Kadir was happy with him, as he used to get the fresh vegetables from their garden for him. Mr. Kadir came to see Huzaifa once and informed him about the Climate Change Trust project. He has convinced Huzaifa to participate in the training programmes under the said project.

In the training, we got to learn how to make use of char lands for farming. Following that, some of the farmers around us began cultivating the char land, and we did the same as well. We grew many crops, such as mustard seed, mashkolai, lentils, khesari, wheat, maize, nuts, potatoes, oil seeds, etc. We made a good profit in the first year, as we got a three-times better yield than before. We have also started cultivating paddy, jute, vegetables, and spices, adapting modern farming technology and climate-tolerant seeds. Jute seeds were supplied by the BADC, and from the yield, we have separated the best seeds to sell in the market. These quality seeds are sold at a premium price, and we made good money out of them.

Due to increased income, our lives have gradually changed. I have constructed a concrete house and purchased necessary furniture for our home. I got married and became a father. I am now a successful farmer. I consider the effort of Climate Change Trust is a blessing for the farmers in the Char Lands. The project support has changed his farming concept and his life as well. His neighbors now come to him for advice, and he is happy to do that for them.

Mr. Huzaifa Rahman of Pathalya village, under Jamalpur Sadar Upazila of, Jamalpur district, was one of the framers who received services from the “Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts” project implemented by Bangladesh Agriculture Research Institute (BARI), funded by BCCTF.

4.8 Thematic Area V: Mitigation and Low Carbon Development

The goal as set forth under this theme of the BCCSAP is to evolve low carbon development options and implement these as the country’s economy grows over the coming decades and the demand for energy increases.

There were nine (9) projects implemented under this theme, and the list of projects including their respectively defined objectives is as below.

Ref. No.	Project particulars
5.1	সমগ্র বাংলাদেশের শহরগুলোর (পৌরসভা/মিউনিসিপ্যালিটি) জৈব আবর্জনা ব্যবহার করে প্রোগ্রাম্যাটিক সিডিএম শীর্ষক প্রকল্প implemented by Department of Environment (DoE) during April 2010 to June 2019
5.2	Eco-Restoration of Hill Forests, Cox's Bazar implemented by Bangladesh Forest Department (BFD) during July 2012 to June 2015
5.3	কাপ্তাই এলাকায় বাগান সৃষ্ণের মাধ্যমে কার্বন সিংক তৈরী প্রকল্প implemented by Bangladesh Forest Department (BFD) during November 2012 to June 2015
5.4	বায়েগ্যাস প্রযুক্তি সম্প্রসারণের মাধ্যমে কার্বন নিঃসরণ হ্রাস ও বিকল্প জ্বালানি ব্যবহার বৃদ্ধিকরণপ্রকল্প (২য়পর্যায়) implemented by Institute of Fuel Research and Development (IFRD) during March 2014 to February 2016
5.5	সিংড়া পৌর এলাকায় পৌর বিদ্যুতায়িত সড়কবাতি স্থাপন শীর্ষক প্রকল্প implemented by Singra Pourashava, Natore during July 2016 to December 2017
5.6	নোয়াখালী জেলার হাতিয়া উপজেলাধীন জাহাজ্জার চর এলাকায় নবায়নযোগ্য শক্তি নির্ভর ১ মেগাওয়াট ক্ষমতাসম্পন্ন বিদ্যুৎকেন্দ্র স্থাপন প্রকল্প implemented by Bangladesh Army during March 2017 to June 2018
5.7	Introduction of Solar Powered Irrigation Pump as well as Power Management and Distribution System to Mitigate Energy Crisis and Climate Change implemented by Rural Electrification Board (REB) during April 2010 to April 2012
5.8	Electrification in Local Area (Upazila Complex) by using Solar Energy implemented by Rural Electrification Board (REB) during July 2012 to November 2014
5.9	Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System implemented by Palli Daridro Bimochon Foundation (PDBF) during July 2017 to March 2019



Photo 18: Picture – programmatic CDM



Photo 19: Picture – eco restoration of hill forest



Photo 20: carbon sink project Kaptai, Rangamati



Photo 21: biogas plant



Photo 22: Picture – solar system (renewable energy)

Evaluation findings:

4.8.1 Year-wise fund allocation and expenditure by the projects

The following table entails the year-wise BCCT fund allocation to and expenditures incurred by the projects (9) under Theme 5 (ref.: PCRs). Figures in the table are in lakh BDT.

P. SL	Year-1		Year-2		Year-3		Year-4		Year-5	
	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.	Alloc.	Exp.
1	84.51	84.51	1240.64	1240.64	64.43	64.43	1391.58	1391.58		
2	166.27	164.62	329.83	31.20	53.90	349.43				
3	382.65	381.99	464.90	463.21	352.45	350.89				
4	NA	NA	1000.0	989.95						
5	199.65	199.65								
6	50.00	00	150.00	100.00	00	50.00				
7	NA	NA	1111.47	953.22						
8	41.37	6.73	2133.84	819.96	450	429.14				
9	NA	NA	300.00	296.25						

P. SL = Project Serial; NA = Not Available

These are included into the PCRs in tabular format only having no further clarifications relevant. During the consultants' field visit sitting officials of the implementing agencies couldn't clarify the pattern of the allocations and expenditures as well.

4.8.2 Objectives and component wise achievements

There were nine (9) projects taken and implemented under this theme, complied objectives of those projects are presented hereunder:

- Contribute to reduction of greenhouse gas emission through enforcing 3R (reduction, re-use and recycle of waste) management of waste, increasing awareness, and earning revenues through selling CER/VER
- Produce and promote composting and using them in improving soil fertility
- Ensure the in-situ and ex-situ conservation of different plant species in the hill forest, and conserve nature to create scope for establishing seed sources and gene bank of the existing, rare, and endangered forest tree species to bring in species diversity and thus biodiversity and thus biodiversity of the natural forests
- Facilitate development of eco-tourism on the available forest lands at the outskirt places
- Develop carbon sink by mobilizing local people for promoting nursery and collecting pulp wood to improve the socio-economic condition of the poor and the ethnic minorities.
- Increase awareness of the people on climate change effect and adaptation
- Support increased use of alternative fuels, renewable energy and power, organic fertilizers, biogas towards reduction of greenhouse gas emission

There were nine projects implemented under this theme by the agencies include: (i) Department of Agricultural Extension (DoE), (ii) Forest Department, (iii) IFRD, (iv) Singra Pourashava, Natore, (v) Bangladesh Army, (vi) Rural Electrification Board (REB), and (vii) Palli Daridra Bimochon Foundation (PDBF) under different ministries. The major activities of the projects implemented are:

- a) Developing programmatic CDM using organic wastes in different municipalities and city corporations
- b) Plantations of the existing, rare, and endangered indigenous, native, and endemic forest species and flower gardens including aquatic plant gardens orchid plantation, cactus garden, bamboo groves, etc.
- c) Construction of Pump House, overhead tank and sinking of deep tube well
- d) Construction of approach roads, drainage systems with brick masonry, permanent nursery, boundary walls and semi-permanent nursery sheds
- e) Excavation of Ponds
- f) Developing carbon sink through gardening of various species
- g) Installation of Biogas Plants
- h) Installation of Solar Street Light/ Solar Energy system (SES)
- i) Installation of 34 KWp Renewable Energy based Power Plant
- j) Community-based electricity supply system, and
- k) Generate electricity from sunlight by Solar Panels and supply AC current through Battery and Inverters

Relevance with the Thematic Targets of the BCCSAP

The following table is used to draw and link the projects' objectives (implemented under this theme) with the thematic targets as set forth in the BCCSAP theme V:

No.	Thematic target(s)	Relevance of the project objectives
5.1	Develop and strategic energy plan and investment portfolio to ensure national energy security and lower greenhouse gas emissions	Partially addressed by the projects implemented

No.	Thematic target(s)	Relevance of the project objectives
5.2	Expand the social forestry programme on government and community lands throughout the country	None of the projects addressed this target
5.3	Expand the 'greenbelt' coastal afforestation programme with mangrove planting along the shoreline	None of the projects addressed this target
5.4	Seek the transfer of state-of the art technologies from developed countries to ensure that we follow a low-carbon growth path (e.g., 'clean coal' and other technologies)	None of the projects addressed this target
5.5	Review energy and technology policies and incentives and revise these, where necessary, to promote efficient production, consumption, distribution, and use of energy	Partially addressed by the projects implemented

Financial Progress:

SL	Project Name	Implementing agency	Financial Progress in BDT		
			Budget	Spent	Burn Rate
1	Programmatic CDM project using Municipal Organic Waste of Towns (City Corporation/Powrashava)	DoE	1,391.58	1,231.689	88.5%
2	Eco-Restoration of Hill Forests, Cox's Bazar	BFD	550.00	545.25129	99.1%
3	কাপ্তাই এলাকায় বাগান সুজনের মাধ্যমে কার্বন সিংক তৈরী	BFD	1,200.00	1,196.09471	99.7%
4	Mitigation of Carbon Emission and Extension of Alternative Energy usage through dissemination of Biogas Technology (2nd Phase)	Institute of Fuel Research and Development (IFRD)	1,000.00	998.94695	99.9%
5	সিংড়া পৌর এলাকায় সৌর বিদ্যুতায়িত সড়কবাতি স্থাপন শীষক প্রকল্প	Singra Paurashava, Natore	199.65	199.63185	99.9%
6	নোয়াখালী জাহাজঘরচর এলাকায় নবায়নযোগ্য শক্তি নির্ভর ১ মেগাওয়াট ক্ষমতা সম্পন্ন পাওয়ার প্লান্ট তৈরি প্রকল্প	Bangladesh Army	200.00	200.00	100.0%
7	Introduction of Solar Powered Irrigation Pump as well as Power Management and Distribution System to Mitigate Energy Crisis and Climate Change	REB	1,039.8	935.159	89.9%
8	Electrification in Local Area (Upazila Complex) by using Solar Energy	BREB	2,460.8	1,255.83	51.0%

SL	Project Name	Implementing agency	Financial Progress in BDT		
			Budget	Spent	Burn Rate
9	Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System (1 st Revised)	Palli Daridro Bimochon Foundation (PDBF)	300.00	296.25	98.8%

Overall fund utilization rate of the projects under this theme V is around 65%.

4.8.3 Projects' relevance and effectiveness

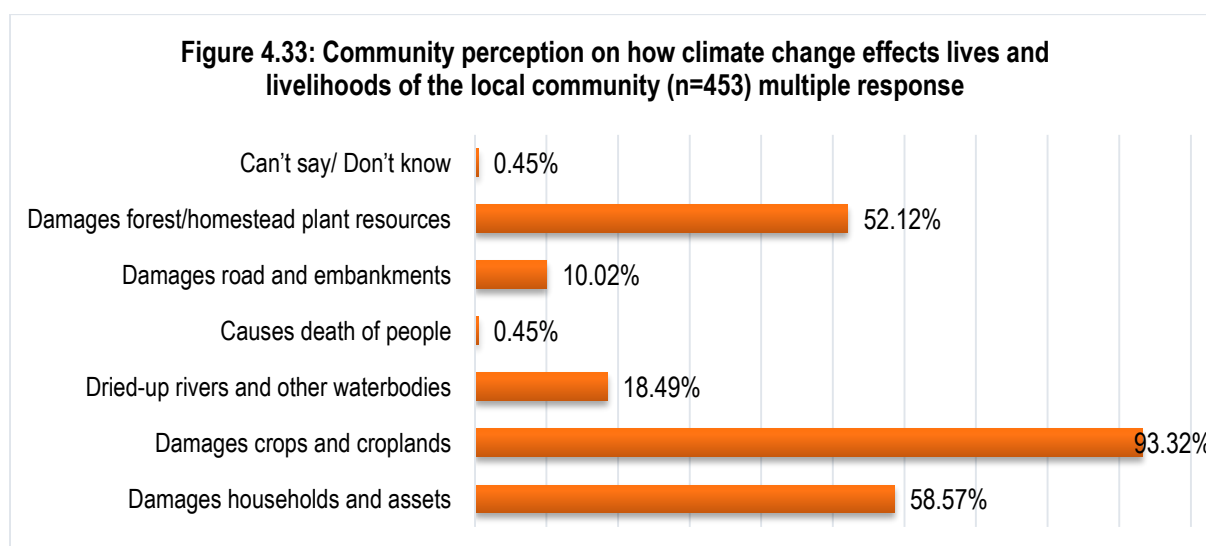
As per community people and stakeholders' opinion the projects implemented were highly relevant to the local context and needs of the climate affected population. Explicitly, for example, 92% of people think that the project was very useful i.e., highly relevant.

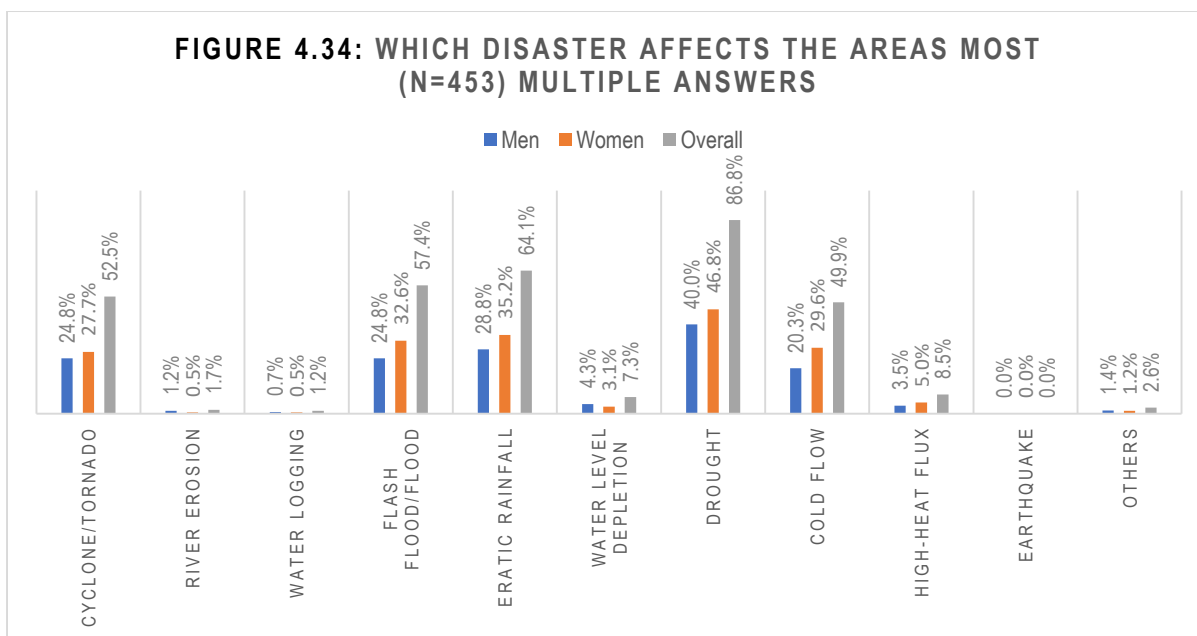
On the other hand, the projects were very effective in terms of addressing the community as well as country needs as those have contributed reducing greenhouse gas emissions to the environment and thus lowered the likelihood of climate induced disasters. In addition to these, people deprived of electricity connections and their benefits were served with alternative renewable energy for their day-to-day and livelihood development purposes.

4.8.4 Socioeconomic impacts and sustainability of the projects

Through the projects' interventions thousands of remote households have gained access to alternative energy sources and that provided them with multiple opportunities for income and livelihoods. Poor rural people and communities benefited with the services to increase their income and alternative livelihood opportunities. Those also provided them with the capacity to cope with climate change impacts. However, sustainability of the projects was generally remained unaddressed by ending up the projects without any institutional mechanisms to look after the project activities and impacts to be expanded in a sustainable manner.

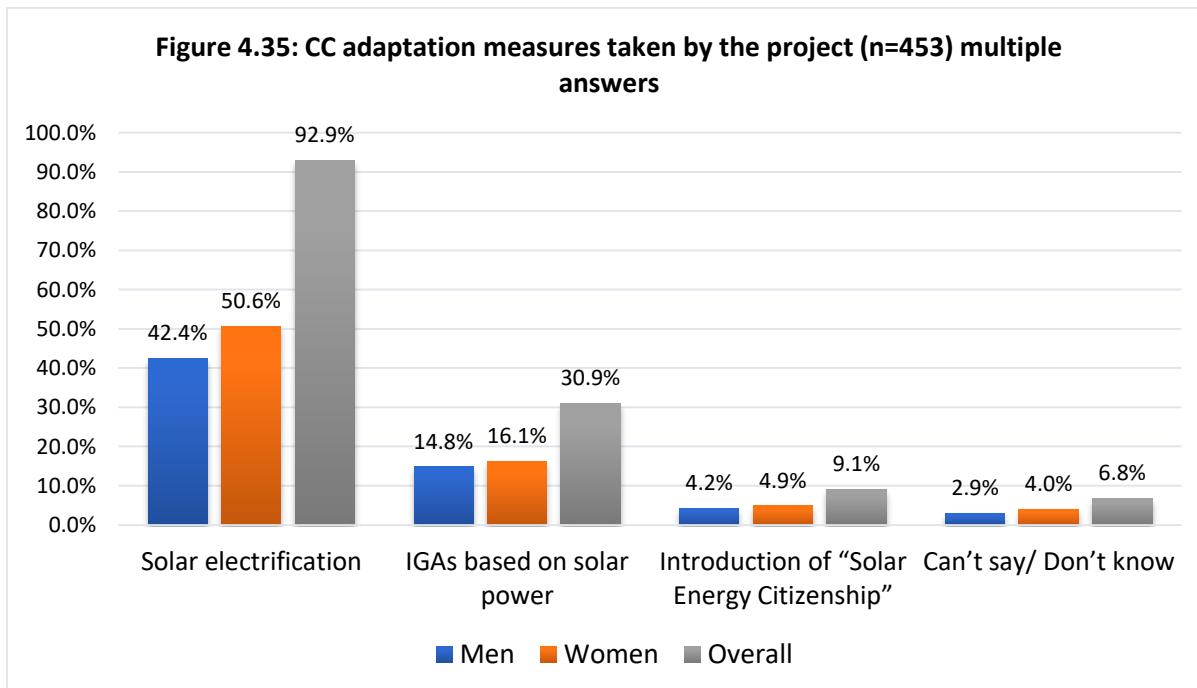
From among the projects under this theme quantitative study was conducted for only project that was implemented by PDBF (Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System -1st Revised). Following figures are indicative of the thematic findings for example,



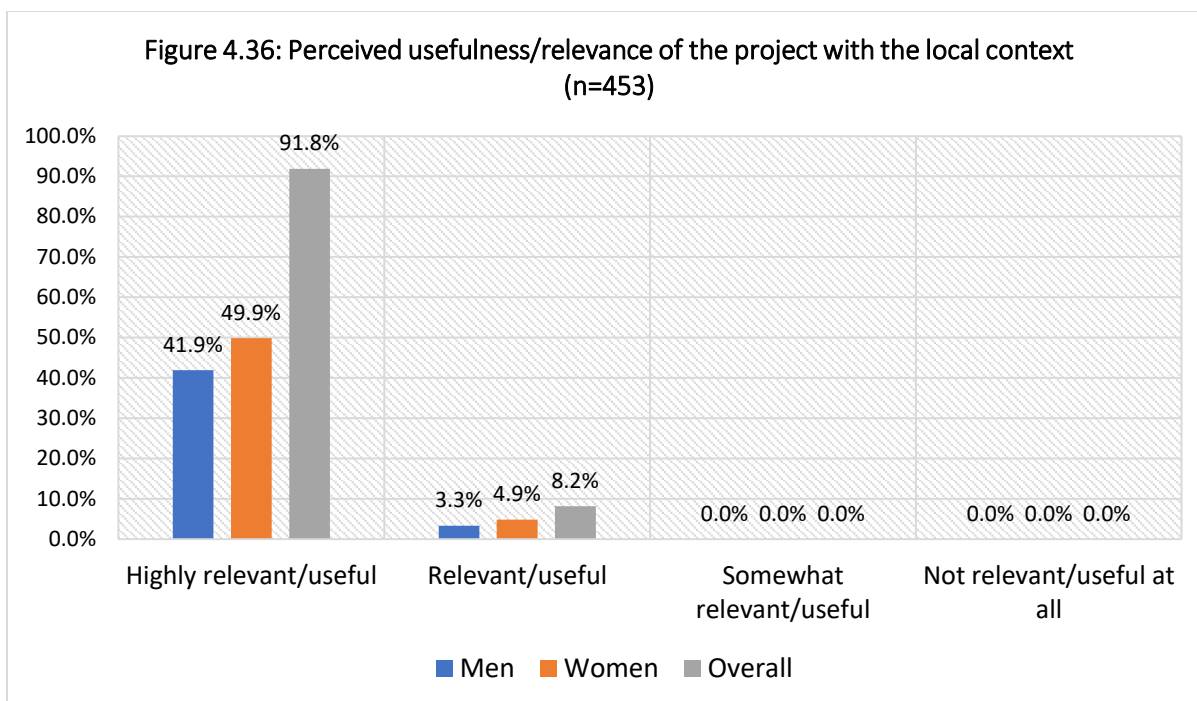


The evaluation study reveals that community people are now more aware of climate change impacts. For example, about 93% respondents of the project perceived that climate change damages crops and crop lands, about 59% perceived that it damages houses and household assets, and about 52% perceived that it damages forests and homestead plant resources.

Locally, about 86% project beneficiaries opined that they have been suffering from drought most, and then 64% opined erratic rainfall, 57% opined flash flood, 52% opined cyclones and tornado, and about 50% opined cold wave are the hazards being induced by climate change.



Given the level of awareness among local communities about 67% suggested that solar electrification is introduced as CC adaptation measure, while 22% opined for solar system based IGAs.



As like other projects, most respondents (about 92%) opined that the project was highly relevant to local context and community demand, where only 8% said that it was merely useful.

Given the accessibility to basis utility and services of the communities of former enclaves, about 58% project beneficiaries said that former enclaves are ended with lack of electricity, 37% said that they enjoy electric and electronic appliances, and some of them said that dependency on grid based electricity is reduced.

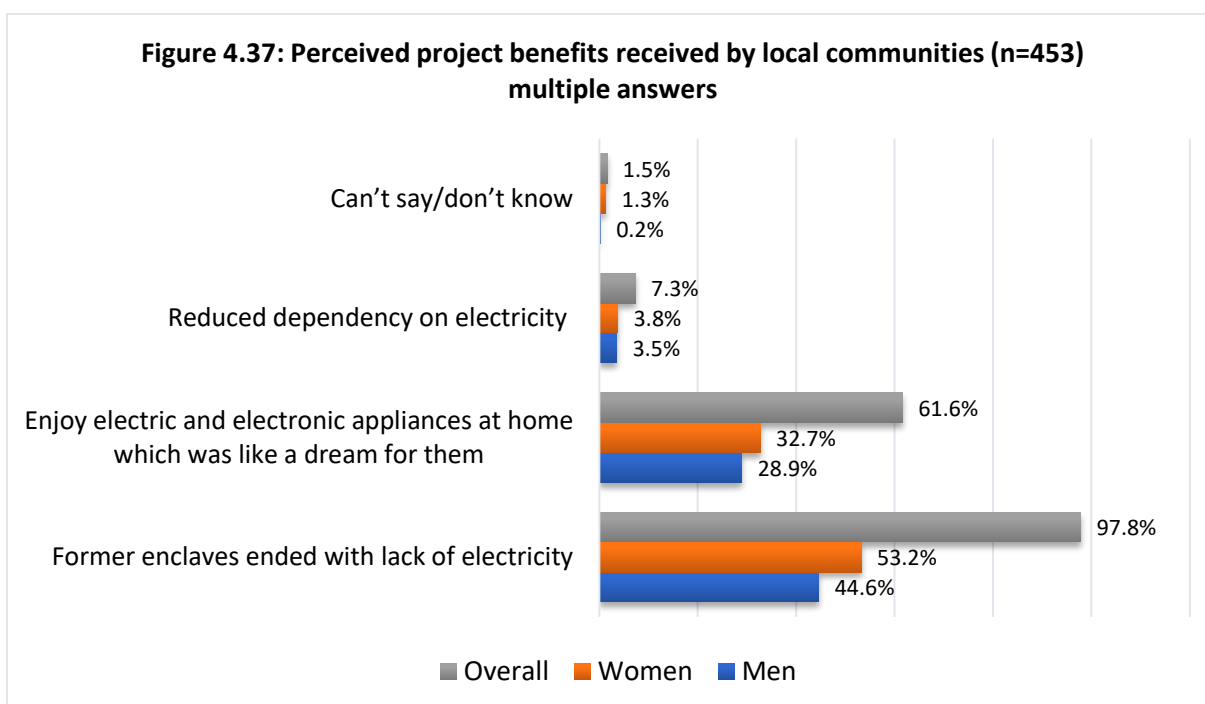
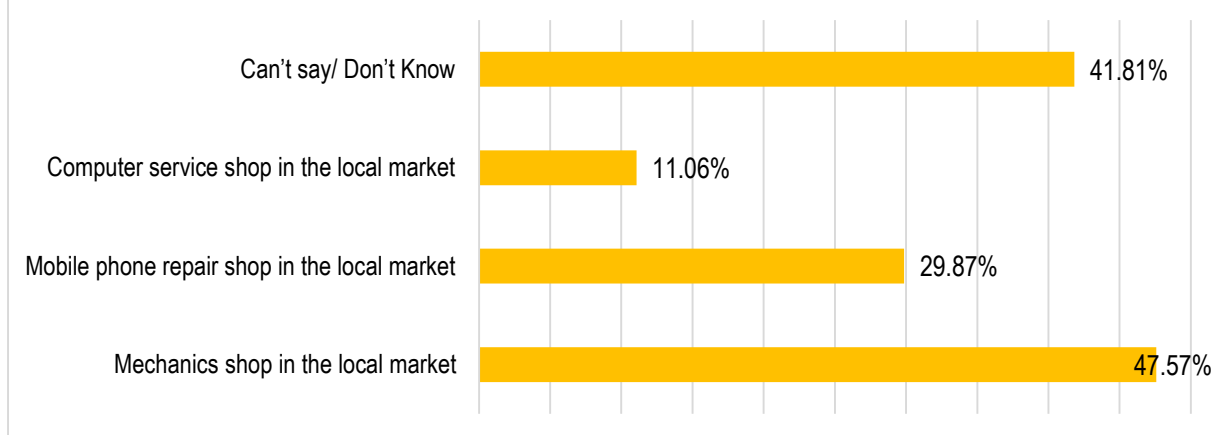


Figure 4.38: IGA activities based on Solar power (n=140) multiple answers



4.8.5 Thematic conclusion

Quite a few of the projects addressed the need of developing investment portfolio to ensure national energy security and lower greenhouse gas emissions, and promoting efficient production, consumption, distribution, and use of alternative (renewable) energy. While none of those projects were related to expanding the social forestry programme on government and community lands throughout the country, expanding the 'greenbelt' coastal afforestation programme with mangrove planting along the shoreline (in fact, these activities used to implement through the own fund of FD), and seeking the transfer of state-of the art technologies from developed countries to ensure that we follow a low-carbon growth path (e.g., 'clean coal' and other technologies). Whatsoever, the IFRD has implemented a project by which a model was demonstrated on how significant reduction of greenhouse gas emission can be possible like below (ref: IFRD-BCSIR staff team exercise):

An example of Scientific Calculation of the reduction of GHG by single Unit Biogas Plant:

In the absence of 5000 biogas plant,

The total daily gas production from 400 tons cow dung

Biogas: 13000m³

Carbon di oxide: 7780 m³

Methane: 5220 m³

Methane absorbs heat 23 times more than that of carbon-di-oxide, so 5220 m³methane means 120060m³carbon-oxide.

In the absence of 5000 biogas plant, the total Carbon di oxide gas production is 46661600 m³

Density of carbon-di-oxide 1.83 kg/m³

So that total mass of carbon-di-oxide is 85390728 Kg/year

In the presence of 5000 biogas plant,

The total daily gas production from 400 tons cow dung

Biogas: 15000m³

Carbon di oxide: 6000 m³

Methane 9000 m³

In the presence of 5000 biogas plant, so that total mass of carbon-di-oxide is 10019250 Kg/year, and therefore, total amount of greenhouse gas reduction (CO₂) from 5000 biogas plant 75371.48 ton/year.

Total amount of greenhouse gas reduction (CO₂) from unit (one) biogas plant 15.07 ton/year.

Case Study 4

Biogas Plant, the Magic Box

Narayan Chandra Roy has a big family, including his wife, two sons, a daughter-in-law, and grandchildren. He got some ancestral lands for farming. He also rears 3–4 cows. His wife burns cow dung sticks for cooking, which more often creates smoke and causes irritation in the eyes and breathing. He wanted to avail himself of cylinder gas, but his low income never allowed it.

During 2014–2015, biogas plants were installed at different households in Nilphamari district with financial assistance from the BCCTF. Luckily, Narayan Chandra was one of those selected to establish biogas plants at home. IFRD, BCSIR, and Shwadesh Biogas have been implementing this biogas plant project together. From the project, Narayan received the necessary assistance to construct the biogas plant. Thus, his family's situation changed significantly.

From that biogas, high-quality organic fertilizers are being made, which are being used on his land. By doing so, he is getting more organic fertilizer than ever before. After cultivating land, fishing, and meeting fuel demand, he is selling these fertilizers to neighboring farmers, which provides him additional income.

Narayan Chandra said that usually cow dung could be used as fuel for cooking. But now cow dung has become valuable and is no longer being wasted because of the construction of the biogas plant. Besides cooking, cow dung is being used for cultivating land and for fish farming in ponds as well. His wife cooks smoke-free, and there is no environmental pollution either.

By seeing the success of Narayan, other people are encouraged to construct biogas plants. It is contributing to farming, using alternative, affordable fuels, and combating climate change effects. The success of biogas plants is creating a huge demand for them in this area. Narayan's village has now earned its name as "Biogas Palli" in Nilphamari district. Narayan correctly named his biogas plant a "magic box," as he found many in one.

Sree Narayan Chandra Roy of the village Ronochandi of Nilphamari district is one of the many successful beneficiaries of the project entitled "Reducing Carbon Emission and encouraging the use of alternative fuel through the extension of biogas technology"

Case Study 5

Solar lights illuminate lives in enclaves

Nilufa Begum lives in Vitokathi, a small village in Kalughat, Union Parishad, under the Lalmonirhat Sadar Upazila. Vitoathi had long been one of the many enclaves, a Bangladeshi village inside Indian territory, and thus very few people can recognize this village. The villagers of Vitorkathi are largely dependent on agriculture, primarily as day laborers. Nilufa was studying in class five, and her father got her married to Md. Hanif of the same village, though she wanted to complete her high school education.

Nilufa Begum is now the mother of two children, one of whom is daughter and the other a son. Nilufa Begum wished to continue her daughter's study up to the eighth grade because she could not study. Her family barely lives by making both ends meet. On the one hand, Md. Hanif is struggling to purchase daily necessities, and on the other hand, his daughter was promoted to the sixth grade from the fifth. On the eve of the kerosene price hike, Nilufa Begum and others in the village dream of electricity. She wishes to see her daughter study in the light of electricity. This unfulfilled dream has come into reality through the BCCTF project entitled "Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar Systems." Vitorkathi, fortunately, was one of the villages where the project was implemented. Nilufa Begum's wish has been fulfilled, as her daughter has passed the eighth grade and is now an SSC candidate. Nilfufa Begum said that the availability of electricity could have helped her daughter in the public exam. Even though she has the will to educate her daughter, she cannot do so because her husband does not have enough income to make it possible.

Nilufa Begum's indomitable will and the Palli Daridro Bimochon Foundation's (PDBF) solar system have contributed to her daughter's study under electric light, which made her so happy. When Nilufa spoke about the solar light, her face was more illuminated than her house itself. She has expressed her gratitude to the BCCTF and the PDBF authorities for making her dream come true.

Nilufa Begum of Vitorkathi village under Lalmonirhat district, is one of the beneficiaries of the solar light project in the former enclaves funded by BCCTF.

4.9 Thematic Area VI: Capacity Building and Institutional Strengthening

The goal as set forth under this theme of the BCCSAP is to enhance the capacity of government ministries and agencies, civil society, and the private sector to meet the challenges of climate change and mainstream them into development actions.

There was only project titled “Forest Information Generation and Networking System” implemented by BFD under this theme during April 2011 to March 2013, and the project objectives were to: (i) prepare GIS database of all forest department-controlled units using high resolution satellite images, and which will assist to assess vulnerability of forest to climate change, (ii) derive appropriate tool of GIS & Remote Sensing for mapping and monitoring, (iii) capacity strengthening of FD officials in the field of mapping, monitoring related to climate change, and (iv) ICT strengthening of MoEFCC and FD.



Evaluation findings:

4.9.1 Year-wise fund allocation and expenditure by the project

Relevant information was unavailable.

4.9.2 Objectives and component wise achievements

There was a single project (included in the evaluation package) implemented under this theme, and objectives of the project are briefed below:

- To prepare GIS database of all forest departments using high resolution satellite images, which will support assessing the vulnerability of forests and find appropriate tool of GIS & Remote Sensing for mapping and monitoring
- Capacity strengthening of FD officials in the field of mapping, monitoring related to climate change including ICT strengthening of MoEFCC and FD

In similar ways, the purposes of different projects will be evaluated differently through the study, but the findings will be clustered and presented linking with the thematic targets as set out in the BCCSAP. Besides, the evaluation findings will be showcased separately focusing on how they are supported in contributing to the overall achievement of the broader thematic goals of the national climate change strategy.

There was a single project titled “Forest Information Generation and Networking System” implemented by the Forest Department (FD) under the Ministry of Environment, Forest, and Climate Change during the period from April 2011 to March 2013. The major activities of the projects implemented are:

- a) Prepare GIS database of all forest department controlled using high resolution satellite, images, which will assist to assess vulnerability of forest to climate change
- b) Find/derive appropriate tool of GIS & remote sensing for mapping and monitoring
- c) Capacity strengthening of FD officials in the field and mapping monitoring related to climate change, and
- d) ICT strengthening of MoEFCC and FD

Relevance with the Thematic Targets of the BCCSAP

The following table is used to draw and link the projects’ objectives (implemented under this theme) with the thematic targets as set forth in the BCCSAP theme VI:

No.	Thematic target(s)	Relevance of the project objectives
6.1	Review and revise, where appropriate, all government policies (sector by sector) to ensure that they take full account of climate change and its impacts	Remains unaddressed
6.2	Mainstream climate change in national, sectoral, and spatial development planning (in government ministries and agencies, local government, the private sector, civil society, and communities) and ensure that impacts on vulnerable groups and women are prioritized in plans	Remains unaddressed
6.3	Build the capacity of key government ministries and agencies to take forward climate change adaptation (e.g., Ministry of Disaster Management & Relief, BWDB, LGED; National Agricultural	Addressed partly by the project through developing ‘forest information generation and networking system’

No.	Thematic target(s)	Relevance of the project objectives
	Research System, the health system, the Ministry of Women and Children's Affairs)	
6.4	Build the capacity of the government to undertake international and regional negotiations on climate change.	Remains unaddressed
6.5	Build the capacity of the government, civil society and the private sector on carbon financing to access various global climate funds	Remains unaddressed
6.6	Build the capacity for education and training of environmental refugees to ease and facilitate their migration to other countries and integration in new societies	Remains unaddressed

Financial Progress:

The approved project budget was BDT 818.723 lakh against which the actual expenditure incurred was BDT 501.678 lakh. This provides the rate of fund utilization of the project under this theme is around 61% only.

4.9.3 Projects' relevance and effectiveness

The major output of the project was to update satellite image-based forest maps of different forest areas and it was done successfully. For proper forest monitoring these maps need to be updated on a regular interval (for our forests it is every five years). These forest maps were updated in 2017 and expected to be updated again in 2023.

4.9.4 Socioeconomic impacts and sustainability of the projects

The share of forest lands has an important role in balancing the overall environmental and national ecosystems. Managing forests through developing forest information generation and networking systems helped forests to be effectively managed, and thus it directly benefits the forest dependent communities. Indirectly, the general communities are benefiting from the well-managed forests in multifold of ways and manners. For example, well-developed and managed forests balances ecosystem and improve environmental conditions and which eventually helps people to be capable of climate change adaptation. Forest Department itself maintains the sustainability of project activities by routine upgrading the system and retaining that useable for a long period of time.

4.9.5 Thematic conclusion

The only project under this theme was partly related to building the capacity of key government ministries and agencies to take forward climate change adaptation (e.g., Ministry of Environment, Forests and Climate Change). BCSSAP 2009 emphasizes regular forest monitoring with the assistance of modern technology. As this project prepared satellite-based maps, the project had been able to contribute to the relevant thematic area. Other than this, the project addressed none of the other thematic targets. In fact, it is not possible to address all the thematic targets by only one project.

4.10 Status of Projects' Physical Infrastructure by Types

As part of the evaluation of 45 completed projects funded by the BCCT, the projects with infrastructure components have been verified physically in different locations. In this section, the findings of physical verifications are presented based on the types of projects

undertaken by different agencies. The types of projects belong to different thematic areas, including rubber dam, protection work, water supply, water logging, canal re-excavation, infrastructure, disaster resilience, irrigation, and road constructions.

Type of Project	Rubber Dam		
Number of Projects	1		
Project Descriptions			
Name	Duration	Location	Implementing Agency
Building Rubber Dam on the river Chellakhali under Nalitabari Upazila in Sherpur to combat climate change effects. Under this project, the following activities were performed: (i) building a rubber dam; (ii) re-excavation of the Chellakhali River, and (iii) constructing an inlet and outlet to facilitate water for irrigation.	Start: April 2014 End: April 2016	Nalitabari, Sherpur.	Bangladesh Agricultural Development Corporation (BADC)
Current Status (overall) of the project: The evaluation team visited the project location after six years of completion. The project was implemented with a 4.50-meter-depth of water to be stored upstream of the rubber dam during the dry season (December to May). The capital expenditures were incurred for the purposes of construction of rubber dam structure works (3500 m ²), construction of inlets and outlets (10 nos.), re-excavation of the Chellakhali river (8.7 km), rubber dam bag procurement and installation (800 m ²), steel sheet pile procurement (61 mt), and drain bag transportation, among others. It was found to be a well-functioning project in terms of providing irrigation water. The quality of construction was satisfactory, as even after six years, no damage was found in the dam, and other machinery and equipment were also in good shape.			
Observations/Comments: The project is critical for farmers because they have been suffering from lack of water during the lean season, which the dam has solved. The O&M service is also vital for any infrastructure project and so is the rubber dam. The implementing ministry should have this responsibility, as mentioned in the BCCT fund utilization guidelines.			



Photo 24: Rubber Dam Irrigation Project in Chellakhali River in Nalitabari Upazila of Sherpur district.

Type of Project	Protective Work		
Number of Projects	10		
Project Descriptions			
Name	Duration	Location	Implementing Agency
1. Protective work in the different areas of Karnaphuli, Halda, Ischamoti river and Shilock Khal and their branches, canal structure construction under Chittagong district.	1 July 2010 to 30June 2014	Chattogram	BWDB
2. Re-construction of embankment and riverbank protection work in Ramnagar-Rahimnagar area under RupshaUpazila of Khulna district.	31 Dec 2010 to 30 June 2016	Khulna	BWDB
3. Protection of Ulania and Gobidapur area from erosion of the Meghna River in Mehendiganj Upazila under Barishal district.	1 February 2013 to 30 June 2015	Barishal	BWDB
4. Bank protective work at the left bank of the Meghna River outfall of Gabtali sluice at HatiyaUpazila in the district of Noakhali to mitigate the risk of the disaster due to climate change.	1 April 2013 to 30 June 2015	Noakhali	BWDB
5. Re-excavation of Shubhadya Khal including slope protection work from Shubhadya to Aganagar to mitigate the environmental impact in Upazila Keraniganj in Dhaka district.	1 July 2013 to 30 June 2017	Dhaka	BWDB
6. Mitigation of natural disaster by protection of Gazibari and Jangalia area in west Ilisha union under Bhola Sadar from erosion of the Tentulia river due to climate change impact.	01 November 2015 to 30 June 2018	Bhola	BWDB
7. Bank protection work at Dewanji Ghat Hindupara and Mukamipara along the left bank of Halda river in RauzanUpazila under Chittagong district to mitigate the hazards due to climate change.	01 October 2016 to 30 June 2019	Chattogram	BWDB
8. Slope protection and improvement work for road cum-embankment of Bhandaria Upazila.	01 April 2014 to 30 June 2015	Pirojpur	LGED
9. Construction of road cum embankment from West Gaudiya Mosque to Puja Mandir via Khanka Sharif of Bejgaon of Louhajnog Upazila under Munshiganj district.	July 2013 to December 2016	Munshiganj	LGED
10. Riverbank protection of the Bangshai river in Tangail's Mirjapur Upazila at Hat Fatehpur.	October 2012 to December 2015	Tangail	BWDB



Photo 25: Riverbank protective works under theme III



Photo 26 : Physical observations made by the Consultant of the riverbank protective works implemented by the projects under theme III.

Current Status (overall) of the projects:

Project 1: The construction of the infrastructure, including 1 regulator (3 vents, 1.50m x 1.50m) was found to be in good shape. Floodwater was kept away from all the installations that were targeted. The adaptation capability of the people has been improved. The project has also been contributing to improving the socio-economic condition of the people in the project areas through increased agricultural productivity.

Project 2: In the project, 76 km of protective work was built. There were four specific objectives of the project, including (i) protecting the project area from river erosion and salinity, (ii) growing agricultural production, (iii) confirming social security, and (iv) generating employment. The reports suggest that 100% of the project objectives were achieved.

Project 3: The riverbank protection work was planned for 875 kilometers and was fully completed. The project helped protect Ulania Bandar, Bazar, the High School, the Girl's School, and adjacent areas of Mehendiganj Upazila of Barishal from the erosion of the Meghna River. It had significant impact on the socio-economic development of the areas.

Project 4: In the first package of 0.423 km riverbank protection was completed, and the second package of 0.430 km bank protection work was done. The project protected all kinds of installations, e.g., homesteads, schools, madrasas, roads, ghats, bazaars, mosques, temples, etc. from flood water. Along with these, the risk factors arising from climate change have declined, and adaptation capacity has improved. The local people were engaged as workers and suppliers, and hence, their socioeconomic condition improved. The project also contributed to increasing agricultural production in the area.

Project 5: The project was an attempt to re-excavate the canal to get the flow of water back, along with the illegal encroachment of the canals by the occupants on both sides of the said canal. The dumping of garment waste at the Buriganga end of the canal was responsible for the loss of water flow, and as there was no water flow, people started throwing their household wastes there, causing further damage to the canal. As a matter of fact, there have been no O&M activities since the work was completed, and thus the canal has gone back to its old shape again.

Project 6: Under this project, a total of 0.280 km of riverbank protection work with CC blocks was completed. Though small in size, the protection of the riverbank was very important for the area. The completion of the project greatly benefits the people in the areas.

Project 7: The works were divided into two packages, one of which was bank protection work in the Dewanjee Ghat area and the other was construction of bank protection work in the Mukamipara area. Both components (a total of 0.360 km of protective works) were completed. It was observed that the targeted installations are protected by the completion of the project. The ability to adapt to climate change has increased and contributed to the community as planned. Agricultural production increased as well.

Project 8: The project included the improvement of 2.96 km of embankment cum road and 210 m² of slope protection work. The project had been completed successfully, with all of its objectives met.

Project 9: It was observed that, according to plan, 2.15 km road cum embankment work had to be done. The project has been constructed to realize the objective. It has saved the lives and livelihoods of thousands of people living on the banks of the river Padma, who primarily depends on agriculture.

Project 10: The protective work at Bangshai River was fully completed, which protected the damage against erosion. The completion of the project has saved several nearby educational institutions and marketplaces.

Observations/ Comments:

Protective works funded by BCCT are almost functioning, and about 90% of the construction works are running well. It was observed that the length of the protective work was not sufficient, but it was primarily due to a lack of funds. In fact, the full scope of the protective work must be completed as soon as possible; otherwise, partial work rarely benefits the targeted communities. It was observed that some portions of the protective work were damaged due to severe water pressure. This is ultimately a waste of public resources. It is recommended that, after implementation of the protective work, O&M activities be increased. Periodic, interim, or routine maintenance is to be done every year.

Type of Project	Water Supply			
Number of Projects	2			
Project Descriptions				
Name		Duration	Location	Implementing Agency
1. Safe water supply project in climate change affected Babuganj and Muladi Upazila in Barishal district		01 January 2017 to 31 December 2018	Barishal	DPHE
2. Safe water supply project in climate change affected Monpura and Charfession Upazila in Bhola district		01 January 2017 to 31 December 2019	Bhola	DPHE
Current Status (overall) of the project infrastructure:				
Project 1: The project's goal was to provide safe drinking water by installing 227 no. (38 mm diameter) deep tube wells with raised platforms in climate change-affected areas of Babuganj and Muladi. The project has generated increased access for the affected disaster-prone communities to safe drinking water, especially during and after natural calamities, resulting in a reduction of waterborne diseases.				
Project 2: Under this project, 175 deep tube wells were installed along with raised platforms. The project aimed at ensuring safe drinking water through the installation of 175 nos. 38-mm-diameter deep tube wells with raised platforms in the project areas. It has increased the access of the affected coastal disaster-prone communities to safe drinking water, especially during and after natural calamities, resulting in a reduction of waterborne diseases.				
Observations/ Comments (overall):				
It was observed in the project areas that the installed deep tube wells were functioning well. Deep tube wells were found with raised platforms, and the pipes were found with the required specifications maintained during installation. However, it was also found that the damaged platforms due to disaster or salinity were not repaired accordingly and became the source of suffering for the users. This suggests that O&M services were not well addressed in the projects.				



Type of Project	Canal Re-excavation Project		
Number of Projects	2		
Project Descriptions			
Name	Duration	Location	Implementing Agency
1. Re- excavation of drainage Khals in Upazila Kotalipara, District Gopalganj to mitigate the adverse impact of climate change project.	01 May 2013 31 to December 2016	Gopalganj	BWDB
2. Re- excavation of Khals in Upazila Madaripur Sadar and Rajoir, District Madaripur to mitigate the adverse impact of climate change project.	01 December 2013 to 31 December 2016	Madaripur	BWDB
Current Status (overall) of the project infrastructure:			
Project 1: The project includes the re-excavation of Khal (65.00 km), which was completed physically by 92.01%, compared to the target of 99.67%. There was a deviation in achieving the target due to a land dispute (e.g., there was no acquired land by BWDB for re-excavation), and physically, 0.31% was achieved against the set target of 0.33%.			
Project 2: The project includes the re-excavation of nine khals totaling 33.45 kilometers, with a physical completion rate of 65.08% versus a target of 99.72%. There was a deviation in achieving the target due to a land dispute (e.g., there was no land acquired by BWDB for re-excavation). The physical achievement was 0.07% of the set target of 0.28%.			
Observations/ Comments:			
The Canal Bank slope should be accurate. The canal's length, width, and depth should be precise (as per design and specification). But sometimes problems arise due to poor people living on the banks of the canal. The volume of deposited soil should be spread according to design on both banks of the canal. So, road and embankment construction should be done with the deposited soil. Any obstruction to free flow in the canal should be removed.			

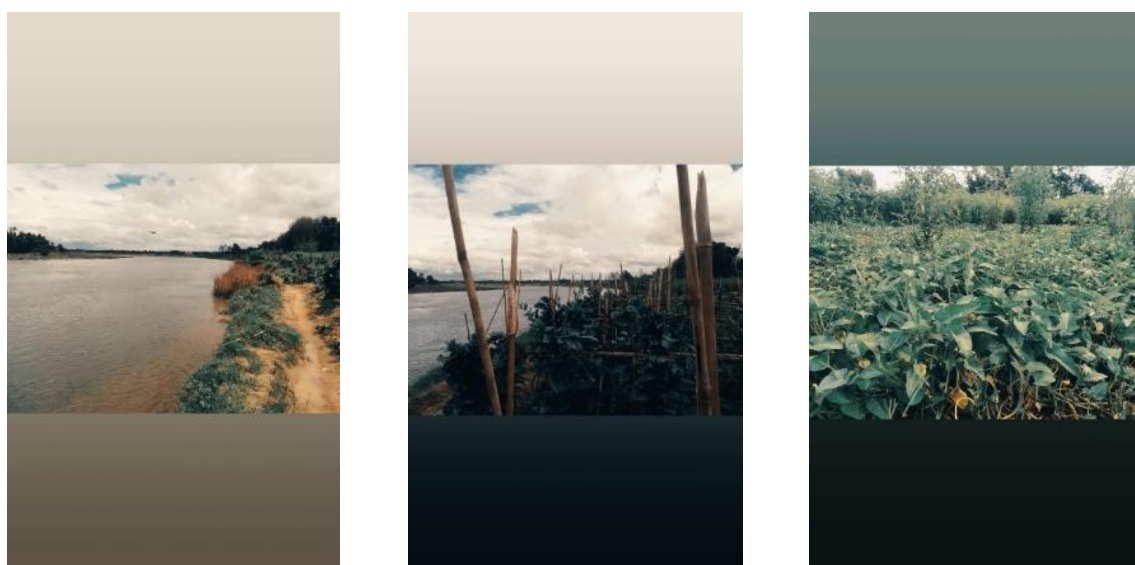


Photo 28: Physical verification of canal re-excavation works and present situation by the Consultants

Type of Project	Infrastructure Project		
Number of Projects	2		
Project Descriptions			
Name	Duration	Location	Implementing Agency
1. Establishment of Khagrachari Pourashava as a climate resilient town.	01 January 2012 to 31 December 2012	Khagrachhari town	Khagrachari Pourashava
2. Development of infrastructure to tackle climate change impacts in Patuakhali Pourashava.	01 July 2012 to 30 June 2013	Patuakhali	Patuakhali Pourashava
Current Status (overall) of project infrastructure:			
Project 1: There were three objectives of the project, such as (i) improving the drainage system at Khagrachari Pourashava to overcome water logging problems due to excessive rainfall and floods, (ii) protecting people from flood risk through the establishment of flood shelters, and (iii) protecting landless people from landslides through the construction of an RCC retaining wall. Among those objectives, two were completed, including (i) improving the drainage system, and (ii) establishing flood shelters.			
Project 2: The project included (a) sewerage for wrest water logging (100%), and (b) supply of safe drinking water, i.e., the installation of 90 Nos. of deep hand pump Tube Well (100%). The project contributed to reduce water logging and supply of pure drinking water to the communities.			
Observations/ Comments:			
Canal measurement and drainage system improvement, including canal digging, are nearly 80% completed and operational, which has a significant impact on water flow and is used to mitigate the negative effects of climate change.			



Photo 29: Physical verification of the drainage system

Type of Project	Disaster Resilient Project			
Number of Projects	2			
Project Descriptions				
Name		Duration	Location	Implementing Agency
1. Construction of Disaster Resilient Shelters for Tornado-2013 affected people in Brahmanbaria district.		01 July 2013 to 31 December 2014	Brahmanbaria	Department of Disaster Management
2. Climate Resilient infrastructure development of 4 educational Institute cum-Cyclone shelter at Pirojpur district.		01 January 2015 to 30 June 2018	Pirojpur	LGED
Current Status (overall) of project infrastructure:				
Project 1: During the field visit, the construction of 100 disaster-resilient houses was identified. The main objective was to provide shelter to the poor people affected by the tornado to help them reduce disaster risks to their lives and properties. In contrast to the goal, 100 (fully realized) disaster-resilient shelters were built and distributed to 500 Tornado 2013 victims in the targeted areas.				
Project 2: It was observed that, four schools cum cyclone shelters had been built, and that 100% of the project target had been met. The project objective was to provide four safe shelters in different locations for local people, including their livestock, during cyclones and tidal surges, and it was achieved accordingly				
Observations/ Comments:				
The house is well protected from flooding and other disaster-related threats. The project was completed in time to avoid natural disasters, and the house's location should be in a safe area. All these establishments are protected from river erosion, and the overall achievement is 80%. Excellent and sustainable infrastructure design as well as sufficient open space for people and livelihoods are considered, which are good for protection against disaster.				



Photo 30: physical verification of school cum cyclone shelter in coastal Bangladesh

Type of Project	Irrigation Project			
Number of Projects	1			
Project Descriptions				
Name		Duration	Location	Implementing Agency
Improvement of irrigation system and CDSP Embankment in Mirsarai Upazila, District Chittagong under CCTF project		01 July 2010 to31 December 2013	Chattogram	BWDB
Current Status of project infrastructure: It was observed that 21 km of khal re-excavated, 3 regulators built, 11.5 km of CDSP embankment repaired, and 0.5 km of riverbank protection work done. The construction of three sluice regulators and 21 km of canal re-excavation in the hilly areas contributed towards irrigation facilities on 1500 hectares of fallen land during the dry season. Additionally, repairs of the 11.5 km CDSP embankment and the 0.5 km riverbank protective work have resulted in flood control, riverbank protection, and transportation facility improvement across the Muhuri accreted areas of the Feni River. These have proven the project objectives to be fully achieved. The achievement rate is around 85%, and the instructions are working properly.				
Observations/Comments: Irrigation systems, including the re-excavation of canals, construction of sluices, and re-sectioning of embankments, are found to be very useful in rural areas. The protective wall on the bank of the Feni River also protects the salinity from the Bay of Bengal. However, the usual O&M service in such installations is critical.				



Photo 31: canal excavation and re-excavation for navigation improvement and irrigation purposes

Type of Project	Road Construction Project			
Number of Projects	2			
Project Descriptions				
Name	Duration	Location	Implementing Agency	
1. Project for construction / re-construction / re-habilitation of roads damaged by climate affects in coastal region (Bhola district)	01January 2016 to 30 June 2017	Bhola	LGED	
2. Climate resilient road improvement project at Bhola Sadar Upazila under Bhola district.	01 December 2015 to 30 June 2018	Bhola	LGED	
Current Status of project infrastructure:				
Project 1: The project was undertaken for the rehabilitation of 26.15 km rural paved roads in the districts damaged by the climatic impacts of climate change. All the works were dome accordingly in phases				
Project 2: Through this project, the implementing agency has ensured (a) the improvement of rural road connectivity, (b) the generation of employment opportunities, and (c) the provision of sustainable livelihoods for rural people in the project areas. It was observed that 100% of the work was done accordingly				
Observations/Comments:				
The rehabilitated roads are functioning, but the road shoulder is not as per design and specification due to the longer construction period. Sub-base, sub-grade, and other components could not be measured after a long period of construction. The construction quality is satisfactory to protect the roads from salinity, and the roads also work as flood control embankments.				



Photo 32: Physical verification of Road transportation infrastructure in rural areas of Bangladesh



Photo 33: Physical verification of Road transportation infrastructure in urban areas of Bangladesh

Type of Project	Water Logging Project		
Number of Projects	5		
Project Descriptions			
Name	Duration	Location	Implementing Agency
1. Development of drainage and environment to tackle climate change impact in Mathbaria Pourashava	01 April 2014 to 31 March 217	Pirojpur	Mathbaria Pourashava
2. Improve water logging situation through construction of drain and other protective measures to protect Kamalganj Municipal area for improvement of environment.	01 Mach 2015 to 31 December 2016	Sylhet	Kamalganj Pourashava
3. To remove the water logging and improve the environment of Kaliakoir Pourashava	01 May 2015 to 31December 2016	Gazipur	Kaliakoir Pourashava
4. Construction of drain to alleviate water logging problem under ward no-28 in Rajshahi City corporation	01 March 2016 to 30 June 2018	Rajshahi	Rajshahi City Corporation
5. Project for reducing water logging and improving of environment in Lalmohan Pourashava to mitigate climate change effect.	01 June 2016 to 31 December 2017	Bhola	Lalmohan Pourashava
Current status of water logging problems:			
Project 1: Under this project, the Mathbaria Pourashava had constructed 2265 meters of RCC drain, re-excavated 21,146 meters of canal, and distributed 500 energy-saving bulbs along with 333 spans of wire. Re-excavation of the canal helped remove the water logging			

problem in the Poura area, and the distribution of energy- saving bulbs and connecting cables went according to plan, helping the residents of the Pourashava area.

The project aimed at mitigating water logging problems in the Pourashava area through the construction of 2.056 km RCC drains. The drain was constructed in 14 different locations in the Pourashava territory. All the objectives of the projects were achieved.

Project 2: Project 5: Construction of a 343-meter RCC drain, an 800-meter canal, 110-meter khalpar protection at the graveyard, 212-meter RCC footpath construction at Shishu Park, and a 135-meter Shishu Park retaining wall were all part of the project. All the works were completed accordingly, benefiting the communities there.

The objectives of the project were to: (1) alleviate water logging problems due to climate change; (2) improve the environmental aspects of the people through RCC works; (3) ensure proper drainage of floodwater and rainwater; and (4) improve human health and productivity in the living environments. Under this project, 4358.75 meters of RCC drains were constructed. All the targeted work was completed accordingly.

Observations/ Comments:

For a smooth flow of water, RCC drainage systems have to be built as per design and specification. As observed, 80% of the drains constructed were functioning well. Regular O&M activities, maintaining size and shape according to plan and design, are highly advisable for the greater interest of urban dwellers.



Photo 34: Water logging – a persistent problem in many areas of Bangladesh

Section 5. SWOT Analysis



5.1 SWOT Analysis Facilitation

One of the important methods proposed to be used for the evaluation of the 45 projects financed by BCCT and implemented by different government agencies was SWOT analysis. The **SWOT** is the acronym of **Strengths, Weaknesses, Opportunities, and Threats**. Thematically, by looking back (since all the projects were already implemented), the exercise on first two areas i.e., strengths and weaknesses were focused on the present, while the exercise on last two areas i.e., opportunities and threats were focused on the future aspects of the project.

There were four regional consultation workshops with key project implementing agencies and their frontline staff were organized and facilitated by the Consultants. The brief information of the consultation workshops is as stated below:

Workshop 1: Regional

Place of the workshop: GJUS Hall Room (a local NGO), Bhola

Date organized: 24 November 2022

Agencies participated: BWDB, LGED, CPP, Bhola Pourashava, and Lalmohon Pourashava

Number of participants attended: 14

Workshop 2: Regional

Place of the workshop: Mymensingh

Date organized: 28 November 2022

Agencies participated: BREB, BADC, BINA, BARI, and DoE

Number of participants attended: 16

Workshop 3: Regional

Place of the workshop: BWDB Divisional Office, Chattogram

Date organized: 15 December 2022

Agencies participated: BWDB, BFD, DAE, DoE, and BCCT

Number of participants attended: 28

Workshop 4: Regional

Place of the workshop: BCCT Conference Room

Date organized: 9 February 2023

Agencies participated: BINA, DAE, BARC, BCSIR, CPP, DoE, VU, JnU and BCCT

Number of participants attended: 30

Workshop 5: Central

Place of the workshop: BCCT office, Mahakhali, Dhaka

Date organized: 9 February 2023

Agencies participated: BCCT, BADC, DAE, IFRD-BCSIR, LGED, DoE, BWDB, BSMRAU

Number of participants attended: 23

The process followed for facilitating the consultative workshops in the three regions and in Dhaka (the central one with key project officials) was in two stages, i.e., formal, and participatory, as follows:

Stage I: Formal -

Step 1: Selecting the participants (per projects under the evaluation package) and workshop venues (to be convenient for all participants)

Step 2: Invitation of the agencies to participate in the regional workshops with purposes

Step 3: Organize venue for the workshop

Stage II - Participatory (in-venue)-

Step 4: Registration of the participants

Step 5: Introduction and objective clarification by the Consultants

Step 6: Presentation-discussion on an overview of the projects implemented across the relevant regions

Step 7: Clarification of SWOT analysis methods and process

Step 8: Grouping of participants and facilitating exercise on SWOT of the projects (already implemented, but by recalling them into groups) concerned

Step 9: Plenary presentation of group exercises by group representatives and discussion

Step 10: Seeking clarification and obtaining feedback from each other groups

Step 11: Wrapping up of the exercise findings and workshop conclusion



Photo 35: SWOT Workshop at Bhola (Regional)



Photo 36: SWOT Analysis Workshop at NGO Forum Hall Room (a National NGO), Mymensingh



Photo 37 : SWOT Workshop at BWDB Conference Hall in Chattogram (Regional)



Photo 38: SWOT Analysis Workshop at BCCT Conference Room at Dhaka



Photo 39: Central Workshop at BCCT Conference Room at Dhaka with the presence of Managing Director of BCCT

The next step undertaken by the Consultants after completion of the regional SWOT workshops was to consolidate the findings by regions first. Then all the regional SWOT findings were clustered by thematic areas of the BCCSAP 2009, and therefore, the thematic findings were consolidated into one greater scenario to present the overall SWOT analysis of the 45 projects implemented and are under the evaluation package.

5.2 SWOT Analysis Findings

The overall strengths, weaknesses, opportunities, and threats of the 45 projects implemented (and those are under this evaluation package), as synthesized from the four regional consultation workshops, are as follows:

STRENGTHS

- Contemporary as well as emerging climate change issues are being addressed by the projects
- Projects are focused on Bangladesh's global image as one of the most climate vulnerable countries but having least contribution to the situation and given that the country endeavors to develop and market a 'climate resilience model' for others affected alike
- Government agencies and departments from across the sectors expressing interests as well as stepping forward to implement projects within limited available resources to achieve and/or contribute to the achievement of the Bangladesh Climate Change Strategy and Action Plan
- Departmental expertise, organized human resource capacities and institutional knowledge-based are optimally used by the government to conjoin efforts for capacitating the communities for climate change adaptation and mitigation in a short and medium term
- BCCT's role in financing climate change adaptation and mitigation projects through different public agencies and departments towards better coordination among them

and creating synergies in climate change adaptation and mitigation measures at national and local levels

- Interdepartmental orientation and experiences are being institutionalized through implementing climate change adaptation and mitigation projects, and by which a drive is being taken for mainstreaming the disaster risk reduction (DRR) into the development sectors across the country

WEAKNESSES

- Limited and in most cases inadequate funding scopes for designing and undertaking an effective response programme to much bigger risk of climate change
- Effective utilization of manpower is a good policy. However, in some cases specialist/expert may be needed for quality implementation of the project/ programme. The structural barriers of the prescribed formats as well as restrictive BCCT policies of not allowing the implementing agencies to propose for additionally required expert staffing and their expenses to be budgeted
- Wasting of money in the name of capacity building and training is not allowed through the projects of BCCT. However, in some cases, it might be needed. No provision for training, orientation, and skill/capacity development of the frontline as well as managerial staff of the implementing agencies/departments
- Relevant agency or departmental M&E systems often do not fit with the projects being implemented; however, this was inadequately considered in designing and planning of the projects, and as a result the projects remain weak during the implementation in terms undertaking appropriate monitoring and evaluation of the interventions by the agencies concerned
- The project approval process from the project preparation, processing and submission first within the line ministry, and then the review and approval process being undertaken by the BCCT i.e., reviewing by the Technical Committee and then approval by the Trustee Board is well articulated. However, in some cases this process may cause delays in funding and rolling out the project afterward
- The projects those having requirement of land acquisition before the start of interventions usually facing challenges and sometimes delayed in starting and ending within the stipulated timeframe
- BBS does not reflect the projects of BCCT

OPPORTUNITIES

- Most projects are undertaken addressing single or multiple risk factors related to climate change, but more scopes can be leveraged to addressing greater climate change issues through proper coordination between the projects and the implementing agencies
- The BCCT Act clearly offers opportunities of sourcing foreign aids/funds for accelerated in-country project funding, which is yet not leveraged effectively
- The number of projects with small scale funding can be revisited by the BCCT and replaced them by comparatively bigger funding to address the greater scopes of addressing the comprehensive climate change adaptation and mitigation strategy
- Particularly for the projects related to agricultural sector development to enhance food security and social protection for the community people sustainable development can be achieved through integrated and climate resilient farming system with active participation of farmers, scientists, extension worker and all strata of people specially policy makers, bureaucrats etc.

- More scopes can be explored in the areas of biogas, bio-fertilizer, waste to energy, vermi-compost, municipal waste management, renewable energy, rainwater harvesting, alternate wet and dry method of irrigation, low cost climate resilient housing, Reverse Osmosis Plant for supplying potable water in the saline prone coastal areas, alternate livelihood for the vulnerable areas, ground water recharge, protective work to protect the village in the flash flood prone haor areas, reduce the use of groundwater, STP, etc.

THREATS

- Ensuring running cost as well as maintenance cost by the implementing agencies is a smart policy to make the ownership of the project. However, projects are being undertaken either with a very poor running costs and less or even no cost for the maintenance from the implementing entity, lead the activities of the project to be unattended beyond the project completion and thus producing non-sustainable impacts
- Typically, government agency-led projects are being formulated without prior consultation with local communities, and/or leaving scopes of undertaking the situational assessments, feasibility studies involving local people which may not be supportive to foster community stewardships and thus results to be sustained
- There is low initiative to undertake appropriate research to forecasting emerging climate change issues in the country context, and thus the investment in addressing only the current/contemporary issues may support only for the short term benefit
- In some cases, establishing poor linkage between research and extension particularly for the projects being implemented in the agricultural sector
- In some cases, taking up the part of the activity instead of the holistic approach of taking a project activity may result into fragmented or non-sustainable impacts in the long run
- Undue obstacles created by political and influential circles
- Particularly, for the agricultural sector, in some cases private sector are more advanced to extend and market the resilient variety than the government sector. Government innovation and extension of climate tolerant variety in some cases is slow and cannot cope with the demand of the local people

NATIONAL LEVEL WORKSHOP

The Final Report has been presented in the National Level Workshop. The Workshop took place on January 02, 2024, at the CIRDAP International Conference Center (CICC) in Dhaka. The distinguished participants included Dr. Farhina Ahmed, Secretary of the Ministry of Environment, Forest, and Climate Change, who graced the occasion as the Chief Guest. Special Guests for the event were Mr. Sanjay Kumar Bhowmik, Additional Secretary of the Ministry of Environment, Forests, and Climate Change (MoEFCC), and Dr. Ainun Nishat, Emeritus Professor of BRAC University. The workshop was presided over by Md. Joynal Abedin, Managing Director (Additional Secretary) of the Bangladesh Climate Change Trust, who served as the Chairperson for the event. All the findings and feedbacks have been incorporated in the final version of the report.



Photo 40: National Workshop at (CIRDAP) Conference Room, Dhaka

Section 6. Procurement



6.1 Procurement Analysis Of The 45 Projects Under Evaluation

Procurement reports are used to determine how procurement activities within an entity occurred over a specific period in order to create value for the entity. Typically, a procurement report includes purchase information for goods and/or services, available budgets, and so on. This allows an entity to demonstrate how its procurement activities deliver value for money, contribute to the realization of its broader goals and objectives, and provide a panoramic snapshot of the effectiveness of its procurement strategy. Tracking the right procurement indicators allows an entity to improve its strategy by preventing minor inefficiencies from becoming major issues and providing clear insight into the practices.

Procurement encompasses a range of activities involved in obtaining goods or services. Actually, it is the techniques, structured methods, and means used to make an organization's procurement process more efficient and achieve desired results while saving cost, reducing time, and building a win-win for the stakeholders involved.

With regards to the procurement of the BCCT-funded projects, the procurement process includes the preparation and processing of a demand as well as the end receipt and approval of payment. At length, this involves purchase planning, standards, specification determination, supplier research, selection, financing, price negotiation, and inventory control. BCCT, as a government entity, complies with the public procurement rules of Bangladesh in practice.

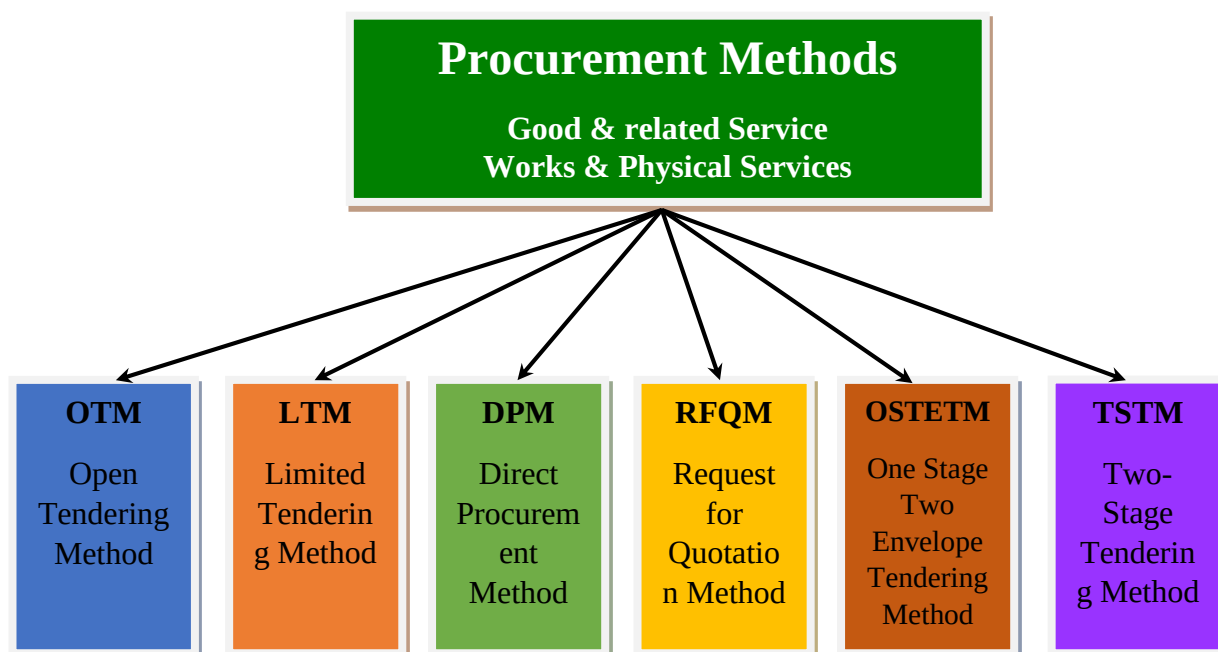


Figure 6.1: Commonly used procurement methods under PPR 2008

There have been several procurement methods recommended under PPR 2008 and being practiced by government agencies and entities in Bangladesh, including:

- a) Procurement under Open Tendering Method
- b) Procurement under Limited Tendering Method
- c) Procurement under Direct Procurement Method
- d) Procurement under Two Stage Tendering Method
- e) Procurement under Request for Quotation Method
- f) Procurement of Services by QCBS Method
- g) Procurement of Services by FBS Method
- h) Procurement of Services by LCS Method
- i) Procurement of Services by QBS Method

However, not all the methods are used, and more often than not, the procurement methods shown in the figure above are used by government entities. The projects funded by BCCT also use the procurement methods shown in the figure.

According to Section 15 (2) of the PPR Rules of 2008, the procuring entity (PE) shall take into account the following when determining the method of procurement and consolidating goods packages:

- a) Type of goods to be procured
- b) Estimated cost as approved by the HOPE or an officer authorized by him or her
- c) Availability of the relevant Goods in the local market
- d) Quality, sources, and brand of the Goods available in the local market
- e) Price levels of the designated Goods
- f) Capacity of local Suppliers to supply the required quantities
- g) Capacity of the national industry and quality of its products
- h) Market conditions and expected competition
- i) Urgency of the Procurement
- j) Capacity of beneficiary stores and proposed terms of delivery and schedule; and,
- k) Risks related to supply in the local and international markets.

Thus, as government entities, the BCCT-funded project implementers also need to comply with the above-mentioned requirements to make the best use of the government funds and have a better impact on adaptation and mitigation of climate effects in Bangladesh. Additionally, the BCCT-funded project implementers should also keep the following issues in mind while deciding the method of procurement so that they can comply with the PPR, 2008.

Section 15 (7) states that, in determining the method of procurement for works, the procuring entity shall consider the following:

- a) estimated cost as approved by the HOPE
- b) the prevalent conditions of the contracting industry
- c) capacity of local Contractors
- d) expected competition
- e) geographic location
- f) intended completion date and
- g) other related matters.

BCCT Fund Utilization Guidelines 2012 underscore the need for BCCT-funded project implementers to follow some key project implementation principles, undertake projects, and implement them accordingly. These are some very useful conditions with which the proposal-submitting entities have to comply if they wish to receive funding from the BCCT. These are as follows:

- i) The proposed projects have to avoid duplication with revenue-funded projects and other projects.
- ii) The entity should submit a certificate on the grounds that there will be no duplication with any other projects being implemented or planned to be implemented.
- iii) The proposed project may be implemented by an entity individually or in partnership with another entity. However, the implementing entity will not be more than three for a single project. In partnership projects, there will be one lead implementer, and others will be mentioned as associate implementers.
- iv) Generally, the duration of the project will be three years; however, the Trustee Board may increase the duration of the project.

- v) The project size will not exceed 25 (twenty five) crore⁶ Bangladeshi taka.
- vi) Generally, the hiring of new human resources is discouraged, and the projects will be implemented with the available human resources of the concerned government entity. If it is a dire necessity, human resources can be hired on a contract basis under a gross salary package.
- vii) Hiring an international consultant to implement the proposed project will not be allowed

For better implementation of the proposed project, the implementing entity must form a Project Implementation Committee (PIC) under the leadership of the Project Director (PD) or the Head of the concerned entity, and for projects with more than 5 crore Bangladesh Taka in value, the implementing entity must form a Project Steering Committee under the leadership of the Secretary of the concerned ministry.

6.2 Procurement Type being Administered in the BCCT Funded Projects

During the evolution of 45 BCCT funded projects, practice of three different types of procurement methods were found among them. However, there were instances of using more than one method in the same project.

6.2.1 Projects under evaluation by year of approval

A total of 45 projects were earmarked for evaluation from 2009-10 to the 2016-17 financial years that were approved under the BCCTF, irrespective of the thematic areas of the BCCSAP. Among the projects, 10 were taken from the 2012–13 financial year, and the lowest was for the 2009–10 financial year, which is only 3.

Table 6.1: No. of Projects under evaluation by implementation years

SL.	Year of Approval	No of Projects
1	2009-10	3
2	2010-11	4
3	2011-12	4
4	2012-13	10
5	2013-14	8
6	2014-15	6
7	2015-16	5
8	2016-17	5
Total		45

6.2.2 Length of the projects under evaluation

The BCCT Fund Utilization Guidelines 2012 do not allow more than three years⁷, other than with special approval by the Board of Trustee (BoT). There were several projects that were specially considered in terms of duration by the BoT. Generally, projects were approved with a duration of less than 30 months.

Table 6.2: Length (i.e., duration of months) of the project under evaluation

⁶ Recently this amount threshold of financing for a single project has been reduced to BDT 15.0 Crore by amending the BCCT Niteemala

⁷ This has been amended by BCCT, and which is now allowing BoT to extend projects as they consider required to achieve project objectives and goal

SL.	Duration (months)	No of Projects
1	0-17	14
2	18-23	14
3	24-29	12
4	30-35	1
5	36-41	3
6	42>	1
Total		45

6.3 Types of Procurement Practiced by the Approved Projects

A total of three types of procurement equipment on the 45 projects under evaluation. The procurement of goods and equipment's was included in 22 projects, while the procurement of work was included in 32 projects. The procurement of services was included in eight projects. Only goods and equipment procurement were accomplished in ten of them. Only the procurement of work was done in 21 projects, and the sole procurement of service was done in one project. Six projects procured work and goods or equipment's.

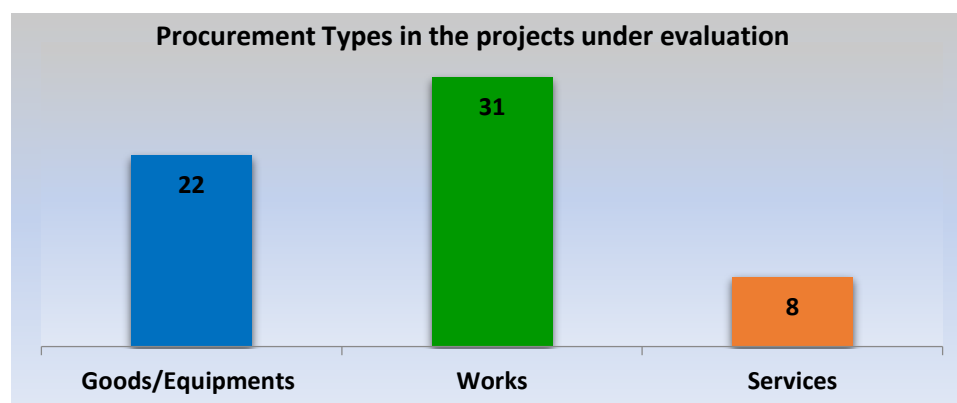


Figure 6.2: Procurement Types in projects under evaluation

The procurement of work and services was both done in one project. Both the procurement of goods and equipment as well as the provision of services are carried out through two projects. The procurement of goods and equipment, work, and service were all done in total for four projects. The following table depicts a detailed picture of the procurement types of the projects under evaluation.

Table 6.3: Procurement types by projects

Procurement Type	Number of Projects
Goods/ Equipment	10
Goods/ Equipment + Works	6
Goods/ Equipment + Services	2
Goods/ Equipment + Works + Services	4
Works	21
Works + Services	1
Services	1
Total	45

6.4 Project Period Extended among the Projects under Evaluation

Twenty nine out of the 45 projects under evaluation had their project duration extended from 6 to 60 months. Of the projects, seven got extensions for up to six months; 11 got extensions for 7–12 months; two projects got extensions for up to 18 months; and five projects got extensions for up to 24 months. Only 16 projects under evaluation did not have to extend their duration, which is roughly 35.55%, i.e., more than 64% of the projects had to extend their duration during implementation. However, the trend of extending project periods suggests that the time extension policy of the BCCT-funded projects needs to be amended so that the entities become more comfortable and make their implementation plans accordingly.

Table 6.4: Projects under evaluation extended for periods (of months)

SL.	Extended Periods (months)	No. of Projects
1	0	16
2	1-6	7
3	7-12	11
4	13-18	2
5	19-24	5
6	25-30	2
7	31-36	1
8	36>	1 (60 months)
Total		45

In the following table, a detailed list of projects that got extended duration is given. In this table, the approved duration of the project, the extended period, the approval year, and the size of the project are given. From the table, it reveals that a seven-month project got an extension for 24 months, a 12-month project got an extension for 36 months, and a 24-month project got an extension for a period of 60 months.

Table 6.5: List of projects extended during implementation

SL	Original Project Duration (months)	Project Extended (months)	Project Implementation Year	Project Budget (in lakh BDT)
1	21	4	2013-14	1,499.00
2	24	5	2011-12	2,460.80
3	24	6	2010-11	2,458.00
4	12	6	2013-14	321.00
5	36	6	2010-11	1,756.52
6	15	6	2016-17	300.00
7	22	6	2015-16	200.00
8	13	9	2014-15	200.00
9	24	12	2015-16	50.00
10	24	12	2015-16	1,391.58

SL	Original Project Duration (months)	Project Extended (months)	Project Implementation Year	Project Budget (in lakh BDT)
11	36	12	2013-14	345.00
12	18	12	2014-15	1,200.00
13	17	12	2012-13	1,999.90
14	15	12	2012-13	598.78
15	20	12	2014-15	500.00
16	21	12	2014-15	500.00
17	19	12	2015-16	300.00
18	24	12	2013-14	800.00
19	24	14	2009-10	1,111.47
20	21	18	2012-13	175.32
21	21	21	2012-13	200.00
22	12	24	2016-17	167.45
23	24	24	2010-11	1,999.50
24	7	24	2012-13	700.00
25	19	24	2011-12	1,376.38
26	13	30	2012-13	1,564.43
27	14	30	2012-13	1,198.64
28	12	36	2013-14	1,000.00
29	24	60	2009-10	600.00

6.5 Size of the Projects under Evaluation

The BCCT Fund Utilization Guidelines allow a maximum of BDT 25 crore⁸ for a single project, but there is no lower limit. Among the projects under evaluation, the smallest project size was BDT 50 lakh, while the largest was BDT 24 cores and 58.6 lakhs. It seems BCCT did not fund any project beyond the BDT 25 crore thresholds mentioned in the guidelines. However, the highest number of projects (12) were within the range of BDT 50 lakh to BDT 2 crore, and only two projects of BDT 24 crore or more were funded among the projects under evaluation.

Table 6.6: Size of the Projects under evaluation

SL.	Project Size (in lakh BDT)	No of Projects
1	50- 200	12
2	201- 400	6
3	401- 600	6
4	601-800	2
5	801- 1000	5
6	1001- 1200	4

⁸ The amount threshold is presently amended (and decreased) to BDT 15 Crore

SL.	Project Size (in lakh BDT)	No of Projects
7	1201- 1400	2
8	1401- 1600	3
9	1601- 1800	1
10	1801- 2000	2
11	2000>	2
Total		45

6.6 Year-wise Funded Projects

BCCT has been funding projects since fiscal year 2009-10 and has 45 projects under evaluation. Projects included for evaluation extend from fiscal year 2009–10 to fiscal year 2016–17. The following table suggests that in FY 2009–10, the lowest and highest amounts approved were BDT 99.46 lakh and 11.11 crore, respectively; in FY 2010–11, the lowest was 8.18 crore and the highest was 24.58 crore. However, after FY 2011–12, BCCT did not fund any project with a budget greater than Tk. 20 crores. This may suggest declining revenue from the government to the BCCT. Since the government grant for the BCCT was gradually decreasing, the highest amount of project funding was only BDT 3 crore in FY 2016–17.

Table 6.7: Lowest-Highest Projects under evaluation by year of approval

SL.	Project Approved (Year)	Lowest	Highest
1	2009-10	99.46	1111.47
2	2010-11	818.72	2458.00
3	2011-12	169.47	2460.80
4	2012-13	175.32	1999.90
5	2013-14	300.00	1499.00
6	2014-15	200.00	1200.00
7	2015-16	50.00	1391.58
8	2016-17	167.45	300.00

N.B. Figures in lakh BDT

6.7 BCCT Funded High-end Projects under Evaluation

The following table suggests that in the early years, BCCT did not approve that many high-end projects (more than BDT 10 crore in size). For example, during the first three years from FY 2009–10 to FY 2011–12, BCCT had funded 1, 3, and 2 high-end projects, respectively, and in the following two years, FY 2012–14, BCCT had funded 5 and 4 projects, and again the trend changed during the next two years, with two projects and only one project, respectively. However, during FY 2016–17, BCCT funded no high-end projects. It seems the BoT has made some judicious decisions not to sell all its eggs at once as the government grant for the trust is declining gradually.

Table 6.8: List of high-end Projects under evaluation (more than 1000 lakh BDT)

SL.	Implementation Year	No of Projects
1	2009-10	1
2	2010-11	3

SL.	Implementation Year	No of Projects
3	2011-12	2
4	2012-13	5
5	2013-14	4
6	2014-15	2
7	2015-16	1

6.8 Procurement Methods Used

The projects under evaluation have used PPA 2006 and PPR 2008 for the procurement methods as directed in the BCCT Fund Utilization Guidelines issued as a circular by the Ministry of Environment, Forest, and Climate Change. Generally, the implementing agencies under different ministries have complied with the PPA 2006 and PPR 2008. However, the Open Tendering Method (OTM) is the most commonly used among the projects under evaluation, followed by the Request for Quotation (RFQ), Direct Purchase Method (DPM), and Limited Tendering Method (LTM).

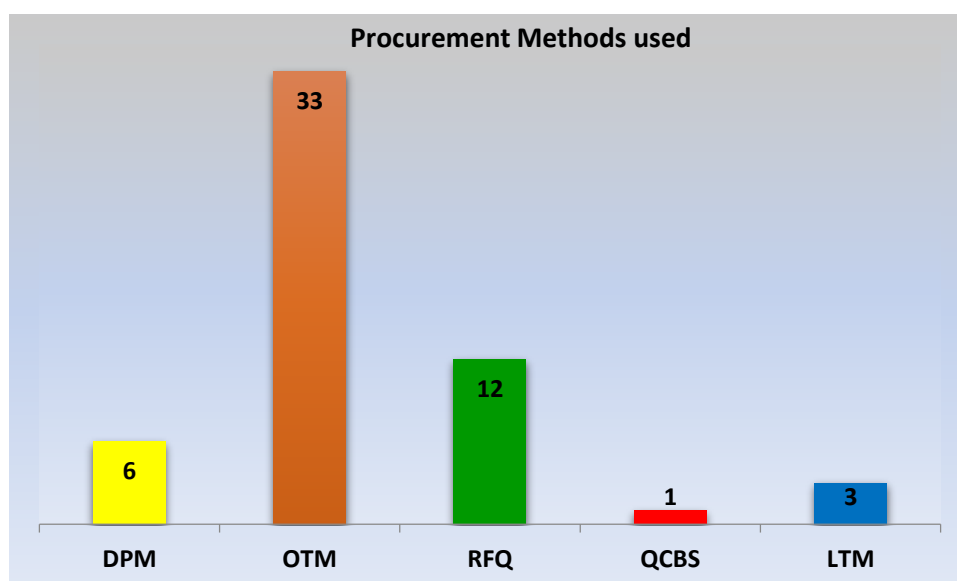


Figure 6.3: Different procurement method used among the projects under evaluation

It needs to be mentioned here that some of the projects have used more than one method, mostly in the case of infrastructure projects. However, two projects have used expressions of interest (EoI) before final tendering, and one project has used e-GP for tendering. One project⁹, however, has used the local purchase method for procurement.

6.9 Contract Approving Authority of the BCCT Funded Projects

For the project's procurement activities, the project's administering ministries have their own mechanism for appointing a contract approval authority. Among the 45 projects under evaluation, there are wide differences in terms of nominating contract approvers. In 19 projects, the project director (PD) or the head of the procurement entity (HOPE) was the contract approving authority. The contract-approving authority was decided according to the delegation of financial power (DoFP) of the government. In seven projects, there was no mention of contract approval authority. The mayor was the contract-approving authority where the municipality had implemented the project. In one project, the contract approval authority was vested with the implementing agency.

⁹ The project was implemented by Bangladesh Army in Jahajjair Char under Hatiya Upazila of Noakhali district

Table 6.9: Contract Approving Authority

Approving Authority	Nos.
Project Director/HOPE	19
Delegation of Financial Power (DoFP)	10
Not mentioned	7
Chief Executive	2
Project Manager	1
Chairman	1
Director General (DG)	1
Mayor	2
Superintending/Executive Engineer (SE/XEN)	1
Implementing Agency	1
Total	45

6.10 Review Procurement Process of Two (2) Projects as a Case

Of the 45 projects under evaluation, the evaluation team has randomly chosen two projects to review their procurement documents in detail under two different thematic areas of NCCCS & AP, i.e., 1. Thematic Area I (Food Security, Social Protection, and Health) and 2. Thematic Area III (Infrastructure). The projects titled ‘The Excavation of Canals to Combat Climate Change Impacts in Madaripur Sadar and Rajair Upazilas’ and ‘Eliminating Waterlogging and Improving the Environment to Combat Climate Change Impacts in Mathbaria Municipality areas’ were selected from Thematic Area I and III, respectively. Project directors were the tender approvers in both projects, while the implementing agencies obtained goods and services under the Open Tendering Method (OTM). In the following sections, the features of the projects under two thematic areas are described.

Table: BWDB implemented projects under the thematic area I

NCCS&AP Thematic Area	Project Name	Implementing Agency	Total Package	Total Estimated Cost (in lakh BDT)	Total Actual Cost (in lakh BDT)	Burn Rate
Theme 1: Food Security, Social Protection and Health	Excavation of Canals to Combat Climate Change Impact in Madaripur Sadar and Rajair Upazilas	Bangladesh Water Development Board (BWDB)	9	697.81	694.20	99.48

The Bangladesh Water Development Board (BWDB) has implemented the project in the Madaripur district, covering two Upazilas of the district, Madaripur and Rajair. Under this initiative, BWDB has re-excavated different canals with a length of 33.45 km in the project areas. For this project, a sum of BDT 697.81 lakh was allocated, and the project spent 99.45% of the allocated amount. This work has improved navigability in the surrounding areas, besides creating opportunities for irrigation in the farmlands. The overall quality of the work was satisfactory, according to the local community; however, the study team could not verify the quality physically as the visit was made long after the completion of the civil work. The 33.45 km of canals were re-excavated under 9 lots. The tender was called separately for each lot but on the same day. The authorities could sign the agreement with the successful

bidder within 4 months or a little more time from the date of calling the tender after necessary scrutiny and evaluating the bidding documents through TEC meetings.

Table: Mathbaria Municipality implemented projects under thematic area III

NCCS&AP Thematic Area	Project Name	Implementing Agency	Total Package	Total Estimated Cost (in lakh BDT)	Total Actual Cost (in lakh BDT)	Burn Rate
Theme III: Infrastructure	Eliminating water logging and improving the environment to combat Climate Change impact in the Mathbaria Municipality areas	Mathbaria Municipality	28	635.56	635.25	99.95

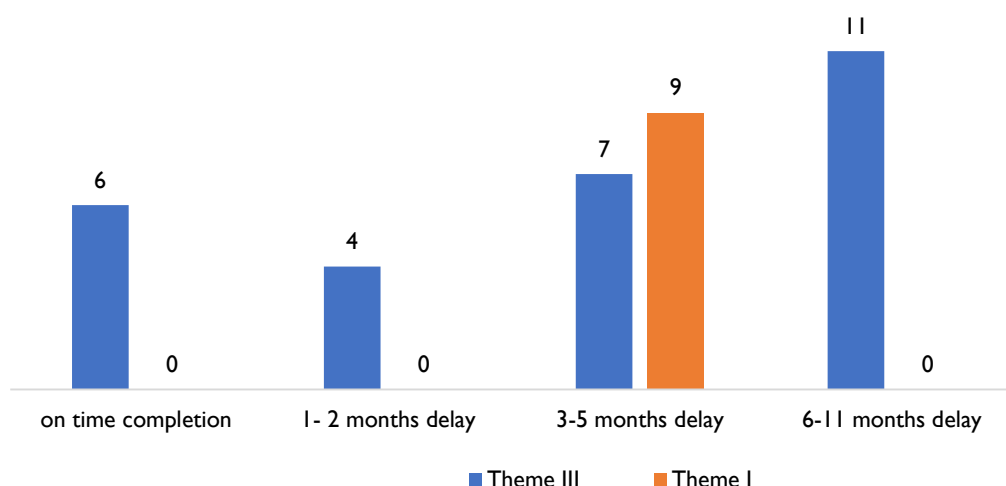
The Mathbaria Municipality has implemented the project in the municipality's areas. Under this project, the municipality has built RCC and brick drains and repaired some of them, with a length of 21,749 meters. For this project, a sum of BDT 635.56 lakh was allocated, and the project spent 99.95% of the allocated amount. This work has improved navigability in the drains in the urban center, helped significantly reduce waterlogging, and improved the health conditions of city dwellers. During the evaluation team's visit, some of the drains were found to be functional, and some damage was seen. The team visited the project location after 6–7 years of implementation, and thus, the ground reality experienced was nothing unlikely.

The 21,749 meters of drains were built and repaired under 28 lots. The tender was called separately for each lot but on the same day (20 August 2014). Managing tender documents was really a hectic task for the project authorities; however, it took them 3–15 months to finalize tender evaluation and award the job to the successful bidder. The TEC, in this case, took more than expected time due to not holding meetings regularly as the committee members could not give their time to hold meetings, which ultimately delayed the whole process.

Implementation Delay in Two Projects

It was revealed that the nine lots of construction work carried out by BWDB are generally four months behind schedule for completion. Just six of the 28 lots were finished within the allotted contract time in Mathbaria Municipality. The following graph illustrates how the remaining ones were delayed by one to eleven months.

Status of project implementation under two thematic areas



6.11 Observations

From the review of the PPCCTF and PCRs, it was apparent that most of the projects did not follow the BCCT reporting guidelines properly. As the projects were implemented from 2010–2017, details of procurement documents were difficult to obtain. A total of 22 projects have detailed procurement descriptions in both the PPCCTF and the PCR. On the other hand, 11 projects have detailed procurement descriptions in PPCCTF only, which are missing in PCR. Only one project was found where the procurement description was found in PCR, but details were missing in PPCCTF. In the case of six projects, only short procurement descriptions were given in the PPCCTF, but details are given in the PCR. Five projects were found where only a short procurement list is given in both the PPCCTF and PCR. Besides, there are other observations from the valuation team that are given below:

- There is a capacity gap or negligence on the part of the project implementers in terms of filling in the forms and formats delivered by the BCCT.
- One of the reasons for noncompliance in reporting by the implementing agencies is mainly due to a shortage of manpower and sector-specific specialists of BCCT;
- One of the major concerns of the BCCT-funded projects is the delay in implementation. There are several reasons for these delays, including:
 - The concerned ministry sometimes takes more than the required time to mobilize the project implementation team. i.e., appointing the project director and other staff.
 - A change in project leadership due to the routine transfer of key project personnel severely affected project implementation in the field and caused delay as well.
 - The project lead time, i.e., from project proposal submission to awarding, usually takes longer than expected.
 - Delayed fund disbursement from the BCCT, which may be caused by the timing of BoT or Technical Committee meetings and delaying of required papers submitted by implementing agencies.

Section 7. Gender Analysis



7.1 Gender Analysis

During the course of the evaluation of 45 projects, gender has always been one of the focus areas. Any endeavor dealing with social development issues involves locating the space for gender in design and implementation and enjoying the outcomes of that very process. During the design phase of the evaluation, the data collection instruments were developed in such a way that they ensured the participation of women regardless of their socioeconomic status. Besides, to what extent women participated during the planning, design, and execution of the BCCT-funded projects undertaken by respective ministries. This enabled the evaluation team to understand the issues of access to decision-making, participation in community affairs, and empowerment of women both within the family and in the community.

7.2 Gender in the BCCT Project

During the evaluation, it was observed that the BCCT-funded projects rarely consulted with communities during the design phase of the project, and hence, gender issues did not get prominence either, though women and children are the most vulnerable sections during any calamities, whether they are climate-induced or otherwise. The project submission formats do not have provisions to consider gender issues, though some of the projects have mentioned gender issues rather insignificantly, such as how women will benefit from the project and so on. However, the women were found to have an interest in the project activities, especially when the activities directly affect them. For example, women had a higher response rate on projects regarding drinking water.

7.3 Access to Project Activities

Generally, the BCCT-funded projects aim at making the communities more resilient to the shock of climate-induced hazards. Thus, the project activities are usually all-encompassing, and the project-implementing authorities might think that a separate gender focus is not needed. As a matter of fact, there are studies¹⁰ that suggest women's access to productive resources could increase yields on their farms by 20–30 percent. Actually, closing the gender gap facilitates a significant gain in agriculture for the sector and also for society. Thus, creating access for women in agriculture contributes to reducing the gender gap in agriculture, which is definitely an option that the BCCT-funded projects may take into consideration while designing projects in the near future.

7.4 Control over Resources

In rural Bangladesh, families with land have mostly engaged women in household activities by virtue of tradition, including cooking and taking care of kids and household animals, i.e., livestock. It is being considered that men are more knowledgeable, and thus family decision-making is dominated by them as well. However, whatever they do, it is considered a contribution to the family as family members, and they can do very little when the male members of the family sell the livestock or use them for family feeding, as women are considered the owners of the things they manage. In other words, they do not have any control over the resources they were made responsible for managing.

In BCCT-funded projects, women's participation was found to be very encouraging whenever they were asked for it. However, their control over resources is a big question, as there has not been any concern or effort observed to facilitate ensuring their control over

¹⁰ The State of Food and Agriculture 2010–2011, FAO; Rome 2011

productive resources. Yet, the projects that directly affect the lives and livelihoods of the people harvesting new crops, farming in char lands, floating cultivation, and so on, were found to contribute to family affairs with no control over them.

7.5 Role in Decision-making in the Family

Traditionally, the most senior male member of the household in a male-dominated society like Bangladesh makes household decisions. There is, however, a sort of joint decision-making in the household in terms of the education of the children, the wedding of the daughters, making or refurbishing houses, etc., as observed in rural Bangladesh. In the community sphere, it is a long haul for the women in Bangladesh, especially in the rural areas. The male members of the household decide on employment for women and get them engaged in business. However, the participation of women in projects that deliver direct financial gain has been observed, especially among the low income households.

The BCCT-funded projects, however, rarely offer any direct financial benefits to the project participants, and thus the scope for women in project implementation was likely to be very limited.

7.6 Gender-specific Needs

In any given society, men and women have some specific needs of their own. The needs of men are easily exploited by them, leaving the needs of others unmet in Bangladesh due to the very nature of society. Gender-specific needs for women include rights to land and inheritance, access to financial services, increased participation in decision-making, equal employment opportunities, and creating an enabling environment where women can explore their potential.

Needless to say, the BCCT-funded projects are of a different nature and rarely contribute to addressing the gender-specific needs of the communities through project activities.

7.7 Gender and Climate Change

There is no denying the fact that the status and roles associated with gender create differences between males and females that can result in inequality among the population. Of late, climate change-induced disasters and other vulnerabilities have affected women and girls more than men globally, and Bangladesh is no exception. The table below depicts the real picture of how women's vulnerability and climate change affect their lives and livelihoods. If these are not considered one way or another while implementing any initiative to address climate change issues, the inequality will likely widen more.

Table 7.1: Vulnerability of women globally

1	The percentage of the world's 1.3 billion people living in extreme poverty are women and girls	60%
2	The percentage of the world's working hours worked by women	66%
3	The percentage of property worldwide owned by women	1%
4	The percentage of the 876 million illiterate adults	25% are men; the rest are women.
5	The victims of natural disasters	Natural disasters kill more women than men on average.
6	The percentage of women among the population displaced by climate change-induced vulnerabilities	80%
7	Women do not have easy and adequate access to funds to cover weather-related losses or adaptation technologies.	

Source: Gender as a Crosscutting Issue in Climate Change Adaptation, UNDP, 2009, UNDP 2016

The BCCT is in the best position to address gender-specific issues through the projects it funds annually for government agencies. These agencies, implementing the BCCT-funded projects, will become more responsive to the situation and always consider the issue moving forward. Thus, it is time for the BCCT to develop and adopt gender-responsive strategies for mitigation and adaptation to climate change to support the resilience and build the adaptive capacities of women and girls through their regular activities, i.e., the implementation of projects. This will certainly better prepare them to respond to the adverse impacts of climate change in the days to come.

Section 8. Issues and Recommendations



In the following sections, some of the key findings are analyzed along with conclusions and recommendations for the BCCT. Combining the findings of the 45 projects under evaluation was not an easy task, but the evaluation team attempted to highlight some of the most important issues here, which will undoubtedly provide food for thought.

8.1 Findings Analysis

8.1.1 Objective-wise Achievements

The projects under this evaluation were formulated and implemented under each of the six thematic areas of the BCCSAP 2009. Therefore, the evaluation was done both in terms of the projects' individual as well as thematic performance, and the evaluation findings are organized and presented in a similar fashion. The analysis of the projects' findings in terms of their physical objective-wise achievements, relevance and effectiveness, and socioeconomic impacts is as follows:

Theme I: Food Security, Social Protection and Health

The projects implemented under this theme addressed three out of four targets as set out in the BCSSAP. The evaluation findings suggest that the projects have significantly contributed to increasing the resilience of vulnerable groups, including women and children, through community-level adaptation, livelihood diversification, better access to basic services, and social protection. However, these were found to be not much done in an integrated (i.e., holistic) approach, which brings them together with the aim of further scaling up the initiatives.

The projects have explicitly made contributions to developing climate-resilient cropping systems, including agricultural research to develop flood, drought, and salinity-tolerant crop varieties based on indigenous and other varieties suited to the needs of poor farmers. However, those projects did not cover much of the development of climate-resilient fisheries and livestock systems to ensure local and national food security. The projects have also contributed to improving the accessibility of disaster-affected communities to safe drinking water in areas at risk from climate change (e.g., coastal areas). However, undertaking projects to develop and improve the surveillance systems for existing and new disease risks and ensure health systems and services meet future demands is apparently not much addressed.

Theme II: Comprehensive Disaster Management

Only one project was included in the evaluation package, which addressed the thematic target of strengthening community-based adaptation and establishing it in the southwestern coastal districts of Bangladesh. The project did not cover each of the disaster-prone parts (i.e., drought, flood, and earthquake) of the country. Furthermore, this opens immense scope for undertaking projects to strengthen the government's capacity and that of civil society partners and communities to manage natural disasters and ensure that appropriate policies, laws, and regulations are in place and functional. The project implemented has contributed to strengthening the short-term cyclone and storm surge early warning system to enable forecasting of natural calamities; however, opportunities remain to explore bringing in medium- and long-term forecasting systems.

Theme III: Infrastructure

More than half of the projects (23 out of 45) were implemented and therefore evaluated under this theme. The projects were comparatively costly, but the evaluation findings reveal the fact that most of those projects were undertaken in a cross-fed or gap financing manner; there was little provision for incurring costs for undertaking regular O&M of the facilities

developed, and hence, the sustainability of the project activities and their impacts remain threatened.

There were several categories of infrastructure (i.e., excavation and re-excavation of canals, riverbank protective works, repair and rehabilitation of road cum embankments, urban drainage systems, etc.) built and/or repaired through the project to deal with the likely short- and medium-term impacts of climate change. These have contributed to the thematic target of repairing and rehabilitating existing infrastructure but have not quite significantly ensured effective operation and maintenance systems of the infrastructure due to budgetary constraints. The projects included the planning, designing, and construction of urgently needed new infrastructure (e.g., cyclone shelters, coastal and river embankments, river erosion control works, urban drainage systems, flood shelters) to meet the changing conditions anticipated with climate change. However, there is ample opportunity to undertake project activities considering the projected climate change, climate modeling, future infrastructure needs, future patterns of urbanization and socioeconomic development, and the changing hydrology of the country.

Theme IV: Research and Knowledge Management

This thematic area is based on a broader goal of undertaking research that is expected to support estimating the likely scale and timing of change impacts on different sectors of the economy and inform the planning of future investment strategies. It was also expected that it would ensure that Bangladesh is effectively linked to regional and national knowledge networks so that Bangladeshi organizations and the general public are aware of the latest research, lessons, and technologies available in other countries.

The projects undertaken within this theme addressed a few of the targets as set out in the strategy. Those undertook research mainly in the agricultural and livelihoods sectors, and those have contributed to developing a climate-proof national development plan. Given the scope of this evaluation, immense opportunities remain and could be explored for developing and implementing projects to address several other target areas of the strategy. Those include (a) modeling climate change scenarios for Bangladesh by applying global climate change models and methodologies at regional and national levels, (b) modeling the likely hydrological impacts of climate change on the Ganges-Brahmaputra-Meghna system to assess likely future system discharges and river levels in order to derive design criteria for flood protection embankments, (c) monitoring and research the impacts of climate change on ecosystems and biodiversity, (d) research the linkages between (a) climate change, poverty and vulnerability and (b) climate change, poverty and health (i.e., disease incidence, nutrition, water, sanitation) in order to identify possible interventions to increase the resilience of poor and vulnerable households to climate change, and e) establish a Center for Research and Knowledge Management on Climate Change (or a network centers) to ensure that Bangladesh has access to the latest ideas and technologies from around the world, and ensure that data is widely and freely available to researchers.

Theme V: Mitigation and Low Carbon Development

The projects undertaken and then evaluated under the theme addressed a minor part of the targets. That includes lowering greenhouse gas emissions and expanding the social forestry programme on government and community lands. While many other targets could be explored through the project activities that include (a) developing a strategic investment portfolio to ensure national energy security, (b) expanding the greenbelt coastal afforestation with mangrove planting along the shoreline, (c) seeking transfer of state-of-

the-art technologies from developed countries to ensure that we follow a low-carbon growth path (e.g., clean coal and other technologies), and (d) reviewing energy and technology policies and incentives and revising those, where necessary, to promote efficient production, consumption, distribution, and use of energy.

Theme VI: Capacity Building and Institutional Strengthening

The only project that was implemented under this theme by the Forest Department to develop 'forest information generation and networking systems' addressed the target of capacity building and institutional strengthening of the Department of Forest to undertake digital mapping and surveillance of forest resources. Unless otherwise stated, the projects implemented under this theme have left greater opportunities to review and revise, where appropriate, all government policies to ensure that they take full account of climate change and its impacts. Apart from the scopes already mentioned, many other targets could be explored which include (a) mainstreaming climate change in national, sectoral and spatial development planning and ensure that impacts on vulnerable groups and women are prioritized in the plans, (b) building the capacity of key government ministries and agencies to take forward climate change adaptation, (c) building the capacity of the government to undertake international and regional negotiations on climate change which has been considered important/essential to build necessary capacity and resilience, (d) capacity building of the government, civil society and the private sector on carbon financing to access various global climate funds, and (e) building the capacity for education and training of environmental refugees to ease and facilitate their migration to other countries and integration in new societies.

8.1.2 BCCT funding approach

Project formulation and design

On occasion, the Bangladesh Climate Change Trust (BCCT) makes public announcements about funding opportunities for projects aimed at adaptation and mitigation of climate challenges in Bangladesh. Once the call is made public, the public organizations submit grant applications through their line ministries in a prescribed form to the Ministry of Environment, Forest and Climate Change. This is how the CCTF grant programme starts.

However, it should be mentioned here that grant proposals have to be submitted addressing the thematic areas described in the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009.. The administrative division or ministry must certify that the proposed project will bring effective results in combating the negative impact of climate change and forward the proposals to the Ministry of Environment, Forest and Climate Change. Now the ministries submit the project to MoEFCC all year round, and there is no public announcement to submit the project proposal.

Technical review

The Climate Change Wing of the Ministry, after receiving grant applications, forwards them to BCCT for a preliminary review, primarily to ensure administrative compliance. After the compliance screening, the qualified grant applications are sent to the Technical Committee of the BCCT for technical review. This technical committee has 90 days to review the proposals and submit a list of qualified ones to the Board of Trustees for approval.

The Technical Committee of the BCCT is headed by the Secretary of the Ministry of Environment, Forest and Climate Change as Convener and supported by the Joint Secretary/Additional Secretary (Environment) and Joint Secretary/Additional Secretary (Development) of the same ministry as members. Other members of the technical committee are two representatives from the Department of Environment, representatives of the Climate Change Cells of the concerned ministries, the Focal Point, nominated by the

Ministry, representatives of the Planning Wing of the concerned ministries, nominated by the Ministry, representatives of the concerned sectors of the Planning Commission of Bangladesh, two members nominated by the Government of Bangladesh from the social sector, one from the Centre for Environmental and Geographic Information Services (CEGIS), one representative from the Forest Department, and the Deputy Secretary (Environment-1), who acts as the Member Secretary to the committee.

Approval of the Grant Proposals

The Trustee Board is a 17-member body formed under the leadership of the Minister responsible for the Ministry of Environment, Forest and Climate Change, along with nine other cabinet ministers or state ministers responsible for their respective ministries. The other members include the Cabinet Secretary, Governor-Bangladesh Bank, Secretary of the Finance Division of the Ministry of Finance, Member of the Planning Commission of Bangladesh responsible for Agriculture, Water Resources, and Rural Institutions Division, two climate change experts nominated by the Government of Bangladesh, and the Secretary of the Ministry of Environment, Forest, and Climate Change, who acts as the Member Secretary to the Board.

After receiving the technical committee report with recommendations for the qualified proposals, a Board of Trustee (BoT) meeting is called to review the proposals before approving them for financing.. If the BoT suggests any change or amendment to the submitted proposals before financing, the concerned entities have to make it accordingly and resubmit the same to the Climate Change Wing of the ministry for further action.

It should be noted that awarded projects are typically not extended or changed in order to be completed on time. However, if the need for a time extension is obvious, the implementing ministry may submit an application through the Climate Change Wing of MoEFCC. If the BoT considers it justified, it may extend the time. However, the evidence suggests that the Climate Change Wing receives lots of extension applications every year, and they are all entertained due to some unavoidable reasons.

Financing of the Grants

Once the BoT meeting declares the final list of approved projects, the Ministry of Environment, Forest and Climate Change issues a project approval order. After this order, the implementing ministries appoint Project Director (PD) for the projects awarded by the CCTF and inform the BCCT. If the appointment of the PD is not made within 60 workdays of the project approval order being issued, the project will be considered cancelled. Like other projects, the Climate Change wing transfers funds to the awarded projects through the Special Noticed Deposit (SND) accounts opened in the scheduled banks, which are being operated by the concerned PDs. The Climate Change wing transfers funds to projects in four quarterly installments in a project life.

Once the fund disbursement order is released by the Climate Change Wing of the Ministry of Environment, Forest and Climate Change, the PDs will submit a bill using government form TR-21 to the Climate Change Unit of the ministry, informing the concerned coordinating ministry. Against the bill, the PD will receive cheque from the drawing-disbursing officer (DDO) of the Climate Change Trust Fund. The fund is usually released according to the sector-wise share of expenditure submitted earlier by the PDs to the Climate Change Wing through the coordinating ministries.

In every quarter, the PDs have to collect authorization from the coordination ministry while submitting the bill for releasing funds from the CCTF. It seems like a cumbersome process. As there is no Drawing and Disbursing Officers in the BCCT office. There should be a process in place so that the officials of BCCT could release funds for the project. The process of releasing funds is relatively lengthy and thus causes delays in project implementation as well.

BCCSAP Themes and Projects

The BCCSAP determined six themes to work on to achieve the goals of climate change actions in Bangladesh, and accordingly, project proposals are being received every year. It was observed that the entities like to implement infrastructure and infrastructure-related activities more than address other issues like research and technological innovations. Among the 45 projects under this evaluation, 23 of them were directly or indirectly infrastructure projects, which demonstrate this trend. The reason may be that infrastructure projects have more visibility than other ones, or maybe there are not many public entities interested in conducting research on adaptation and mitigation.

8.1.3 Implementation by agencies

According to the Climate Change Trust Act of 2010, government entities must submit grant proposals through their respective coordinating ministries, and thus ministries have very important roles to play in winning grants from the CCTF and implementing them accordingly.

Roles of agencies and ministries concerned

Though the BCCT Act of 2010 has allowed both public and private entities to submit project proposals, nowadays the BCCT only receives proposals from public entities due to the limited availability of funds from the revenue budget. Thus, the public entities that are interested and have expertise can request funds from the CCTF through their respective ministries. As the departments, attached institutions, and universities submit proposals, the ministries have to review them to ensure they fit with the goals and themes of the BCCSAP and forward them to the Climate Change wing of the Ministry of Environment, Forest, and Climate Change for review and approval.

Once a project is approved, the ministry is responsible for appointing the PD and informing the BCCT accordingly so that funds can be released. Moreover, monitoring the implementation of the projects is another responsibility that the coordinating ministries have to comply with.

Community Consultation and involvement of LGIs

All the projects being undertaken or awarded are for the benefit of the citizens at large. Activities for combating climate change's effects work best with community involvement. However, community consultation was not found in the projects under evaluation, particularly during the design phase. Thus, other than working as laborers during construction work, community involvement was not an important issue in the CCTF-funded projects. There should be a system for community consultation by the project initiating agency. This process could capture the demand and necessity of the local community. In some agricultural projects, farmers, however, get involved as contract growers. If the community is consulted during the design phase of the projects, ownership will grow among the people, which will eventually contribute to project sustainability.

Besides, there was very little sign of sharing or collaboration with local government institutions in the rural areas, though some urban government bodies had some projects awarded. Generally, there was little provision for cooperating with local government institutions. Involvement of the local government institutions certainly helps solve many local issues, if not all, during implementation.

Adequate financing

Climate-sensitive infrastructure projects under evaluation are more likely to construct new roads, rehab existing roads and embankments, construct or repair protection walls to save riverbanks, etc. These sorts of projects are usually very expensive and long-term by nature, which is not the case for the CCTF-funded ones. It was observed that, due to small-scale

project funding in most cases, the whole work cannot be completed, and thus, partial work is being done. As the other portion of work is not done simultaneously, the completed work is lost somewhere and gets damaged on many occasions. As a result, such piecemeal solutions to larger problems rarely solve them and may likely to waste scarce resources of the state.

M&E and Accountability Mechanism

Monitoring and evaluation are essential components for any project and programmes and, in the end, ensure the accountability of the project management process. The very norm for CCTF-funded projects is that the projects are to be monitored by the executing ministries, as they used to do for other annual development programmes (ADP)-funded projects. It is discovered that BCCT has yet to develop and operationalize an effective and smart monitoring framework in place for climate-sensitive projects within PPCCTF, it becomes a mere inspection tool by the relevant top authorities of the line ministries. In practice, this neither helps the implementing entity nor becomes a useful product for the BCCT. The accountability mechanism has been established by the government. BCCT and individual projects are audited by the Comptroller and Auditor General of Bangladesh. BoT is required to submit an Annual Report on its activities. The Technical Committee and BoT has Two (2) Civil Society representative and BCCT is accountable to Parliamentary Standing Committee.

Adequate staffing

One of the conditions of a CCTF-funded project is that the implementing entities are discouraged to recruit staff for the project from outside, i.e., the project has to be managed with the existing human resources of the entity in question. Thus, the available human resources have sometimes become overloaded, which delays project implementation. This, however, helps to reduce the project's budget on the one hand while also building the capacity of the existing human resources on the other by procuring and implementing external projects. It might be useful for the implementing entity, if they could appoint an appropriate number of staff or specialists. However, it was observed that the project team did not get the appropriate number and quality of staff and did not receive sufficient orientation on climate change issues and thus had to follow generic project management practices, which limit the potential impacts of the project under implementation.

O&M budgets, exit plans, and addressing issues of context-specific sustainability (institutional mechanisms)

The projects under evaluation lack an operation and maintenance budget, with the expectation that the implementing ministry will take them over. The field reality suggests that was not the case, especially for the construction projects. For these reasons, after the completion of the projects, there is hardly any maintenance work visible, which leads to early damage to the construction sites. This happens primarily due to the fact that in the proposal, the entities submitting grant proposals do not have to explicitly present an exit plan. If there was an exit plan, the O&M issues were not mentioned clearly, and someone has to be made responsible for non-compliance. Due to the minimal focus on climate change issues, context-specific sustainability issues are rarely considered during project design and implementation, which also compromises project sustainability. Integration of the project implementing partner and their institutional mechanism is key for the ***O&M budgets, as is addressing issues of context-specific sustainability.***

Approach on CC adaptation and mitigation

The projects submitted for funding and eventually implemented with CCTF funding, in the majority of cases, lack holistic climate change thinking, as it seems the projects were designed with a narrow focus on solving short-term emergency issues. Such thinking is neither helping the national agenda of combating the threat of climate change nor bringing any long-term benefits for the communities they work for. Actually, for addressing climate

change issues, the focus should be particularly on adaptation and, in some cases, mitigation. It was observed that more than 90% of the projects targeted adaptation, and for a vulnerable climate, this is appropriate, but long-term sustainability science-based medium- and long-term projects should also be encouraged.

8.1.4 Procurement process

According to the BCCT fund utilization guidelines, the government's procurement laws and rules must be followed for procurement of CCTF-funded projects. With few exceptions, the entities under this review followed the PPR 2008 and PPA 2006. However, in a few cases, it was observed that there was a tendency to exhaust the allocated funds during procurement, which can be better identified through regular monitoring and auditing. There is a detailed discussion in the section dedicated to procurement.

8.2 Challenges

BCCT is dedicated to supporting adaptation in climate-vulnerable areas, sectors, and communities as well as addressing climate change mitigation. To contribute significantly to combating climate change effects and to address climate change adaptation and mitigation, BCCT has long been facing some challenges, as follows:

i) Human Resources Capacity

Since inception, there has been no assessment of the need for human resources to manage the mandated tasks. The types of works and the volume were never assessed either. Thus, it was observed that there is a lack of appropriate and adequate human resources addressing multidimensional issues of climate change adaptation and mitigation at the BCCT.

ii) Technical Capacity

Combating the climate change challenge requires significant technical capacity on the part of the BCCT, as the grant requests made to the BCCT are mostly technical in nature and cover various sectors of climate change adaptation and mitigation. There is no engineering unit or expert on the water or agriculture sectors in the BCCT to review grant proposals or monitor the technical aspects of project implementation, which compromises the quality of reviewing grant proposals and monitoring.

iii) Project Monitoring

The BCCT has a monitoring system in place, which includes (i) field visits by BCCT officials, (ii) Annual Performance Agreement (APA), and (iii) quarterly PDs meeting. It was revealed that during the life of a BCCT-funded project, the organization tries to monitor it twice before the release of funds. According to practice, the implementing ministry monitors the projects before recommending the final payment. In the absence of a monitoring policy, framework, or established tools, both teams monitor the projects based on their personal expertise or historical experience with monitoring. However, it was found that the BCCT is trying to improve monitoring tools an online monitoring system, which will strengthen the situation, and routine monitoring will further improved. The information and data collected through the online platform will immensely help the physical monitoring for both the BCCT and the implementing ministry teams.

iv) Board of Trust Meeting

The Board of Trustees (BoT) is full of dignitaries, including ministers, secretaries, and other high-ranking officials, which makes challenging to hold the meetings a big task. According to the BCCT Act, the BoT has to meet quarterly, and additional meetings are also possible if

needed. In reality, BoT could never meet more than twice a year. The delay in holding BOT meeting logically affects timely approval of the the projects and their implementation.

v) *Delay in Project implementation*

Every year, the BoT approves a lot of grant proposals to implement climate-sensitive activities. The BCCT fund utilization guidelines strongly discouraged the extension of the project period and made the extension process difficult. Nonetheless, nearly half of the projects under evaluation were extended, and there was evidence that a project was extended for twice its estimated period and more than five times. There are several reasons for delayed implementation, such as

a) *Awarding projects*

The BOT approves the BCCT-funded projects based on the recommendation of the Technical Committee formed under the BCCT Act. In the said Act, a time limit was mentioned for reviewing and awarding proposals, but more often than not, delays in holding meetings of both the technical committee and the BoT delay the approval process, and eventually time extension requests have to be entertained.

b) *Fund disbursement*

The fund disbursement process described in the BCCT Fund Utilization Guidelines is a complicated process that involves (i) the appointment of the PD, (ii) submitting a component-wise share of expenditure, (iii) issuing a fund disbursement order by the concerned ministry, (iv) submitting a bill using Form TR-21, (v) collecting recommendations from the coordinating ministry, and (vi) collecting a cheque from the office of BCCT.

Performance of implementing agencies

As mentioned earlier, the entities have to implement BCCT-funded projects with existing human resources. Thus, they have to do additional work besides their routinely assigned duties and responsibilities. As a result, project implementation staff cannot devote their full time to project work, resulting in delays. In most cases, there are very few dedicated and professional staff to implement the project. It seems, implementing agencies have less than adequate interest in the quality and timely implementation of the projects.

vi) *Lack of innovative proposals*

Of the 45 projects under evaluation, almost all can be labeled as routine works that were being done by the respective public entities for years, even before the introduction of the BCCT in Bangladesh. These routine works are surely helping vulnerable sectors, areas, and communities, but in terms of combating climate change effects, their contributions are not focused. BCCT can do very little if they do not receive innovative proposals. However, BCCT, with the support of BoT, could make some kind of instructions for the implementing ministry or agency to encourage innovative funding proposals to address climate change vulnerability as well as the issues of climate change mitigation. Furthermore, BCCT can organize some kind of workshop or orientation with the potential implementing entities so that they can submit innovative and creative projects.

vii) *No research unit of BCCT*

With funding available, BCCT itself cannot conduct any significant research or action research, try to get appropriate and innovative adaptation options for different climate-vulnerable areas of the country, or take appropriate and innovative mitigation actions due to the absence of its own research unit and research initiatives. It is a pity that the BCCT

does not have a research unit to conduct research on adaptation and mitigation to give directions to the government and other social sector organizations for climate action.

viii) *The BCCT contribution not recognized*

The BCCT has been in operation for almost a decade, and it is spending state resources to implement its mandated projects for adaptation and mitigation of the adverse impact of climate change in Bangladesh. Needless to say, the BCCT is the only organization of its kind to address climate change issues for the people of the country, but government documents, including the publications of the Bangladesh Bureau of Statistics (BBS), never mention any of its activities. While the government is very sincere about the adaptation and mitigation of the adverse impact of climate change and spends more than a few hundred core of Taka annually, this goes unnoticed and unrecognized in the national setting.

8.3 Lessons Learned From The Evaluated Projects

This section includes a summary of lessons learned from the projects evaluated under the current assignment.

Release of funds for projects is complex and time-consuming; in some cases, funds for a project are not rational regarding targeted activities of the projects and programmes. Funds of BCCT are not enough for long-term and sustainable adaptation projects. The project lacks some extra funding and appropriate manpower for maintenance after completion and has limited linkage to proper authorities for maintenance after completion. During project approval, less emphasis was given to their necessity for addressing climate vulnerabilities and verification of local climate vulnerability.

There is a lack of relevant professionals for monitoring infrastructure and other technical projects.; It is necessary for the projects to recruit additional manpower for technical activities; Skills of Project Directors are essential for the successful implementation of a project. For better monitoring, there is an absence of a technical unit in BCCT, such as an Environment Specialist, a civil engineer, or an electrical engineer.

BCCT's role should not be confined to only allocating funds for project implementation but also to capacity enhancement of the implementing agencies, and quality monitoring of the projects should also be one of their priorities. It is not clearly spelled out in the different guidelines of BCCT; Participatory needs assessment, feasibility study, effective involvement of community people, capacity building of implementing agencies, transparency, equity, and effective accountability mechanism are inadequate. There is a lack of compliance of implementing agencies to laws, policies, and guidelines of BCCT.

The tendering process for the purchase of equipment, services, and goods is not commonly understood by some implementing agencies.

There is less initiative to engage the local people in developing ownership among them for better maintenance of the project activities after completion of a project. A maintenance committee formation with the support of local people/beneficiaries is absent.

In some cases, the Local Government's involvement in sustaining the project activity after completion of the project is necessary, but it is not adequate. There is a lack of capacity of the Local Government Institutions so that they cannot adequately address the climate change impacts as well as integrate the climate vulnerabilities in their regular activities in an effective manner. In addition to that, LGIs integration into climate financing governance and maintenance is less.

All information on the projects, including plans, activities, budget, M&E report, and audit report, are not disclosed and made available on the webpage. To get the community people well informed about the project information, citizen charter, billboard, etc., are less used in

the project areas; Accountability mechanism and monitoring system as well the role of relevant departments and institutions, i.e., the IMED, CAO, MoEF, LGD, etc. is not adequately defined in the documents. It is also crucial to clarify the role of the citizens in the monitoring process.

8.4 Recommendations

Based on the above discussion, the following recommendations are made to improve the overall performance of BCCT:

Applicable for BCCT:

- **Introduction of BCCT's Project Cycle Management (PCM) approach:** BCCT should introduce a project cycle of receiving grant proposals, reviewing, and awarding grants, and disbursing funds. This project cycle will guide monitoring, evaluation, auditing, and reporting.
- **Introducing a new project proposal submission format:** The existing proposal form is comprehensive, but insufficient in terms of monitoring plan, exit plans, sustainability plans, etc.
- **A comprehensive monitoring policy and framework:** Monitoring is an integral part of a project's lifecycle. BCCT has initiated the design of an online monitoring system, but this has to be done under a policy.
- **Innovative projects on adaptation and mitigation:** Experience suggests that BCCT does not receive enough innovative project proposals. To have innovative projects, BCCT may mention issues like adaptation projects that have mitigation co-benefits, climate-smart agriculture, etc.
- BCCT may organize training sessions for the potential entities on how to fill out the project proposal template together with the annexure.
- Provisions should be kept in the projects to recruit additional human resources for technical activities or at the time of necessity
- Local communities should be involved to develop ownership among them for better maintenance of the project activities after the completion of the project. The feasibility of forming a maintenance committee could be explored.
- An impact assessment should be performed for selected projects. A fund can be kept for third party impact evaluation on a selected number of projects every year.
- BCCT funds could be increased for implementing long-term adaptation projects and programmes.
- Projects should be approved based on their necessity to address any climate vulnerabilities in a specific location. Verification of local climate vulnerability might be mandatory before approving any project.
- BCCT needs to improve all the relevant documents for successful project implementation based on the updated BCCSAP, NAP, NDC and Mujib Climate Prosperity Plan
- **More responsibility for the BCCT team:** In a new project management cycle, BCCT officials should entrusted to make a short list of the potential projects after getting the project application and reviewing them professionally.

Applicable for Implementing Agencies:

- The skills of project directors are very important for the successful implementation of a project. Therefore, project directors should get support from the relevant authorities. Recognition and reward for efficient PDs, and some sort of penalty for inefficient PDs, could be introduced.
- The tendering process for purchasing various goods and services should strictly follow the PPA 2006 and PPR 2008.

- The respective local government bodies (city corporation, municipality, upazila parishad, union parishad etc.) should be involved with the relevant projects during project preparation and implementation.
- Stakeholder consultation should be done before preparing the project (local administration, LGI, NGO, local people etc.)
- Participatory needs assessment, feasibility study, effective involvement of community members, capacity building of implementing agencies, transparency, equity, and effective accountability mechanisms should be incorporated into relevant acts, rules, policies, and guidelines to make them mandatory in different steps of the BCCT projects.

Applicable for Policy Makers:

- **Building a strong monitoring team:** Having a good monitoring policy or framework is not enough to capture field realities during project implementation. To capture quality information and data, a knowledgeable and skilled monitoring team is equally important. Monitoring of infrastructure and other technical projects should be performed by relevant professionals.
- **Capacity Building of the BCCT Officials:** Since its inception, BCCT officials have not had enough opportunity for advanced training to enhance their skills and knowledge on project monitoring under different sectors, both for climate change adaptation and mitigation. Respective authority should support the
- **Recommendation from the coordinating ministry:** As of now, all public entities have to submit applications through their respective ministries. BCCT should take initiative to ask the ministry concerned to take over the successful projects for wider replication or nationwide implementation through their ADP funding.
- **Enforcing strong administrative compliance:** It was observed that many entities submit their project proposals without sufficient information, i.e., without clear objectives and justifications and with mismatched objectives, justifications, and expected outcomes. Strong review and scrutiny particularly by the implementing entity will reduce such weakness on the part of the proposal-submitting entities of the project proposal. BCCT should implement this strategy by incorporating it in the policy for the approval of the project.
- Complexities related to the release of funds for projects should be resolved, and the process should be made easy and less time-consuming. The budget of a project should be rational with regards to targeted activities. MD of BCCT should have more discretion to release the fund for timely implementation.
- The project should have some extra funding for maintenance or be linked to an appropriate authority for maintenance after completion.
- For better monitoring of the project, there should be a technical unit under BCCT supported by experts such as an environment specialist, a civil engineer, an electrical engineer, an agricultural expert, etc. based on the technical nature of the project
- The project approval process should be made easy because it is complicated and time-consuming.
- The capacity of the committees under local government institutions (eg. Disaster management committee) should be further developed so that they can address the challenges of climate change impacts, take over the implemented projects of BCCT after the project implementation, and mainstream and integrate climatic issues and vulnerabilities in their regular development activities in an effective manner
- BCCT's role should not be confined to only managing funds; capacity development/strengthening of the implementing agencies and monitoring of the projects should also be among their priorities. BCCT capacity should also be strengthened by increasing human resources according to needs, especially for monitoring projects.
- All information on the projects, including plans, activities, budget, M&E report, and audit report, should be disclosed and made available on the webpage. To get the community well informed about the project information, a citizen charter, billboard, etc. should be displayed in the project areas and in the respective offices.

- Accountability mechanisms and monitoring systems, as well as the roles of relevant departments and institutions, i.e., the IMED, MoEFCC, and LGED, should be clearly accommodated in the project/policy document so that accountability mechanisms can be functional in a coordinated manner. It is also crucial to define the role of citizens/beneficiary in the monitoring process

8.5 Conclusion

BCCT-funded projects are to achieve thematic goals set in the BCCSAP, 2009. This evaluation covered 45 projects approved by different public agencies from 2009 to 2017. Of the six thematic areas, a large share of the projects are infrastructure focused. To achieve better results on climate change adaptation and mitigation projects, BCCT must act fast to streamline the project management activities, from receiving proposals to monitoring, evaluating, and reporting. Strong adherence to the BCCT Act, along with the BCCT Fund Utilization Guidelines, should be the point of inclination in this regard. The projects implemented so far have also suggested that there is a dearth of innovative and research projects. BCCSAP is a very comprehensive document, and achieving thematic goals should have been the priority in approving project proposals. The role of BCCT should not be limited to awarding projects and receiving a completion report indicating that projects are completed and money is spent. As a statutory organization, the BCCT should be the custodian of public resources and spend them judiciously so that money is spent efficiently and accordingly, reducing the climate change-induced vulnerability of the country, as well as participating in GHG emission reduction with the global effort. It is also an opportunity for BCCT to show the performance of the global community as the government-owned dedicated trust for climate change and an entity of a climate-vulnerable country. Finally, effectiveness and long-term sustainability should be the central goals from approval to completion of any project or programme. By making some improvement in project selection and implementation, in future BCCT have bright chance to become an accredited entity of Green Climate Fund and Adaptation Fund.

Section 9. Summary of Individual Project Findings



9.1 Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts implemented by BARI

Implementation Period : (May 2010 to April 2012)

Thematic Area 1, Project 1

Status of component-wise implementation progress (physical and financial): The originally approved project budget was 156.26 lakh of which Taka 99.46 lakh was actually spent of which 1.24 lakh was spent for staff salaries, 66.68 lakh was spent for research activities, 0.45 lakh was spent for training allowance, and 3.43 lakh was spent for repair and maintenance. There were no amounts spent against vehicle, land and field equipment, and office equipment against the budgeted amounts 0.16, 0.18 and 3.15 lakh respectively.

Status of achieving project objectives: there were four objectives of the project among which one was to support farmers to cope up with the climate change by enhancing farm productivity of the char-lands. The status of other objectives is as below:

No.	Objectives	Status of achievements
1	To introduce modern cultivars of pulses and oil crops to exploit the potentiality of the productive char-lands	About 20% of farmers use improved cultivar of mungbean, 30% farmers use improved variety of blackgram, and 15% farmers used improved variety of groundnut. The project supports farmers to introduce high yielding varieties that increased total production of the crops. Ref. BARI study
2	To maintain soil health and environment-friendly production practices of maize and pulses in the char-lands	The practice gives increased and more stable yields, better nutrient recycling in the soil, better control of weeds, pests, and diseases. The key advantage of the legume-cereal intercrop is the input of nitrogen to the system by the fixation of atmospheric N ₂ by the legume, which may contribute to an increased fertility of the intercrops.
3	To ensure food security, social protection, and health of small and marginal farmers of the char-lands	Both objectives are directly linked with the BCCSAP 2009 theme and its impacts. Through improving intercrop cultivars and practices of cultivating high yielding and climate tolerant intercrop varieties, nitrogen fixing plants, the food security, social protection of local communities has been tangibly enhanced, and the soil health is improved.

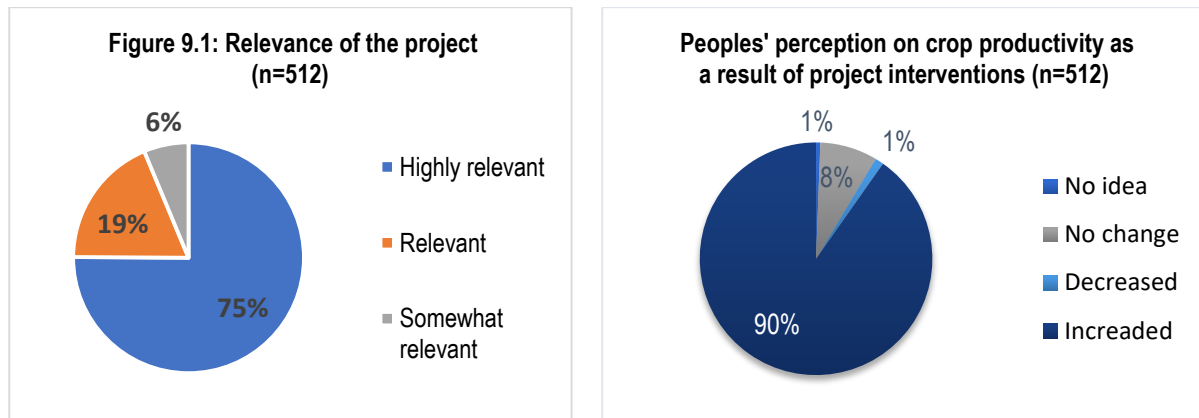
Tendering and procurement (as per PPA 2006/PPR 2008): The project hires a staff (i.e., Scientific Assistant). The procurement items include a few equipment items, and for which the tendering and procurement process was reportedly transparent, those were initiated and completed following the PPA 2006 and the PPR 2008.

Status of procured goods/works/services and its maintenance: the status and O&M of procured items (i.e., equipment), as reported by the available project officials, remains uncertain; but secondary document (i.e., the PCR) refers to the items that those are kept in RARS in Jamalpur.

Quality and quantity of the works (as per design and specifications): There were no physical components of the project to be implemented. Items of goods related to office equipment reportedly were of good quality and procured 100% in quantity.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original implementation period of the project and its components as per PPCCTF was 01 May 2010 – 30 April 2012 and the 100% project activities were implemented within the stipulated timeframe.

Relevance and effectiveness of the project: the following two different pie-charts represent the community perception of the project relevance and effectiveness, and which are also being validated by the evaluation findings.

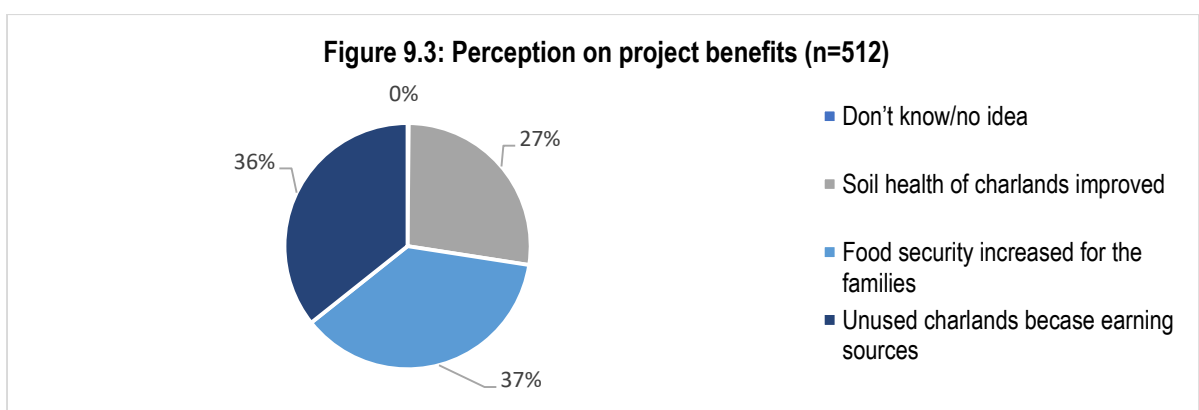
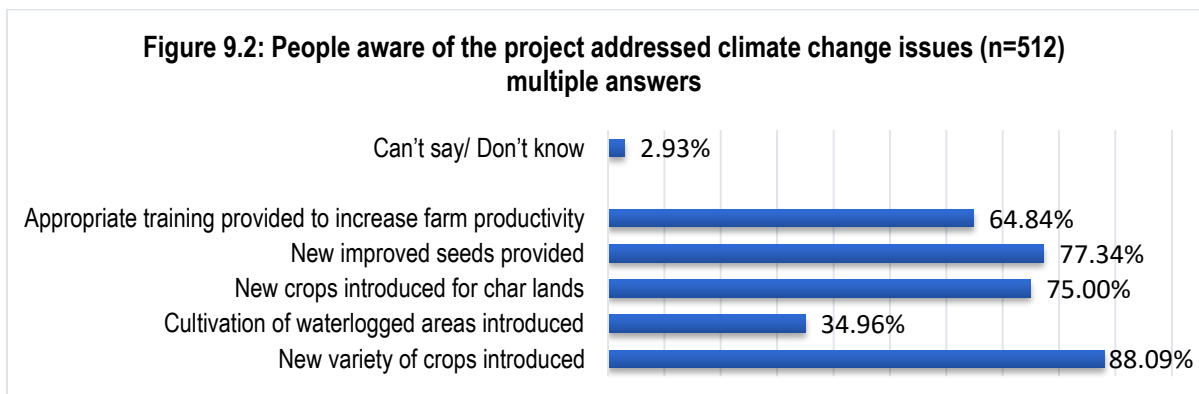


Overlapping and/or duplication of similar other projects in the same areas: No such evidence was found.

Studies conducted, if any, under the project: No issue-based studies, other than baseline and project completion, were conducted.

Exit plan of the project: No such explicit plans are found having been formulated and executed.

Socio-economic impacts of the project interventions: following pie and bar-charts are reflective of the evaluation findings related to socioeconomic impacts created through the project interventions.



Sustainability of the project: Expected that the technologies like mung bean (BARI mung-6) cultivation in kharif-I, blackgram (BARI mash-3) kharif-II and maize-pea and maize-khesari intercropping systems will be sustainable, since these will play a vital role for enhancing pulse crop production with enhancing soil fertility (by ensuring nitrogen fixation) in the project area.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: this project objectives are directly addressing the theme one of the BCCSAP 2009.

Key issues identified and recommendations: Exit plan – an appropriately designed and formulated plan needs to be in place and functioning. This may also consider incorporation of the sustainability issues, particularly on how to establish an institutional set-up to handover the onward responsibility of the project works to carry forward.

9.2: প্রতিকূলতা সহিষ্ণু ধান, গম, ডাল ও তৈল বীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প implemented by BADC

Implementation Period : June 2011 to December 2013

Thematic Area 1, Project 2

Status of component-wise implementation progress (physical and financial): The revised project budget was 2,443.00 lakh against the original 2,458.00 lakh proposed. From which 2,413.45 was spent for seed purchase and seed related cost, 10.00 was spent for oil and fuel, 4.00 was spent for vehicle, and 0.98 lakh was spent for laptop computer. There was a total of 14.57 lakh taka unspent and returned. Year-wise the total expenditures were 27.67% and 72.33% respectively for 1st (July 2011-June 2012) and 2nd year (July 2012-December 2013) of the project. The reason of the deviation in the financial target was the less cost (550.02 lakh against 564.57 targeted) for seed related while an excess of 500 mt. seeds were procured.

Status of achieving project objectives: Production, processing, and distribution of stress tolerant rice (5,600 mt.) including Aman and Boro paddy, wheat (400 mt.), pulse (200 mt.) and oil seeds (200 mt.) amounting a total of 6,400 mt. against 5,900 mt. targeted (excess 500 mt.).

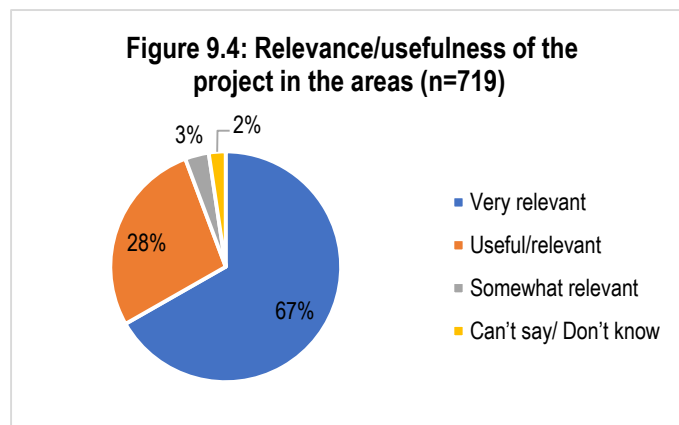
Tendering and procurement (as per PPA 2006/PPR 2008): Tendering and Procurement of Aman paddy seed, wheat seed, boro paddy seed, pulse seed, and oil seed were done using DPM method, while seed related cost and others (including 1 laptop computer) were procured through DPM/RFQ/cash method. These are being reported as per the PCR prepared and submitted by the project itself. We did not review other documents because of the unavailability (i.e., already write-off) of official documents.

Status of procured goods/works/services and its maintenance: Only goods were procured by the project and subsequently those were distributed among the project beneficiaries. Currently, the sole incidental item i.e., laptop computer is reportedly under maintenance by the agency but cannot be physically verified.

Quality and quantity of the works (as per design and specifications): as reported by the beneficiary farmers, the quality of stress tolerant paddy, wheat, pulse and oil seeds distributed were good; while the PCR supports the narration that the quantity of goods was even more procured with less costs as per financial target.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility for the delay: the project period was once revised. The original proposed project period was June 2011 to July 2013, and the revised period was June 2011 to December 2013. There was no delay found in the implementation of the project. No reasons were found for the revision of the project period but assumed that project took the extra period to properly wrap up the project.

Relevance and effectiveness of the project: The project was highly relevant to the local context as this had been evident (67% say highly relevant and 28% say relevant) in the beneficiary opinion (shown in pie chart). Moreover, about 97% farmers in the surveyed project areas were reportedly cultivating stress-tolerant crop varieties, seeds of those were introduced and distributed by the project. This proves the effectiveness of the project interventions.

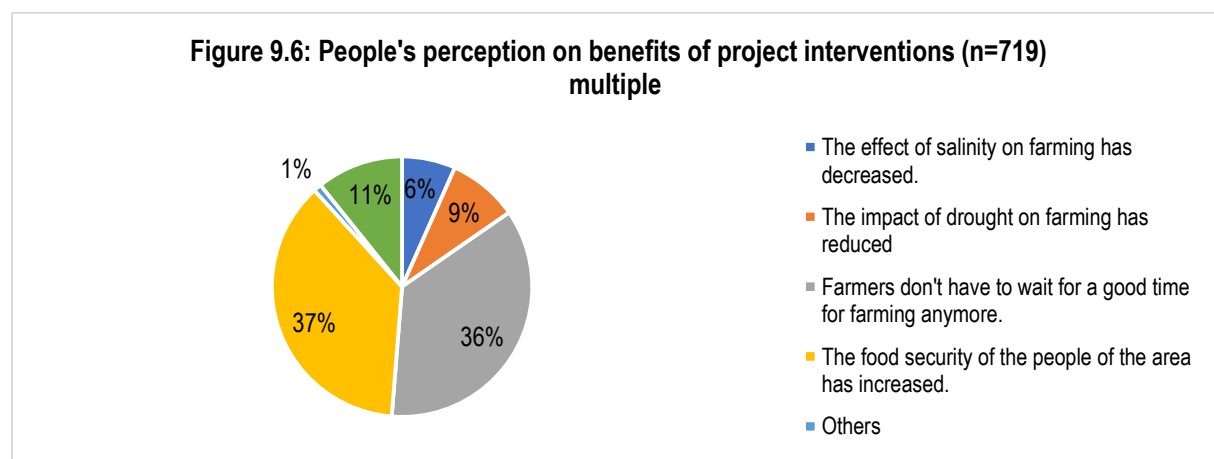
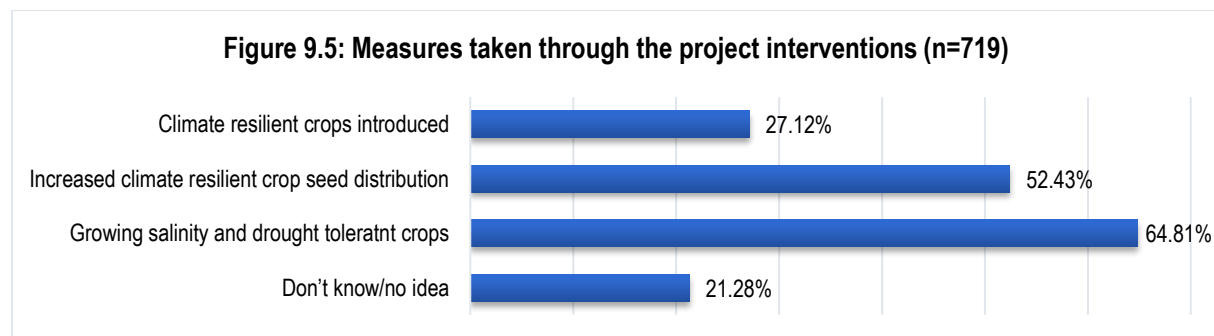


Overlapping and/or duplication of similar other projects in the same areas: there was no overlapping of similar other projects and/or interventions found.

Studies conducted, if any, under the project: None

Exit plan of the project: there was no explicit exit plan formulated and/or institutional set-up established; however, the project office used to forecast that the demand of stress tolerant HYV are increasing day by day due to impact of climate change, so the project should be continued in order to increase the stress tolerant varieties of cereal, pulse and oil seeds as well as to increase more production in the south-east and northwest areas of Bangladesh.

Socio-economic impacts of the project interventions: The PCR refers that by using HYV stress tolerant seeds about 20% crop production has increased. The farmers benefited, and their socioeconomic conditions improved. Apart, these kinds of seeds; stress and sub-merge tolerant varieties are used across the project areas.



Sustainability of the project and its activities: the evaluation finding exploits a demand for an exit plan leading towards sustainability of the project process undertaken and impacts created, however, the absence of such plan and/or institutional set-up may lead the project outcome might be less sustainable

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project components are directly related to food production as well as social security of the communities under the climate affected (e.g., salinity, drought, and water depleted etc.) areas. Therefore, the project objectives and outcomes are well-linked with the thematic area one of the BCCSAP 2009.

Key issues identified and recommendations: the project had not formulated and executed an explicit exit plan, and therefore left its activities and impacts on the assumption to be sustained based on the future forecasted demand among the farmers. The evaluation also did not find further information if the project was extended. Since the implementing agency is a public body, it may consider looking after the project activities through its permanent structure of programming in the areas where the project was implemented.

9.3 বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প implemented by DAE

Implementation Period: (July 2013 to December 2017)

Thematic Area 1, Project 3

Status of component-wise implementation progress (physical and financial): Taka 1,447.80 lakh was spent against the same amount of budget for revenue purpose, while 50.50 lakh was spent against the budgeted amount of 52.20 lakh. The total expenditure was 1,498.30 lakh against the budgeted amount of 1,500.00 lakh. Originally the proposed budget was 1,380 lakh which was increased to 1,500.00 lakh (by adding 200.00 lakh more) through a special budget revision meeting of the Trustee Board (41st meeting dated 29.09.2016) of BCCT. The project successfully accomplished 3 planning workshops, 4 national level seminars, 6 batches of officers' training, 462 batches of farmers' training, exposure visits for 42 farmers' and 6 officers' batches, installation of 420 demonstration plots of floating bed technology, support 12,900 farmers to establish floating beds, 21 batches of field level SAAO training, awareness raising campaigns, monitoring-evaluation-documentation, mid-term evaluation, and procurement of 12,000 seed preservation pots as part of project activities. Besides, the project incurred expenditure for administrative purposes that include TA-DA for key staff, stationeries, telephone-mobile bills, conducting an impact assessment, vehicle rental, fuel, contingency, O&M, furniture, and computer including printer and software, photocopier, laptop, scanner, digital camera, video camera, IPS and other accessories. Overall, the project achieved 100% physical target with a less cost (1.70 lakh) than the financial target.

Status of achieving project objectives:

No.	Project objectives	Implementation status
1	Extension of floating bed vegetable and spices production technology	Extended to additional 42 Upazilas under 10 districts.
2	Undertaking appropriate measures for the effective use of waterlogged areas in agricultural development sector	Measures are taken through farmers' training, awareness raising campaign, seminars, workshops, advertisement, exhibition of video clips, etc.

<i>No.</i>	<i>Project objectives</i>	<i>Implementation status</i>
3	Using unutilized floating kochuripana for the purpose of agricultural production due to shortage of cultivable lands	Ensured through massive expansion of vegetable and spice cultivation using floating beds
4	Supporting people to cope with disasters and adverse climate through cultivation even during floods	Ensured through several training programmes for farmers on modern agricultural technology
5	Establishing technology village organization for agricultural technology extension and management of supplied agricultural equipment	Technology Village Organizations are formed and established in 42 Upazilas and they took the responsibility of managing the equipment
6	Distribution of seed preservation pots during flood	12,000 pots distributed among farmers
7	Distribution of awareness raising materials (i.e., leaflets, posters, booklet, information sheet etc.) on climate change adaptation in the agricultural sector	Numerous awareness campaign hold, materials are distributed and several training programmes for farmers and fairs are organized
8	Installation of floating technology demonstration plots – 420 Nos.	420 demonstration plots installed
9	Establishing floating beds at farmers' level – 12,000 Nos	12,900 floating beds established at farmers level

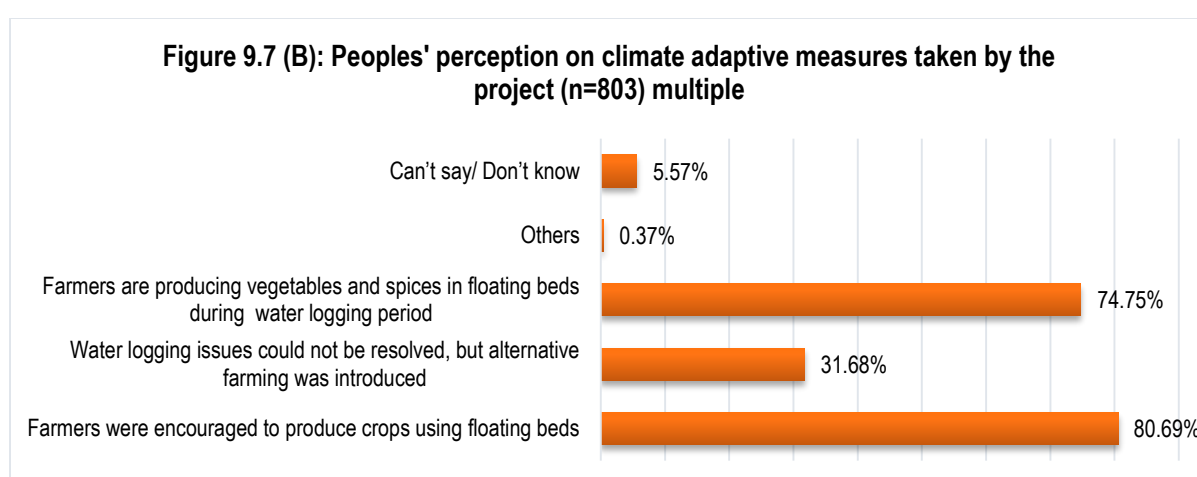
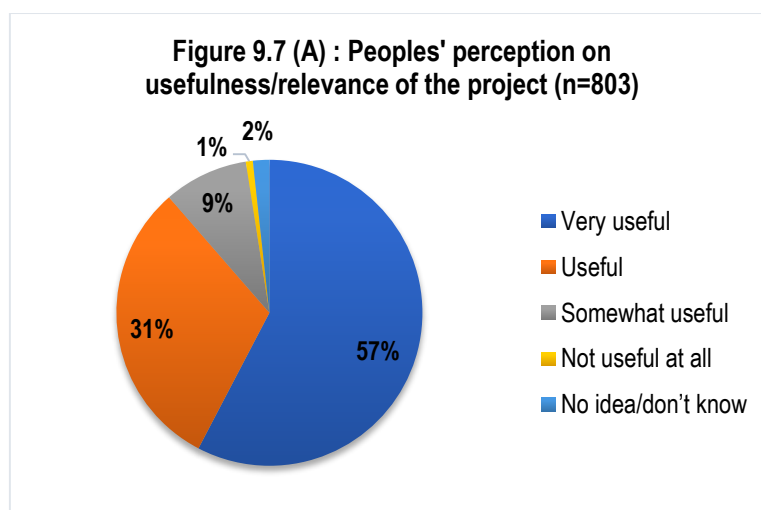
Tendering and procurement: formal external audits were completed for all the fiscal years of the project with no complaints/objections on the tendering and procurement process as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: Goods supplied to the villages are under maintenance of the Technology Village Organizations, and remaining others are under the implementing agency. No scope remained to physical verification of the goods since the project officially closed by 2017.

Quality and quantity of the works: quality and quantity of procured goods were reported as per design and specifications proposed in the approved PPCCTF.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: Original project period was proposed to be July 2013 to June 2016 which had been revised once from July 2013 to December 2017.

Relevance and effectiveness of the project: results are reflected in the pie and bar charts below.



Overlapping and/or duplication of similar other projects in the same areas: No overlapping found.

Studies conducted, if any, under the project: There was a mid-term evaluation and impact assessment study undertaken during 2015 and November 2017 respectively.

Exit plan of the project: No such explicit exit plan formulated and executed.

Socio-economic impacts of the project interventions: evaluation findings are reflected in the charts below.

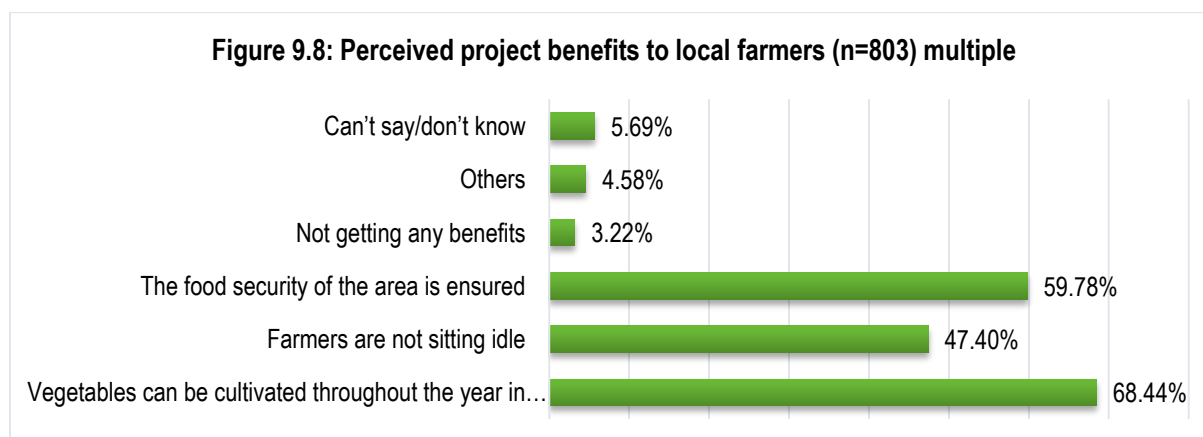
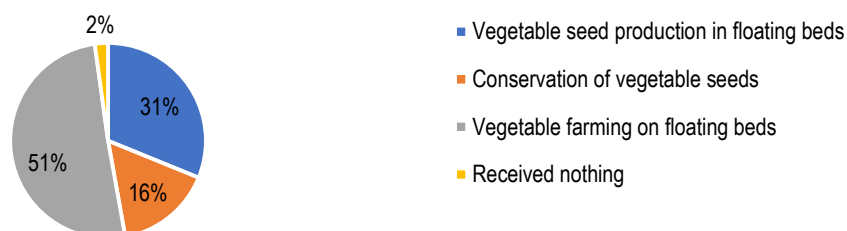


Figure 9.9: Farming technology received by farmers through the project (n=803) multiple



Sustainability of the project and its activities: Excellent results of the projects have inspired the implementing agency to further undertake a follow-up project in other regions of the country. Therefore, these results are expected to sustain within the organizational management mechanism.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the objectives and goal of the project are directly related to the thematic area one of the BCCSAP

Key issues identified and recommendations: an explicit exit plan is yet to be in place and functional, and which are to be indicated in the follow-up project(s) being undertaken. In addition to this, necessary prior consultation with the farmers (i.e., a needs assessment) might have been more effective in the project design.

9.4 জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প **implemented by DPHE**

Implementation Period: January 2017 to June 2019

Thematic Area 1, Project 4

Status of component-wise implementation progress (physical and financial): Installation of 38mm dia 227 Nos. Deep Tubewells with 6 No. handpump with raised platform. Total financial progress was 188.19 lakh against the budget of 200.0 lakh, while 100% physical targets (227 against 227 DTWs) were achieved by the project. The reason of deviation in financial progress was because of the Contract value (based on which the Contract was signed with the Supplier) less than the estimated cost.

Status of achieving project objectives: the objective of the project was to ensure safe drinking water through installation of 227 nos. 38mm dia Deep Tubewells with raised platform in climate change affected areas under Babuganj and Muladi Upazilas of Barishal district. The objective was achieved fully by increasing access of the affected coastal disaster-prone communities to safe drinking water especially during and after natural calamities resulting reduction of water borne diseases.

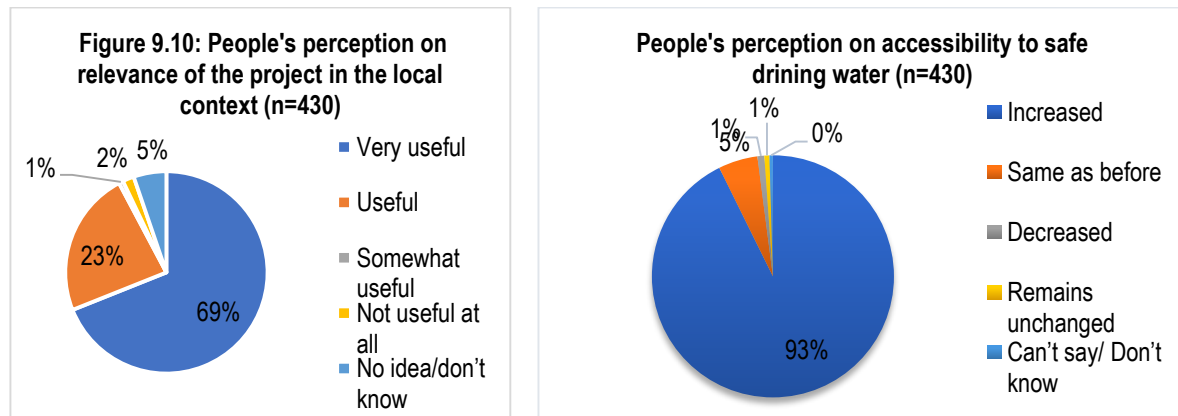
Tendering and procurement: Procurement of goods and services were done in two slots, in first slot 114 Nos. DTWs with civil works for Muladi Upazila and the second slot for 113 DTWs with civil works for Babuganj Upazila as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: O&M of the DTWs installed by the project is the responsibility of the users, however the evaluation finds almost half of the DTWs with raised platform installed in the wrong places and those were found non-maintained/nonfunctional.

Quality and quantity of the works: the quality of goods and works were done as per design and specifications, while the quantity procured and installed was also as per target.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original period of the project as was proposed from January 2017 to December 2018, which was revised once as from January 2017 to June 2019. Activity implementation period was from February 2017 to June 2019 with a 25%-time over-run. The reason for the delay was reportedly because of delayed revised site selection and approval of installation sites.

Relevance and effectiveness of the project: the following graphs reflect the relevance and effectiveness.



Overlapping and/or duplication of similar other projects in the same areas: No such duplication observed.

Studies conducted, if any, under the project: No studies were conducted under the project.

Exit plan of the project: as like others, the project did not have an explicit exit plan formulated and executed. Furthermore, there was no locally established institutional set-up in place and functioning to look after a sustainable O&M mechanism of the tubewells installed.

Socio-economic impacts of the project interventions: those are reflected in the presented pie and bar charts below.

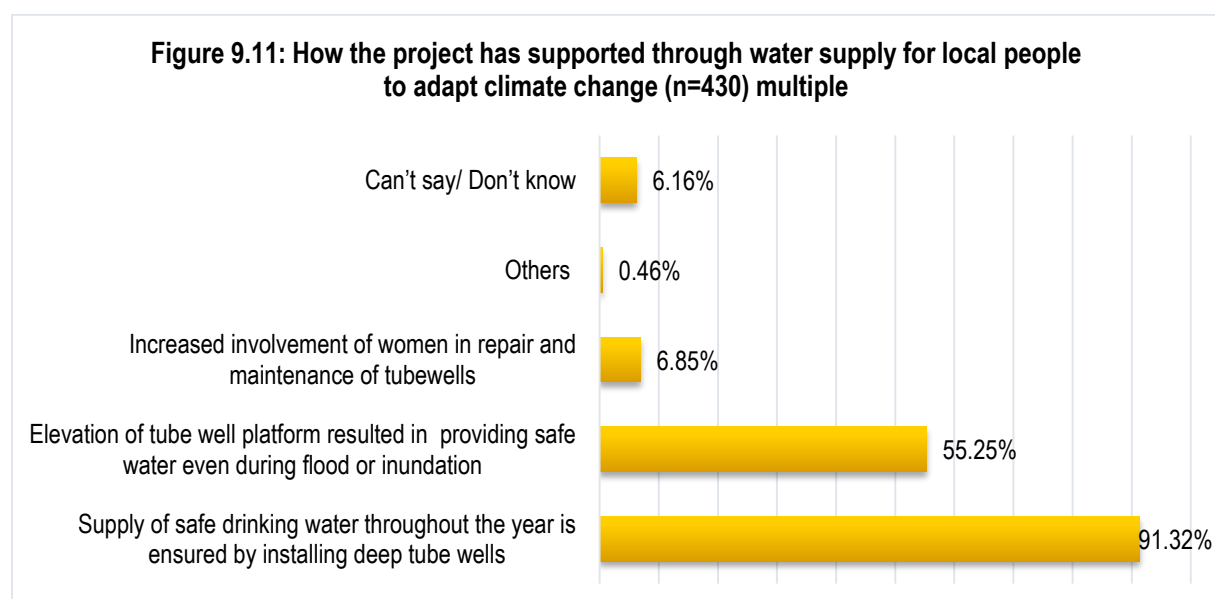


Figure 9.12: Current prevalence of water-borne diseases in the project areas (n=430)

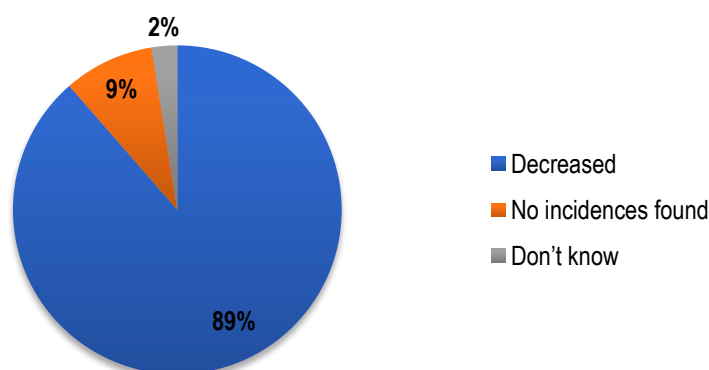
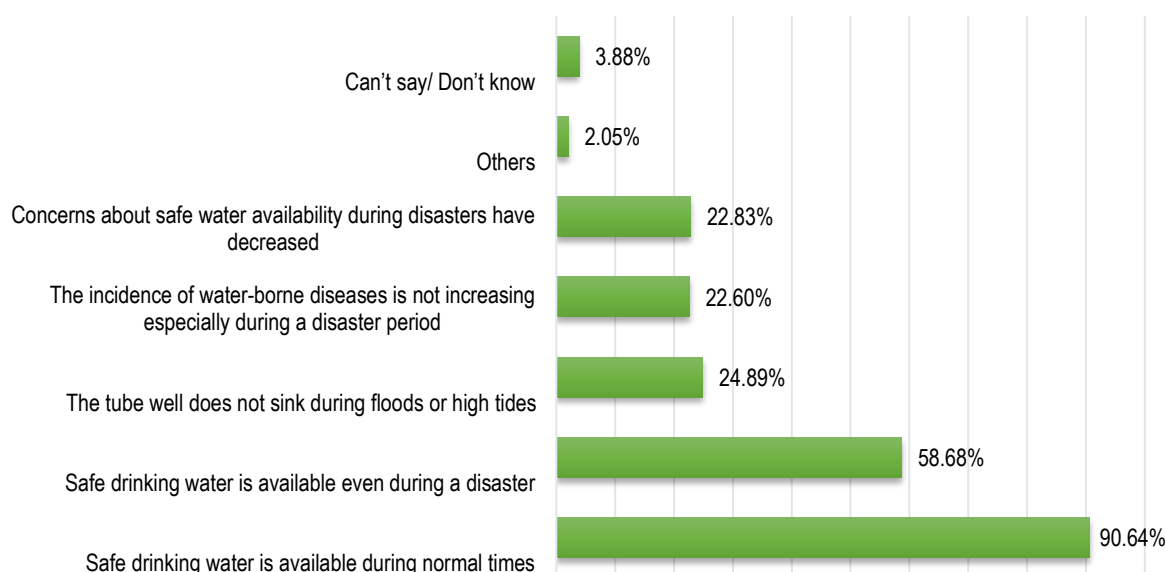


Figure 9.13: Perceived project benefits (n=430) multiple



Sustainability of the project and its activities: PCR provides a note that usually this type of project activities sustain because users themselves take care of the DTWs to meet their everyday necessity of safe drinking water. However, an absence of institutionalized mechanism for site selection and O&M of the community based DTWs leave the options wrongly placed for many cases and unattended.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the impact of the project is to improve the health status of climate change affected people through supplying safe drinking water and thereby playing roles in reduction of the prevalence of water-borne diseases.

Key issues identified and recommendations: an explicitly/objectively formulated exit plan with local level institutional set-up was needed to look after the O&M of the tubewells installed, while a transparent mechanism was evidently required for appropriate site selection to ensure the sustainability of the project and its impacts.

9.5 জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প (২য়পর্যায়) implemented by DPHE

Implementation Period: (January 2017 to December 2019)

Thematic Area 1, Project 5

Status of component-wise implementation progress (physical and financial): Installation of 38mm dia 175 nos. Deep Tubewells with 6 No. handpump with raised platform. Total financial progress was 141.83 lakh against the budget of 162.45 lakh, while 100% physical targets (175 against 175 DTWs) were achieved by the project. The reason of deviation in financial progress because the Contract values (based on which the Contract was signed with the Suppliers) were less than the estimated costs.

Status of achieving project objectives: the objective of the project was to ensure safe drinking water through installation of 175 nos. 38mm dia Deep Tubewells with raised platform in climate change affected areas under Monpura (an island) and Charfashon Upazilas of Bhola district. The objective was achieved fully by increasing access of the affected coastal disaster-prone communities to safe drinking water especially during and after natural calamities resulting reduction of water borne diseases.

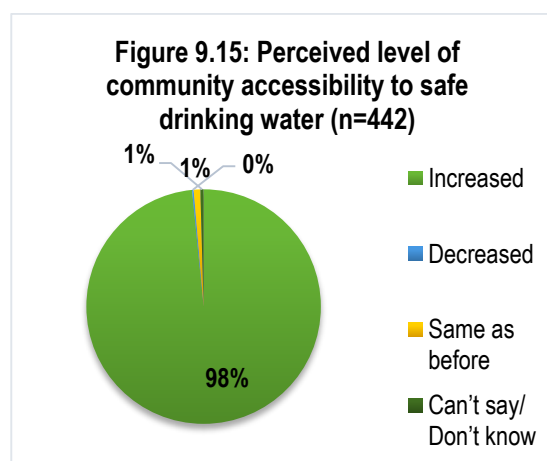
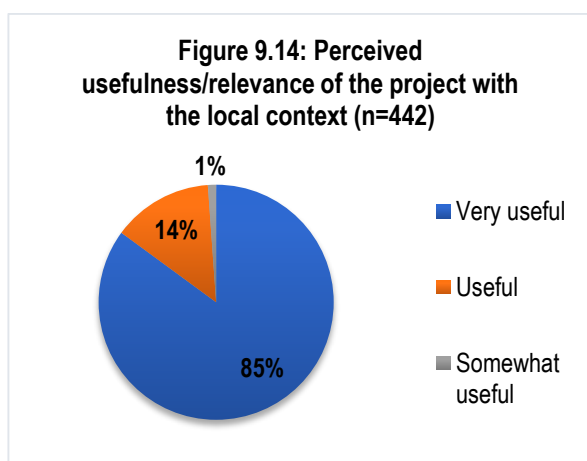
Tendering and procurement: Procurement of goods and services was done in two slots, in the first slot 145 Nos. DTWs with civil works for Monpura Upazila and the second slot for 30 DTWs with civil works for Chafashon Upazila as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: O&M of the DTWs installed by the project is the responsibility of the users, however the evaluation finds many DTWs with raised platform installed in the wrong places and those were found remaining non-maintained/nonfunctional.

Quality and quantity of the works: the quality of goods and works were done as per design and specifications, while the quantity procured and installed was also as per target.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original proposal for the project period was from January – December 2017, while the latest revised period was from January 2017 to December 2019. The reasons behind the delay in project implementation were due to difficult communication and delay in providing monitoring report from the competent authority, since this phase of the project was a continuation of its first phase (previous one).

Relevance and effectiveness of the project: these are reflective in the following pie charts.



Overlapping and/or duplication of similar other projects in the same areas: No such duplication and/or overlapping of similar other projects observed.

Studies conducted, if any, under the project: No studies were conducted under the project.

Exit plan of the project: As like others, the project did not have an explicit exit plan formulated and executed. Furthermore, there was no locally established institutional set-up in place and functioning to look after a sustainable O&M mechanism of the tubewells installed.

Socio-economic impacts of the project interventions are reflected in the following bar and pie charts.

Figure 9.17: How the project supported local people to adapt with climate change (n=442) multiple

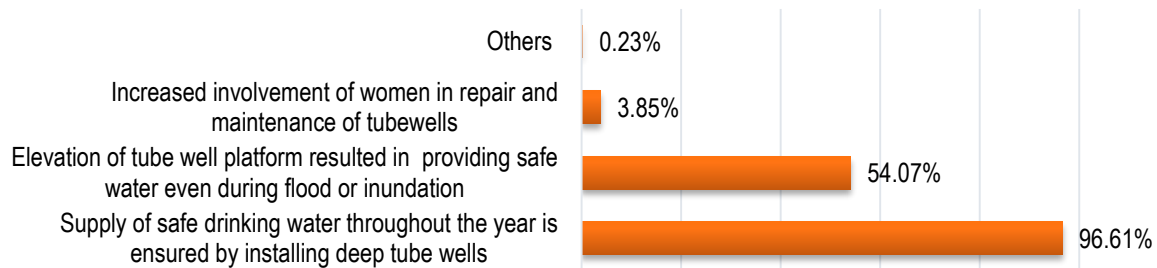


Figure 9.16: Perceived water-borne diseases in the local community (n=442)

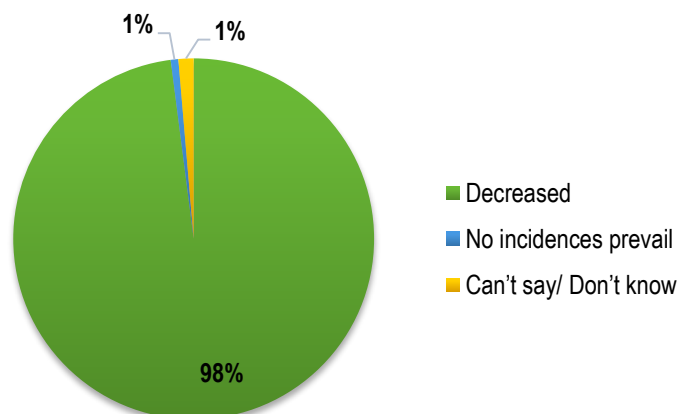
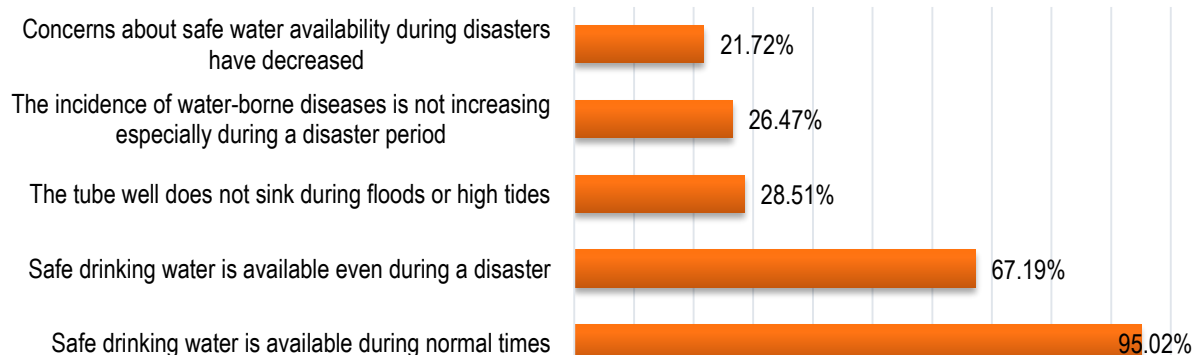


Figure 9.18: Perceived project benefits (n=442) multiple



Sustainability of the project and its activities: PCR provides a note that usually this type of project activities sustain because users themselves take care of the DTWs to meet their everyday necessity of safe drinking water. However, an absence of institutionalized mechanism for site selection and O&M of the community based DTWs leave the options wrongly placed for many cases and unattended.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the impact of the project is to improve the health status of climate change affected people through supplying safe drinking water and thereby playing roles in reduction of the prevalence of water-borne diseases.

Key issues identified and recommendations: an explicitly/objectively formulated exit plan with local level institutional set-up was needed to look after the O&M of the tubewells installed, while a transparent mechanism was evidently required for appropriate site selection to ensure the sustainability of the project and its impacts.

9.6 জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় গোপালগঞ্জ জেলার কোটালীপাড়া উপজেলায় খাল পুনঃখনন implemented by BWDB
Implementation Period: (May 2013 to December 2016)

Thematic Area 1, Project 6

Status of component-wise implementation progress (physical and financial): The project's capital component includes re-excavation of khal = 1 No, 65.00 Km which was done physically 92.01% against the target of 99.67%, and financially spent 1102.87 lakh against the target of 1194.64 lakh. There was deviation in achieving the target due to a land dispute (e.g., there was no acquired land by BWDB for re-excavation). While for the revenue component there was 3.77 lakh spent against 4.00 lakh targeted financially, and physically achieved 0.31% against the set target of 0.33%.

Status of achieving project objectives: achievement status of project objectives is listed below.

No.	Project Objectives	Work Status	Deviation reasons
1	Enhancement of agricultural by improving water supply system for adequate irrigation facility	Agri production increased	
2	Comprehensive drainage and irrigation facilities will be improved in the project area	Facilities improvised	
3	Improvement of adaptation capability for risk factors of climate change	Assumed to be not much achieved	This requires a large facility to improve
4	Reducing natural poverty with increased employment and income	Employment and income increasing	To get the data, no study was conducted
5	Improving navigation facilities/system	Navigation system improved	
6	Reduction of waterlogging in an area of 7000 Hac agricultural land	Waterlogging reduced	
7	Environmental improvement by tree plantation alongside canal banks	Plantation improved	

Tendering and procurement: the ceiling of procurement was set to be for goods and works of the project costing above TK. 50.00 lakh and Consultancy services above Taka 25.00 lakh. Accordingly, the revenue items like fuel and lubricant, printing and publication, stationeries etc. were procured; and therefore, the capital works/items were divided into 11 packages for tendering and procurement as per PPA 2006/PPR 2008. Invitation of tenders started from 29/07/2013 and the completion of works ended by 30/04/2015.

Status of procured goods/works/services and its maintenance: The responsibility of O&M of the goods and works done was vested upon BWDB, while the evaluation findings say that there was more attention needed in this regard.

Quality and quantity of the works: It was difficult or to some extent impossible for the evaluation team to verify whether the physical works were done as per design and specifications; however, the PCR refers to the facts that at 3rd Monitoring attempt by the BCCT Officials providing note 'work was not done as per design' dated 21/03/2014, otherwise the rest observations were found to be quite satisfactory. There was no question noted and/or found in the evaluation regarding the quantity of work done.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period was proposed to be from May 2013 to June 2014, and this had been revised twice. As per the first revision the period was reset from May 2013 to June 2015, and then in the second the period was finalized from May 2013 to December 2016. According to these revisions the project was implemented duly with no further delays.

Relevance and effectiveness of the project: As per evaluation findings, the project was highly (100%) relevant to the local context. Public opinions reflected that the project was support/effective in protecting canal banks, it has improved navigation system, increased ability of cultivation, increased transportation facility, reduced waterlogging, among others.

Overlapping and/or duplication of similar other projects in the same areas: there was no overlapping and/or duplication of similar other works/projects found in the evaluation.

Studies conducted, if any, under the project: No studies were reportedly or physically conducted.

Exit plan of the project: No such explicit exit plan formulated and executed under the project. The follow-up of the implemented works and goods remain at BWDB's hand leaving them to any of the institutional arrangements locally established.

Socio-economic impacts of the project interventions: The implementation of the project has supported socioeconomic development of the areas where people are able to cultivate agricultural crops and getting increased yield of the crops. That has also created new employment and income-generating opportunities for the local communities, especially the farmers. Due to improvement of transportation facilities the local people's mobility for cultivation and businesses have improved resulting in them getting more opportunities for socioeconomic development.

Sustainability of the project and its activities: Sustainability of the project works is found/seemed to be depending on the BWDB's regular O&M activities, especially due to siltation problems in the canal. These activities were found yet to be strengthened.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project's capital components are directly related to the 'infrastructure' theme of the BCCSAP; however, it had contributed to enable local communities to explore irrigation and thus crop (i.e., food) production facilities. These have a direct impact on food security, social protection, and health of people in the project areas.

Key issues identified and recommendations: the absence of an explicit ‘exit plan’ is a common issue where other than the implementing agency should have been held responsible for undertaking the follow-up activities to ensure that the project activities and their results are better sustained.

9.7 জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় মাদারীপুর জেলার মাদারীপুর সদর ও রাইজের উপজেলায় খাল পুনঃখনন প্রকল্প implemented by BWDB

Implementation Period: December 2013 to December 2016

Thematic Area 1, Project 7

Status of component-wise implementation progress (physical and financial): The project’s capital component includes re-excavation of khal (9 Nos) having a total of 33.45 Km which was done physically 65.08% against the target of 99.72%, and financially spent 454.25 lakh against the target of 698.00 lakh. There was deviation in achieving the target due to a land dispute (e.g., there was no acquired land by BWDB for re-excavation). While for the revenue component there was 0.48 lakh spent against 2.00 lakh targeted financially, and physically achieved 0.07% against the set target of 0.28%.

Status of achieving project objectives:

No.	Project Objectives	Work Status	Deviation reasons
1	Reduction of waterlogging in an area of 6500 Hac agricultural land	Water logging reduced	
2	Improving navigation system	Communication improved	
3	Enhancement of agricultural production by improving availability of irrigation water supply facility	Agricultural production increasing	
4	Improvement of drainage facilities	Facilities improved	
5	Improvement of adaptation capability for risk factors to climate change impacts	Not too much achieved	Needs wider aspects of development
6	Socioeconomic development of local people/communities (including women)	Developing	

Tendering and procurement: the ceiling of procurement was set to be for goods and works of the project costing above TK. 50.00 lakh and Consultancy services above Taka 25.00 lakh. Accordingly, the revenue items like fuel and lubricant, printing and publication, stationeries etc. were procured; and therefore, the capital works/items were divided into 9 packages for tendering and procurement as per PPA 2006/PPR 2008. Invitation of tenders started from 03/04/2014 and the completion of works ended by 30/04/2015.

Status of procured goods/works/services and its maintenance: The responsibility of O&M of the goods and works done was vested upon BWDB, while the evaluation findings say that there was more attention needed in this regard.

Quality and quantity of the works: It was difficult or to some extent impossible for the evaluation team to verify whether the physical works were done as per design and specifications; however, the PCR refers to the facts that Monitoring attempts by the BCCT Officials providing note works were done quite satisfactorily. There was no question noted and/or found in the evaluation regarding the quantity of work done.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period was proposed to be from December 2013 to June 2014, and this had been revised twice. As per the first revision the period was reset from December 2013 to June 2015, and then in the second the period

was finalized from December 2013 to December 2016. According to these revisions the project was implemented duly with no further delays.

Relevance and effectiveness of the project: As per evaluation findings, the project was highly (100%) relevant to the local context. Public opinions reflected that the project was support/effective in protecting canal banks, it has improved navigation system, increased ability of cultivation, increased transportation facility, reduced waterlogging, among others.

Overlapping and/or duplication of similar other projects in the same areas: there was no overlapping and/or duplication of similar other works/projects found in the evaluation.

Studies conducted, if any, under the project: No studies were reportedly or physically conducted.

Exit plan of the project: No such explicit exit plan formulated and executed under the project. The follow-up of the implemented works and goods remain at BWDB's hand leaving them to any of the institutional arrangements locally established.

Socio-economic impacts of the project interventions: The implementation of the project has supported socioeconomic development of the areas where people are able to cultivate agricultural crops and getting increased yield of the crops. That has also created new employment and income earning opportunities for the local communities, especially the farmers. Due to improvement of transportation facilities the local people's mobility for cultivation and businesses have improved resulting in them getting more opportunities for socioeconomic development.

Sustainability of the project and its activities: Sustainability of the project works is found/seemed to be depending on the BWDB's regular O&M activities, especially due to siltation problems in the canal. These activities were found yet to be strengthened.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project's capital components are directly related to the 'infrastructure' theme of the BCCSAP; however, it had contributed to enable local communities to explore irrigation and thus crop (i.e., food) production facilities. These have a direct impact on food security, social protection, and health of people in the project areas.

Key issues identified and recommendations: the absence of an explicit 'exit plan' is a common issue where other than the implementing agency should have been responsible for undertaking the follow-up activities to ensure that the project activities and their results are better sustained.

9.8 জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় শেরপুর জেলার নালিতাবাড়ি উপজেলাধীন চেল্লাখালী নদীতে রাবার ড্যাম নির্মাণ প্রকল্প **implemented by BADC**

Implementation Period: April 2014 to April 2016

Thematic Area 1, Project 8

Status of component-wise implementation progress (physical and financial): The project was implemented with a 4.50-meter depth of water to be stored at the up-stream of the rubber dam during dry season (December to May). Taka 58.38 lakh was spent against the targeted budget of 61.00 lakh for the revenue purposes. While under the capital head a total of 1101.24 lakh was spent against the budgeted amount of 1194.00 lakh. The capital expenditures were incurred for the purposes of construction of rubber dam structure works (3500 sqm), construction of inlet/outlet (10 nos.), re-excavation of Chillakhali river 8.7 km), rubber dam bag procurement and installation (800 sqm), steel sheet piles procurement (61 mt.) and drain bag transportation among others. The original gross budget proposed was

amounting Tk. 1499.00 lakh and that was revised and approved to an amount of Taka 1194.00 lakh.

Status of achieving project objectives: the project objective was to provide irrigation facilities to an additional 500 ha of cultivable land through establishing the rubber dam on Chillakhali river. Accordingly, the dam works were completed successfully.

Tendering and procurement: the project had two components to procure. Firstly, procurement of works (e.g., rubber dam construction, inlet-outlet construction, river re-excavation, rubber dam bag installation, steel piles installation, etc.) and secondly procurement of consultancy (e.g., survey, EIA consultancy, consultancy for planning, design, drawing and construction supervision, etc.) were done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and their maintenance: the evaluation found the rubber dam was working well; however, it requires further attention especially for its (including river protection works adjacent to the dam) appropriate maintenance. As per PPCCTF, it was a plan to ensure people's participation and to make sure that sustainable Water Management Cooperative Association (WMCA) will be established to look after the dam and work for collection of irrigation charge for O&M of the dam purposes. The project was supposed to be handed over to the WMCA after one year of the physical work completion. Wherein BADC will provide technical assistance and guidance as needed to support WMCA in performing their responsibilities. Practically, the functioning of the WMCA is found to be weak and somewhere non-existent.

Quality and quantity of the works: the quality and quantity of the project works were done as per design and specifications approved by the project authority.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original proposal for the implementation period was from April 2014 to December 2015 which was revised once, and project duration extended up to April 2016. The project was completed on time, and there was no evidence found that there was any delay in the implementation.

Relevance and effectiveness of the project: the project was highly relevant to the local context because the farmers were suffering from acute irrigation water crisis during dry seasons at the upper stream of the Chillakhali river originated from the hill springs from the west. The project was effective because it helps irrigation facilities across the up-stream areas, increased Boro rice productivity and increased groundwater recharge.

Overlapping and/or duplication of similar other projects in the same areas: there was no overlapping and/or duplication of similar other projects found/identified.

Studies conducted, if any, under the project: There were two studies i.e., situational survey and Environmental Impact Assessment (EIA) conducted under the project.

Exit plan of the project: there was an indirect exit plan formulated and executed, and institutional set up established for the purpose of O&M and ensuring that the operation of the dam is sustained. As per the project provision a WMCA was formed and established during the period of handing over the dam to them, but afterwards the WMCA has become reluctant to carry forward their tasks and responsibilities as assigned.

Socio-economic impacts of the project interventions: Due to application of modern irrigation techniques in the rubber dam, the size of cultivable land has increased, and agricultural production raised. These provide enhanced socioeconomic condition of the local farmer communities.

Sustainability of the project and its activities: the PCR refers to the facts that agricultural development gets acceleration due to increased irrigation facilities. Hence, the project has been contributing to an increased crop production and upgrading socioeconomic condition

of the rural poor people of the project area. It was expected that with the experience from other irrigation-oriented projects, this project will be able to supply adequate irrigation water and apply on-farm water management successfully. WMCAs were expected to be established and registered under the Cooperative Act 2002 and Cooperative Rules 2004, and this community/user institutions will take up responsibilities for O&M activities including enforcing decision and mobilizing resources for meeting 100% O&M cost. They were supposed to be collecting water revenues from the beneficiaries to make the project sustainable; however, WMCAs tend to be left alone (no BADC guidance is received on regular basis) and this remains apparently inadequately functional.

Comments on how the project design and its impacts relate to the thematic areas of the BCSSAP 2009: after completion of the project, most of the targeted cultivable land in the project area was covered with water and remains green throughout the year. As a result, the temperature has understandably declined and humidity increased, which helps for raining and recharging groundwater aquifer. Since the project was aimed to provide extended irrigation facilities towards increased crop production, this has been found to be directly related to the thematic area 'food security, social protection, and health of the BCSSAP.

Key issues identified and recommendations: a precisely good attempt was planned and executed by establishing a user association to look after the O&M of the dam facilities and make the project activities sustainable. However, this attempt seems to have been weakened apparently because of inadequate monitoring, guidance and support from BADC.

9.9 Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change implemented by CPP

Implementation Period: January 2013 to December 2015

Thematic Area 2, Project 1

Status of component-wise implementation progress (physical and financial): The project period originally proposed to be from January 2013 to December 2015, and which was revised once keeping the same period to implement the project activities. Financial target-wise Taka 1,219.1618 lakh was spent against the budgeted amount 1,564.43 lakh; given this there were 345.27 lakh remains unspent.

Status of achieving project objectives:

<i>No.</i>	<i>Project Objectives (i.e., indicators)</i>	<i>Implementation status</i>
1	Training of 14,205 CPP volunteers at 316 centers	Training provided as per plan/target
2	Training for 5,400 Seagoing fishermen at 108 centers	100% training target achieved
3	Conduction of 2 orientation workshops	2 workshops conducted successfully
4	Organize 13 Cyclone Field Demonstration	Demonstrations were successfully completed
5	Purchase 1 Emergency Response Vehicle	Vehicle purchased
6	Develop and disseminate posters and leaflets for awareness raising	20,000 posters and 40,000 leaflets distributed
7	Office furniture and stationeries	Completed as needed and planned
8	Purchase warning equipment and Volunteer Gears (12 items)	Successfully procured and provided to CPP:

No.	Project Objectives (i.e., indicators)	Implementation status
		14,205 CPP vests, Raincoats, life jackets, 866 Radio, 663 Hand Sirens, 1,521 signal flags, 807 signal flag mast, 1,161 first aid kits, 1,183 Rescue Kits, 1,047 bi-cycles, 668 super megaphones and 802 torch lights.

Tendering and procurement: all early warning equipment and materials useful for responding to disasters and emergencies are procured as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: Physical verification of all procured and distributed goods was not practically possible. However, as reported by the CPP volunteers at local level the responsibility of O&M of the equipment and tools was vested upon the volunteers and their offices concerned. It is assumed that a part of the goods and equipment are functioning yet under the control of CPP programme.

Quality and quantity of the works: reportedly, the quality and quantity of the goods and services were as per design and specifications (fully satisfactory) proposed in the approved PPCCTF.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: there was no delay in the implementation recorded of the project

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication of the similar other projects in the same areas was identified/found.

Studies conducted, if any, under the project: No such studies were conducted.

Exit plan of the project: The evaluation finds no explicit exit plan formulated and executed. However, since the CPP has become an umbrella programme for disaster management and emergency relief specially working across the southwestern coastal districts, they have many other projects supported by different other agencies and donors the projects' exit could be easily handled by them through linking the project activities with other projects or programmes. Nonetheless, establishment and functioning of an institutional set-up may support more effectively to delivery their support services pre, during and post emergencies in a sustainable manner.

Relevance and effectiveness of the project are reflected in the pie charts presented below.

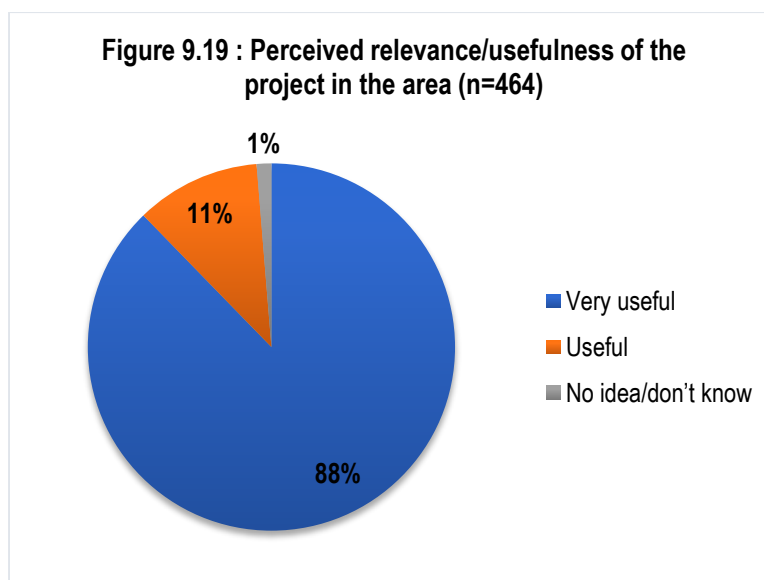
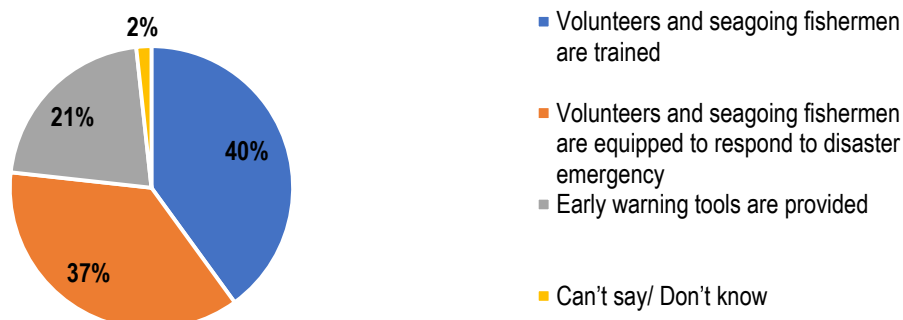


Figure 9.20: Perceived capacity changes made through project for target people to respond to disasters (n=464)



Socio-economic impacts of the project interventions are demonstrated through the pie charts below.

Figure 9.21 : Perceived benefits from project interventions (n=464)

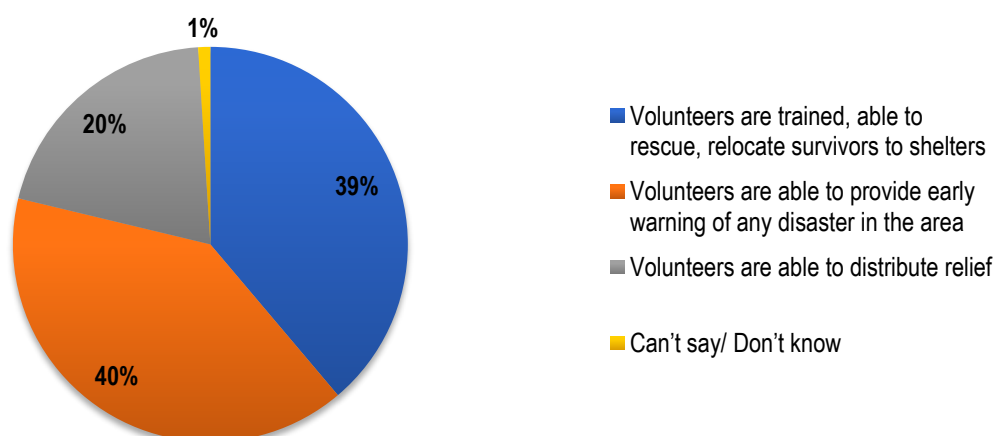
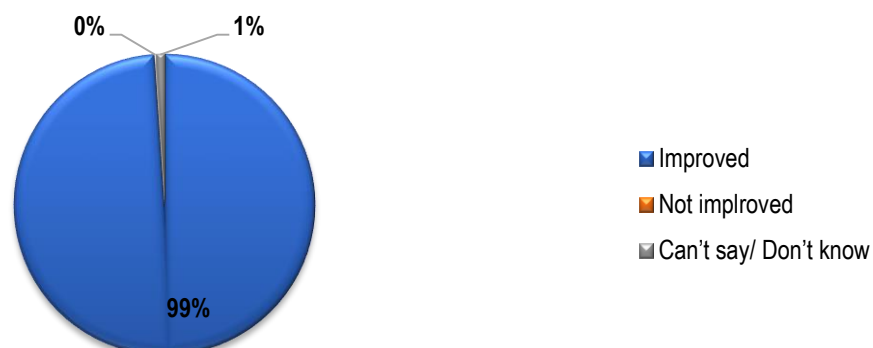


Figure 9.21 : Has the early warning system improved? (n=464)



Sustainability of the project and its activities: the PCR noted that after completion of the project the cost for implementation of the follow-up activities will be met-up by regular budget of the CPP and from IFRC through BDRCS as per agreement of CPP. This will guarantee the sustainability of the project.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project activities are directly linked with comprehensive disaster management theme of BCCSAP.

Key issues identified and recommendations: depending not only upon the contract between the CPP and IFRC through BDRCS the project should have an exit and sustainability plan to be in place and functional to secure the continuity of the programme activities beyond the project period.

9.10 Establishment of Khagrachari Pourashavas as a Climate Resilient Town implemented by Khagrachari CHT Pourashava

Implementation Period: January 2012 to December 2012

Thematic Area 3, Project 1

Status of component-wise implementation progress (physical and financial): the original project budget was Taka 169.47 lakh, and it remains the same during implementation without any further revision. Component-wise, progress was 100%.

Status of achieving project objectives: There were three objectives of the project such as (i) improve drainage system at Khagrachari Pourashava to overcome waterlogging problem due to excessive rainfall and flood, (ii) protect people from wind risk of flood through establishment of flood shelters, and (iii) protect landless people from landslides through construction of RCC retaining wall. Among those objectives, two were completed that include (i) improve drainage system, and (ii) establishment of flood shelters.

Tendering and procurement: the procurement of goods and works was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the evaluation finds the status and maintenance of the works in good condition; however, those require more attention to ensure longevity of the works.

Quality and quantity of the works: physical works were done as per design and specifications approved by the proper authority.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility for the delay: The project was completed within the stipulated timeframe with no further delays and/or incompleteness.

Relevance and effectiveness of the project: the project seems to be relevant to the local context and effective in terms of its objectives as set forth. These support local and poor landless people to benefit more, and in general municipal communities to benefit with the drainage system.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication of the project activities found.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: the project had no explicit exit plan formulated and executed. Neither the PCR nor the PPCCTF refers to anything about it.

Socio-economic impacts of the project interventions: the project works seem to be helping local people to get rid-off the water logging problem inside the township, and poor people's accessibility to flood shelters has been increased. These all are for saving lives and getting free from polluted environment.

Sustainability of the project and its activities: The responsibility is vested upon the Pourashava, and the evaluation finds them to be more attentive in taking care of the facilities constructed.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project is directly linked with the thematic area of 'infrastructure' which will help people of the project area living in an environmental condition where they are free from water logging and able to take shelters during floods.

Key issues identified and recommendations: They should have developed and executed an exit plan and investigated issues of better O&M of the facilities towards ensuring sustainability of the project activities and impacts.

9.11 Development of Infrastructure to Tackle Climate Change Impacts in Patuakhali Pourashava implemented by Patuakhali Pourashava

Implementation Period: July 2012 to June 2013

Thematic Area 3, Project 2

Status of component-wise implementation progress (physical and financial): The originally proposed budget of the project was Taka 244.28 lakh, and which was not revised. By components the budget was spent for (s) sewer of wrest water logging (100%) and (b) supply of safe drinking water i.e., installation of 90 Nos. Deep handpump TW (100%); where amounts allocation and spent were not specifically mentioned in the PCR.

Status of achieving project objectives: the PCR as well as the evaluation findings refer to the facts that all objectives were fully achieved.

Tendering and procurement of goods and works were done as per PPA 2006/PPR 2008

Status of procured goods/works/services and its maintenance: The O&M responsibility kept remaining upon the PIU of the Pourashava. The evaluation findings reveal that the project activities done need more attention to be maintained properly.

Quality and quantity of the works were procured and implemented as per design and specifications of the approved project.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility for the delay: The project was implemented during June 2012 to June 2013, and which was originally proposed and approved having without further revision.

Relevance and effectiveness of the project: as of Pourashava dwellers opinion the design and implementation were 100% relevant and the works that have been implemented were highly effective in mitigating problems of logged water and serving people with safe drinking water supplies.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication was found.

Studies conducted, if any, under the project: No studies were conducted.

Exit plan of the project: no such exit plan formulated and executed. The Pourashava itself takes care of the work done.

Socio-economic impacts of the project interventions: Environmental hazards removed by improving drainage system and needs of safe drinking water of the people partially fulfilled. Therefore, the prevalence of water-borne diseases has reportedly declined.

Sustainability of the project and its activities: PIU of the Pourashava takes care. Sustainability issues need to be taken care of. By implementing similar other works, they are trying to keep the activities continued.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project components are directly related to the theme of 'infrastructure' including 'health' of the local people that support reduce risks of climate change induced natural hazards.

Key issues identified and recommendations: an exit plan needed to be in place and functional, while the issues of O&M and sustainability of the project activities demand further attention.

9.12 ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগ সহনশীল গৃহ নির্মাণ প্রকল্প **implemented by DDM**
Implementation Period: July 2013 to December 2014

Thematic Area 3, Project 3

Status of component-wise implementation progress (physical and financial): the original project period was proposed to be from July 2013 to June 2014, which was revised once as to be implemented from July 2013 to December 2014 (time over-run 50%). While the original budget proposed was 321.00 lakh and the amount spent was 320.05835 lakh, Taka 0.94165 lakh remains unspent. Component wise expenditures were 0.50 lakh for stationery, 0.40117 lakh for circular of tender, and 319.15718 lakh for construction of 100 disaster resilient houses. The total refunded amount was Taka 1.5225 lakh.

Status of achieving project objectives: the main objective was to provide shelter to the Tornado 2013 affected poor people to help them reduce disaster risks for their lives and properties by constructing disaster resilient houses/shelters. In contrast to the objective, 100 (fully achieved) nos. of disaster resilient shelters constructed and provided to 500 Tornado 2013 affected poor people in the targeted sites. There was no deviation found in the achievement of the project objectives.

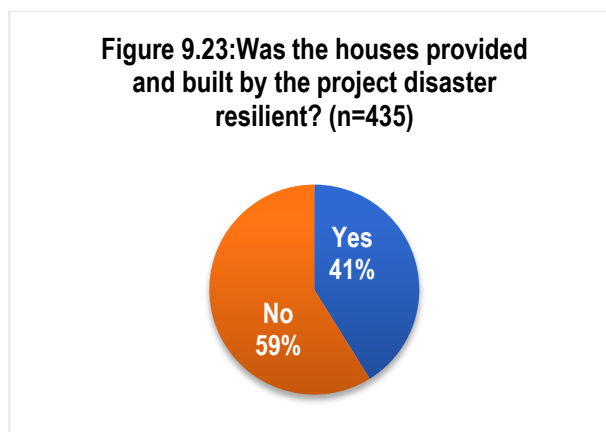
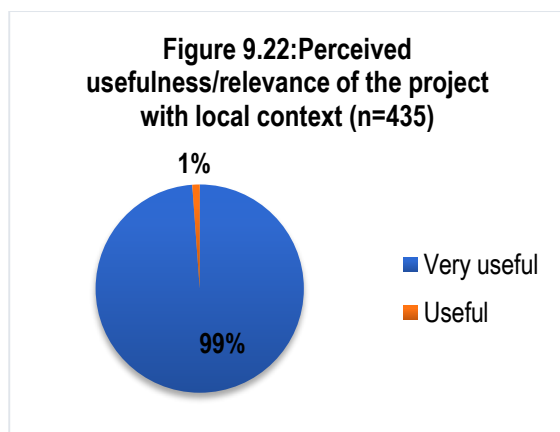
Tendering and procurement: Tender/bid proposal was 319.50 lakh, and the Contracted value was 317.12412 lakh. Date of tendering was 1.1.2014 and the date of Contract award was 27.2.2014, while the date of completion of works was 15.12.2014. These provide evidence that the tendering and procurement of goods and works were done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: The PCR refers to the fact that O&M of the goods and works procured and provided to the people was not applicable. However, the evaluation findings suggest that a good number (about one third) of houses/shelters provided through the project have been partially eroded because of a lack of proper maintenance. The remaining others are found to be apparently in good condition.

The quality and quantity of the works were done and maintained as per design and specifications proposed by the DDM (the implementing agency) and approved by the BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility for the delay: the project activities were completed on time as were originally planned.

The relevance and effectiveness of the project are reflected in the pie charts presented below.

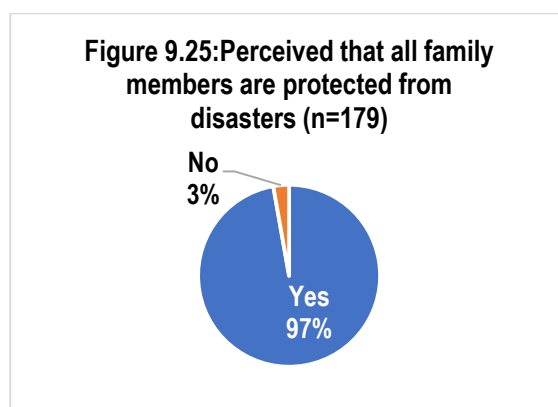
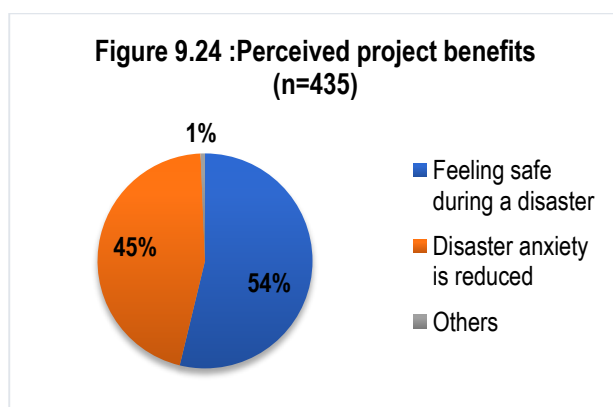


Overlapping and/or duplication of similar other projects in the same areas: No overlapping or duplication of similar other project activities in the areas was found.

Studies conducted, if any, under the project: No studies conducted under this project.

Exit plan of the project: no such explicit exit plan formulated and executed for the project; instead, the project was ended by handing over the constructed houses/shelters to the pre-listed Tornado affected families.

Socio-economic impacts of the project interventions are reflected in the pie charts presented below.



Sustainability of the project and its activities: the evaluation findings support the PCR note that constructed cyclone/tornado resistant houses were made by RCC structure, and quality materials were used for the construction. This will ensure the sustainability of the project activities.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project activities were to build/construct disaster resilient house infrastructures and hand those over to the affected families. Therefore, the project design and its impacts directly relate to the thematic area No. 3 of the BCCSAP.

Key issues identified and recommendations: an exit plan needs to be in place following an institutional set-up upon which the responsibility of taking care of the goods and works should have been considered. Apart, the houses provided was apparently good enough in terms of quantity and quality; however, those were not designed and constructed with varieties that could address the need of different sizes of families to protect and/or feeling safe during disasters.

9.13 পিরোজপুর জেলার ৪টি শিক্ষা প্রতিষ্ঠান কাম সাইক্লোন সেন্টার নির্মাণ প্রকল্প implemented by LGED

Implementation Period: January 2015 to December 2018

Thematic Area 3, Project 4

Status of component-wise implementation progress (physical and financial): There was a total of Taka 1200.00 lakh approved budget for the project of which 1197.50 lakh was for civil works and 2.4 lakh was for revenue purposes (i.e., price/physical contingency and provisional sum). As per plan, there were 4 Nos. of education cum cyclone shelters constructed incurring with a total expenditure of taka 1178.21 lakh. Therefore, 100% project target was achieved.

Status of achieving project objectives: the project objective was to provide 4 (four) safe shelters in different locations for local people including their livestock during cyclone and tidal surge, and accordingly the objective was fully (100%) achieved.

Tendering and procurement of planned works and goods was done according to the PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: The PCR refers to the status that O&M of the project was to be undertaken by LGED itself. However, the evaluation findings suggest that inclusive attention to be paid to undertake appropriate maintenance of the facilities provided.

Quality and quantity of the works under the project was accomplished as per design and specifications approved by the project and the BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: Original period as proposed for the project to be completed in between January 2015 to June 2017, which had been revised twice. Firstly, the revised period was from January 2015 to December 2017 and then in the third term, the period was revised, and it was from January 2015 to December 2018. The causes of the delays or repetitive revision of the project period were reportedly due to land purchase and developing low lying areas for construction of the shelters.

Relevance and effectiveness of the project: the project design and implementation were 100% relevant and effective, as reported both by the project and the local communities.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping or duplication was found.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: No exit plan formulated and/or executed.

Socio-economic impacts of the project interventions: reportedly, the impacts that were created including people of the project areas got strong and beautiful school building where parents are encouraged in sending their children into school. The evaluation finds that the construction of shelters relieved local people from anxieties of taking shelter during natural disasters.

Sustainability of the project and its activities: the PCR refers to the statement that the shelters built will be under routine maintenance programme of the LGED, and therefore, the project activities would be sustained.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: The project component is directly related with 'infrastructure' which will ensure local people to mitigate loss/sufferings and reduce vulnerability to disasters.

Key issues identified and recommendations: absence of an exit plan and/or locally established institutional mechanism will decline the possibility of proper maintenance and sustainability of the activities of the project.

9.14 চট্টগ্রাম জেলার বিভিন্ন উপজেলায় কর্ণফুলী, হালদা, ইছামতি নদী ও শিলক খাল এবং ইহাদের শাখা নদীর বিভিন্ন ভাঙ্গন কবলিত অংশে প্রতিরক্ষামূলক অবকাঠামো নির্মাণ প্রকল্প **implemented by BWDB**

Implementation Period: July 2010 to June 2014

Thematic Area 3, Project 5

Status of component-wise implementation progress (physical and financial): a total of taka 1997.38 lakh was approved against the original budget proposed taka 1999.50 lakh, and of which taka 1970.25 lakh spent for protective works (a total of 1970.25 km against the target of 1972.38 km) including 1 No. regulator (3 vent, 1.50m x 1.50m) and taka 6.83 lakh spent against 12.00 lakh planned for revenue purpose as lumpsum.

Status of achieving project objectives:

No.	Objectives	Status of implementation	Remarks, if any
1	Protect all type of installations in the project area like homestead, school, college, road, ghat, mosque, temple etc. from flood water	All type of installations as targeted were under safety from floodwater	
2	Improvement of adoption capability for risk factors from climate change	Adaptation capability has been improved	
3	Sustainable environmental improvement	Achieved	
4	Socioeconomic development of local people	Increasingly developed	
5	Boosting of agricultural productivity by the provision of alternative irrigation facilities	Agricultural productivity is boosted	

Tendering and procurement of 17 works packages of riverbank protective works and 1 No. Regulator were done by the project as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: Remains under responsibility of BWDB; however, the evaluation findings suggest that the maintenance works needed to be regularly and appropriately monitored and maintained.

The quality and quantity of the infrastructure works of the project were completed as per design and specifications approved by the project and BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the project was originally proposed to be completed with July 2010 to June 2012, then it was revised once to be implemented from July 2010 to June 2014. As such, the implementation was done without any further delays.

Relevance and effectiveness of the project: the project was highly relevant to the local context and community demand, and effectiveness of the project activities was highly satisfactory.

Overlapping and/or duplication of similar other projects in the same areas: None was identified.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: no such explicit exit plan formulated and/or executed for the project, and even an institutional set up established.

Socio-economic impacts of the project interventions: the successful completion of the project ensures protection of local installations as specified in the objectives from flood water, helps people to get relaxed or free of anxieties from the natural calamities, increases opportunities of alternative irrigation and increased crop productivity, among others.

Sustainability of the project and its activities: the PCR refers to a comment that the project needs regular O&M activities; however, it did not mention how to do it. Practically, most of the infrastructure that was designed and constructed left out without appropriate and routine maintenance; therefore, the chance of sustainability has been declined to a greater extent.

Comments on how the project design and its impacts relate to the thematic areas of the BCSSAP 2009: the project activities are directly related with 'infrastructure' to provide supports to local people increasing their capability of withstanding natural disasters like flood, cyclone and tidal surge, etc.

Key issues identified and recommendations: the absence of an exit plan and the 'sustainability' of the project activities are main issues. These are structural constraints of the BCCT financed project.

9.15 চট্টগ্রাম জেলার মিরেশ্বরই উপজেলার উপকূলবর্তী এলাকায় সেচ ও যোগাযোগ ব্যবস্থার উন্নয়ন এবং মুহুরী এক্রিটেড এলাকায় সিডিএসপি বেড়ীবাধ উন্নীতকরণ প্রকল্প implemented by BWDB

Implementation Period: March 2011 to December 2015

Thematic Area 3, Project 6

Status of component-wise implementation progress (physical and financial): total originally approved budget of the project was Taka 1756.52 lakh and spent Taka 1737.53 lakh, and there was no cost over-run happened. Component wise Tk. 317.80 lakh was budgeted for re-excavation of 21 km khal against what taka 313.23 lakh was spent; 638.32 lakh was budgeted for 3 Nos. of Regulator construction against which 627.97 lakh was spent, taka 375.00 lakh was budgeted for repair of 11.5km CDSP embankment against which 371.04 lakh was spent, and taka 425.40 lakh was budgeted for 0.5 km riverbank protective work against which 425.29 lakh was spent.

Status of achieving project objectives: Construction of 3 Nos. sluice regulator and 21 km canal re-excavation in the hilly areas contributed towards irrigation facilities into 1500 ha lands during dry season. Additionally, repair of 11.5km CDSP embankment and 0.5km riverbank protective work have resulted in flood control, riverbank protection and transportation facility improvement across the Muhuri accreted areas of Feni River. These have proved the project objectives to be fully achieved.

Tendering and procurement: there were 10 (ten) packages of works and services tendered and procured for the project fully complying with the PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: The PCR refers to the status that the O&M of the project will be undertaken as per rules and guideline of BWDB. However, the evaluation findings reveal that the maintenance of project works needs further and stronger attention.

The quality and quantity of the project work were done as per design and specifications approved by BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: Original period of project was proposed to be from March 2011 to June 2012, which was revised once as to be from March 2011 to

December 2015. The project was implemented within the stipulated timeframe without any further delay.

The relevance and effectiveness of the project was highly relevant to the local context and community demand, and the activities undertaken were 100% effective in the opinion of the local people.

Overlapping and/or duplication of similar other projects in the same areas: None was found.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: None formulated and/or executed. The responsibility of maintenance of the project works is vested with BWDB itself.

Socio-economic impacts of the project interventions: the project has resulted in cultivating into 1500 ha land and therefore increasing crop productivity, and in protecting Muhuri accreted areas from bank erosion and flood control including improvement in the local transportation.

Sustainability of the project and its activities: sustainability depends on the continuation of undertaking similar projects as well as appropriate maintenance of the physical works.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project is directly related with 'infrastructure' and indirectly related with 'food security and social protection' theme and disaster risk reduction theme of the strategy.

Key issues identified and recommendations: exit plans and sustainability of the project activities and process needs to be addressed properly.

9.16 খুলনা জেলার বুপসা উপজেলার অন্তর্গত রামনগর-রহিমনগর এলাকায় বাধি পুনঃনির্মাণ ও নদীতীর সংরক্ষণ প্রকল্প **implemented by BWDB**

Implementation Period: December 2012 to June 2016

Thematic Area 3, Project 7

Status of component-wise implementation progress (physical and financial): the original approved budget of the project was unchanged, the amount of which was Taka 1811.04 lakh. Against the budget Taka 1619.03 lakh was spent having no cost over-run happened. In detail, Taka 1218.65 lakh was spent for 76km protective work (CCTF) against the budgeted amount of 1373.38 lakh, and Taka 400.38 lakh was spent for O&M of the protective work (24km) against the budgeted amount of taka 434.65 lakh.

Status of achieving project objectives: there were four specific objectives of the project as (i) protecting the project area from river erosion and salinity, (ii) growing agricultural production, (iii) confirmation of social security, and (iv) employment generation. According to the project report 100% of the project objectives were achieved.

Tendering and procurement: project goods and work (3 packages) were done as per PPA 2006/PPR 2008.

The status of procured goods/works/services and its maintenance remains under the responsibility of BWDB. The evaluation findings suggest that the maintenance of the works needs to be regularly done and further strengthened.

Quality and quantity of the works of the project was done as per design and specifications approved by BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original project period approved was from December 2012 to June 2014, and which was revised once to be from December 2012 to June 2016. The project was implemented within the timeframe.

Relevance and effectiveness of the project: the relevance was highly appropriate, and the effectiveness was 100% as reported by the target beneficiaries.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping or duplication found.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: No such plan formulated and/or executed; moreover, no institutional set up established.

Socio-economic impacts of the project interventions: protective works were useful to prevent riverbank erosion and intrusion of salinity into the project area. The overall impacts as reported by community people include (a) increased food grain production, (b) food security enhanced, (c) various economic activities like employment, businesses were made possible due to flood protection and alternative irrigation opportunities created.

Sustainability of the project and its activities: the PCR refers to nothing; however, the evaluation findings reveal that this needed to be taken seriously.

Comments on how the project design and its impacts relate to the thematic areas of the BCSSAP 2009: the project objectives and activities are related to 'food security and social protection' as well as 'infrastructure' themes of the BCSSAP.

Key issues identified and recommendations: as like others, absence of an exit plan and addressing sustainability issues were generated from the weak structural design of the project.

9.17 Protection of Ulania and Gobindapur area from the erosion of Meghna River in Mehendiganj Upazila under Barishal District implemented by BWDB

Implementation Period: February 2013 to June 2015

Thematic Area 3, Project 8

Status of component-wise implementation progress (physical and financial): the original budget as proposed was Taka 1999.90 lakh and approved the same without revision. The riverbank protective work component was planned to be for 875m with the estimated cost of Taka 1984.89 lakh and which was completed 100% with the same cost. In addition, it costs Taka 8.5 lakh for the revenue component (100% physically and financially).

Status of achieving project objectives: the main objective of the project was to protect Ulania Bandar, Bazar, High School, Girls School, and adjacent area of Mehendiganj Upazila of Barishal from the erosion of Meghna River by construction of 875.0 km bank revetment work along the bank of Meghna River. The planned objective was reportedly fully (100%) achieved without any further delay.

Tendering and procurement: the only riverbank protective works and services for 875.0m were reportedly tendered and procured as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: The PCR refers to the point that the O&M will be undertaken as per BWDB rules and regulations. The evaluation findings suggest BWDB to be more attentive in undertaking routine maintenance of the works done.

Quality and quantity of the work was done as per design and specifications proposed by BWDB and approved by BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The project was originally proposed to be implemented during February 2013 to June 2014, which was revised once as to be from February 2013 to June 2015. Therefore, the time over run of the project was 70% (% of original implementation period), and it was completed within that timeframe.

Relevance and effectiveness of the project: as per community and other stakeholders' views and opinions the project undertaken was highly relevant to the local demand and context, and the works were 100% effective for the people of the project areas.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication found.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: no such exit plan formulated and executed, and/or local institutional set up established for looking after the project works to keep well-maintained.

Socio-economic impacts of the project interventions: the PCR tells that socioeconomic activity development was going on; whereas the evaluation findings reveal that the project helps local people to protect from flooding and river erosion, waterlogging drainage, cultivable lands and increased agricultural production. These have impacted tangible development in increased earning and family welfare.

Sustainability of the project and its activities: Needs regular O&M activities to be undertaken.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project has contributed to enhance food security, social protection, and health through livelihood development of vulnerable socioeconomic groups (including women), and infrastructure by planning, designing and construction of riverbank protective works from river erosion.

Key issues identified and recommendations: exit plan like in other projects might have been explicitly helpful in ensuring sustainability of the project alongside O&M activities.

9.18 মুন্সিগঞ্জ জেলার লৌহজং উপজেলার পশ্চিম গাঁওদিয়া জামে মসজিদ হতে বেজগাঁও পূজামন্দির ভায়া খানকা শরীফ পর্যন্ত সড়ক কাম বেড়িবাঁধ নির্মাণ প্রকল্প **implemented by LGED**

Implementation Period: July 2013 to December 2016

Thematic Area 4, Project 9

Status of component-wise implementation progress (physical and financial): total proposed and approved budget of the project was Taka 200.0 lakh for construction of 2.15 km road cum embankment, and works were done 100% with the less cost of Taka 199.27 lakh.

Status of achieving project objectives: the project objectives were 100% achieved by constructing 2.15 km road cum embankment works.

Tendering and procurement: the procurement of works and goods for the project was done per PPA 2006/PPR 2008 (invitation date 27.22.13, contract signing date 06.02.2014 and completion date was 25.03.2015)

Status of procured goods/works/services and its maintenance: facilities developed were supposed to be maintained by LGED itself out of the revenue budget provided to it by the GOB. Physically this appears to be yet well-maintained, though some repairs are found demanding.

The quality and quantity of the works of the project was ensured as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original proposed implementation period was from July 2013 to March 2015, which was revised from March 2013 to December 2016. In contrast, the project (physical works) was completed by February 2015, time extension was needed mainly for financial settlement.

Relevance and effectiveness of the project: the relevance was moderately high to the local context and people's demand. While the project activities were highly effective in terms of its socioeconomic outcome.

Overlapping and/or duplication of similar other projects in the same areas: None happened/found.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: no exit plan formulated and executed (LGED itself takes care).

Socio-economic impacts of the project interventions: through the implementation of the project income of the rural households have increased 12%, and around 1.5 million people were benefited from the project (ref. PCR). The road cum embankment constructed was climate resilient as well.

Sustainability of the project and its activities: it was apprehended that the facilities developed will be sustainable unless there is a major erosion in the nearby Padma River (which is very unlikely).

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project facilities were directly related with 'infrastructure' theme, which will help local people saving from river flooding, damaging crops, improving food security and sustain income restoration. Thus, the project facilities were expected to help people to adapt to the climate change impacts.

Key issues identified and recommendations: only the absence of an exit plan may cause unexpected irregularities in undertaking O&M activities, and therefore, underpin importance of addressing the issue of sustainability of project benefits.

9.19 জলবায়ু পরিবর্তনের ঝুঁকি নিরসনকল্পে নোয়াখালী জেলার সুবর্ণচর ও হাতিয়া উপজেলার গাবতলী স্লুইস সংলগ্ন মেঘনা নদীর তীর সংরক্ষণ প্রকল্প [implemented by BWDB](#)

Implementation Period: April 2013 to June 2015

Thematic Area 3, Project 10

Status of component-wise implementation progress (physical and financial): the original budget proposed was Taka 598.78 lakh and it remains the same (unrevised) until the completion of activities. The first package of 0.423 km riverbank protection was completed with Taka 295.85 lakh against the budgeted amount 296.05 lakh, and the second package of 0.430 km bank protection work was done with Taka 300.90 lakh against the budgeted amount of 300.95 lakh. Total capital expenditure was 596.75 lakh against the budget of 597.00 lakh; while for revenue purpose Taka 1.78 lakh was spent as it was planned.

Status of achieving project objectives were as below:

No.	Objectives	Actual achievement	Reasons for shortfall if any
1	Protect all type of installations in the project area like homestead, school, madrasa, road, ghat, bazar, mosque, temple, etc. from flood water	Fully achieved by protecting all kind of installations e.g., homesteads, school, madrasas, road, ghat, bazar, mosque, temple etc. from flood water	NA
2	Improvement of adaptation capacity for risk factors from climate change	Risk factors arising from climate change are declined, adaptation capacity improved	NA
3	Sustainable environmental improvement	Sustainability of environment is improved	NA
4	Socio-economic development of local people	Local people are engaged as workers, suppliers; and hence, socioeconomic condition improved	NA
5	Boosting of agricultural production	Production of agriculture has been boosted up	NA

Tendering and procurement: two packages under the project were tendered and procured as capital component and there was some revenue budget spent as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: O&M programme was supposed to be arranged by BWDB from its revenue budget. The evaluation findings suggest more attention needs to be paid.

The quality and quantity of the works of the project component i.e., works and goods were ensured as per design and specifications approved by BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the project period was initially proposed to be from April 2013 to June 2014, and then it was revised once as to be from April 2013 to June 2015. The time over run was 80%. The project was implemented within the timeframe stipulated without any further delay.

Relevance and effectiveness of the project: almost 100% of the local community people opined that the relevance of the project was high to the local context and community demand. While the effectiveness of the project activities was moderately satisfactory, there were more development projects needed to address the full desire of the community people.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication of the project was found in the evaluation.

Studies conducted, if any, under the project: No such studies were conducted.

Exit plan of the project: typically, like other government projects, this project was also lacking structural constraints in putting in place an exit plan for the greater interest of the project activities to be institutionalized and sustained.

Socio-economic impacts of the project interventions: at post project condition due to reduction of riverbank erosion and flood hazards investment was less needed and

productivity in all spheres of crops was increased. Due to the increase in crop production financial security was apparently increased through construction of growth centers, educational institutions, health and family planning centers and many more were established.

Sustainability of the project and its activities: due to an absence of institutional mechanism were put in place and those remain functional, the evaluation finds the sustainability of the project very difficult to assess; rather, the possibility of sustaining indicates to be narrowed down.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was directly linked with 'infrastructure' theme as well as part of 'food security, social protection, and health. This was attempted to ensure that protection of Meghna riverbank to protect areas from tidal surge as well as negative impact of sea level rise. Various economic activities were accelerated and saline intrusion into groundwater prevented, agricultural productivity increased.

Key issues identified and recommendations: sustainability of project activities and their impacts created are somewhat threatened due to an absence of an exit and sustainability plan.

9.20 ঢাকা জেলার কেরানীগঞ্জ উপজেলাধীন শূভাঢ্যা হতে আগানগর পর্যন্ত শূভাঢ্যা খাল পুনঃখনন ও তীর সংরক্ষণমূলক কাজ বাস্তবায়নের মাধ্যমে পরিবেশের ভারসাম্য রক্ষাকরণ প্রকল্প implemented by BWDB

Implementation Period: July 2013 to June 2017

Thematic Area 3, Project 11

Status of component-wise implementation progress (physical and financial): the original budget of the proposal was Taka 1000.00 lakh and that remains unchanged. For revenue purposes a total of Taka 22.50 lakh spent against the same amount budgeted, and for the capital purposes 847.46 lakh was spent against the budgeted amount Taka 977.50 lakh. In total, taka 869.96 lakh was spent against the budget Taka 1000.00 lakh.

Status of achieving project objectives:

No.	Objectives	Status of achievement	Remarks, any
1	Overall environmental balance and development through establishment of river flow by re-excavation of Shubhadya Canal	River flow established through re-excavation of Shubhadya Canal	NA
2	Freeing canal from illegal occupation	Canal has been freed of illegal occupation	NA
3	Improvement of irrigation facility and removing waterlogging	Irrigation facilities improved and waterlogging problem removed	NA
4	Prevention of both side canal bank erosion of canal through bank protective works	Canal bank erosion has been possible due to bank protective works	NA
5	Socioeconomic development through employment generation in the project areas	Socioeconomic condition of local people developed	NA

Tendering and procurement of the project works, goods and services was done as per PPA 2006/PPR 2008. Those included revenue from five components e.g., petrol and lubricant of vehicles, printing and publications, stationeries, organizing seminar and conference for

public awareness and motivation, and survey investigation. While the capital components include three items such (a) re-excavation of 3.117 km Subhadya Canal, (b) 2.026 km slope protection works, and (c) 0.150 km & 0.518 km repair works of retaining wall.

Status of procured goods/works/services and its maintenance: the evaluation finds relatively poor maintenance of the project activities, and reportedly that had been because of the shortage of revenue fund availability alongside the lack of engagement of local people in the maintenance activities.

The quality and quantity of the work was done as per design and specifications approved; however, the assessment of quality works seems to be very difficult in the evaluation conducted after such a long period.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original project period proposed to be from July 2013 to June 2014 which was revised once as to be from July 2013 to June 2017, with a three-year extension. The reason for such a long extension and time distortion at various stages of project planning and implementation was due to process-oriented complexity of the proposal submission and its approval, and to some extent the absence of a proper pre-proposal consultation with the needs of local people.

Relevance and effectiveness of the project: the relevance of the project planning, design and implementation was highly fitting to the local context and people's demand; however, effectiveness of the activities appeared to be less than those were expected by the communities.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication of the project was found in the evaluation.

Studies conducted, if any, under the project: only an investigation survey was conducted.

Exit plan of the project: there was no explicit exit plan formulated and executed, and therefore community level institutional set-up established to look after the maintenance and sustainability issues.

Socio-economic impacts of the project interventions: the PCR refers to a fact that socioeconomic activity development was in progress, but no clear areas of development were mentioned. The evaluation findings reveal the situation that the Canal re-excavation was inadequately done and that had resulted in the water flow of the canal is not sufficient. This leaves local people to a broader extent deprived of benefiting much from the project as was expected.

Sustainability of the project and its activities: due to absence of an exit plan and institutional mechanism put in place at functional stage, the issue of sustainability remains visible.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project implemented was directly related to 'infrastructure' theme and it serves local people with multifold of benefits. The benefits include enhanced irrigation facilities, improved navigation system, removal of waterlogging problems, among others.

Key issues identified and recommendations: routine/regular maintenance of the works as well as the sustainability of the project activities and their impacts demand more and high attention to produce/deliver expected outcomes.

9.21 জলবায়ু পরিবর্তনের প্রভাব হতে ভোলা সদর উপজেলার পশ্চিম ইলিশা ইউনিয়নের গাজীবাড়ি ও জাঙ্গালিয়া এলাকা রক্ষা প্রকল্প implemented by BWDB

Implementation Period: November 2015 to June 2018

Thematic Area 3, Project 12

Status of component-wise implementation progress (physical and financial): total budget of the project as proposed was Taka 499.96 lakh and the total expenditure was Taka 495.07 lakh. For a total of 0.280 km riverbank protection work with CC block was completed with Taka 493.70 lakh against the budgeted amount Taka 497.46 lakh, while a lump-sum amount (Taka 1.37 lakh) was spent for revenue purposes against the budgeted amount of Taka 2.50 lakh.

Status of achieving project objectives:

<i>No.</i>	<i>Objectives</i>	<i>Achievement status</i>	<i>Remark, any</i>
1	Riverbank protection work at Gazibari and Jangalia area in west Ilisha of Bhola Sadar Upazila	Riverbank protection at the targeted site fully completed	NA
2	Saving the project areas from erosion of the Tentulia River	The project areas were protected by the works done	NA

Tendering and procurement of the project works, goods and services was done as per PPA 2006/PPR 2008. There were two capital components of the project for which tendering, and procurement was done, those were 0.140 km (0.00 to 0.140 km) riverbank protection by CC block and sand filled geo-bag, and another 0.140 km (0.140 to 0.280 km) riverbank protection by similar materials.

Status of procured goods/works/services and its maintenance: the O&M activities were reportedly undertaken as per BWDB rules and guidelines. The evaluation finds those needing more attention and regular maintenance of the physical work.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period as proposed was from November 2015 to June 2017, which was revised once as to be from November 2015 to June 2018. While the actual implementation period was from July 2016 to June 2018, where the time over run was reportedly 30% (percent of original implementation period). The reason for the delay in the start of the project remains unknown.

Relevance and effectiveness of the project: the relevance was high to the local context; but effectiveness was moderately satisfactory to the local people.

Overlapping and/or duplication of similar other projects in the same areas: None happened.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: No exit plan was formulated and/or executed. The responsibility of O&M was vested upon BWDB itself.

Socio-economic impacts of the project interventions: due to the implementation of the project safety from riverbank erosion was increased among the people living in the project

areas and this brought remarkable socioeconomic stability and improvements of the same communities.

Sustainability of the project and its activities: The PCR refers to the evaluation findings that the project needs regular follow-up O&M activities. In addition, riverbank protective work in Tentulia River was also required to make the project sustainable.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was directly linked with ‘infrastructure’ theme, and it provides safety and protection of important installations and improvement in flood protection. It has also protected cultivable lands, increased agricultural production and sustainable environmental improvement enabling local people to withstand natural disasters.

Key issues identified and recommendations: O&M activities of the protective works need to be regularly undertaken, and a locally established institutional mechanism needs to be in place and functional to look after the project activities implemented.

9.22 টাংগাইল জেলার মির্জাপুর উপজেলাধীন হাট ফতেহপুর নামক স্থানে বংশাই নদীর তীর সংরক্ষণ কাজ বাস্তবায়ন প্রকল্প implemented by BWDB

Implementation Period: October 2012 to December 2015

Thematic Area 3, Project 13

Status of component-wise implementation progress (physical and financial): the original budget of the project was Taka 175.32 lakh which remains unchanged. The actual cost incurred was taka 175.26 lakh which is slightly less than it was budgeted. For revenue purposes the actual money spent was Taka 1.00 lakh against the same budgeted, while 174.26 lakh was spent for capital works against the budget amount Taka 175.32 lakh.

Status of achieving project objectives:

No.	Objectives	Status of achievement	Remarks
1	Implementation of riverbank protective work at certain place of Bongshai River	Protective work at Bongshai River was fully completed	NA
2	Re-sectioning of existing embankment to save the people from the damage of river erosion	Protecting damage against erosion had been achieved	NA
3	Saving nearby educational institutions, and markets by riverbank protective work	Objective was achieved fully to save nearby institutions and marketplaces	NA

Tendering and procurement of goods, works and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the evaluation finds the status of works needing further and serious attention to maintain regular O&M activities.

Quality and quantity of the works and services was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the project was originally proposed to be implemented during October 2012 to June 2014, which was revised as to be from October 2012 to December 2015. The implementation was completed by June 2014 where December 2015 was taken only for payment settlement.

Relevance and effectiveness of the project: the project design and implementation were highly appropriate to the local context, while effectiveness of the project was also moderately high against the expectation.

Overlapping and/or duplication of similar other projects in the same areas: None of such found.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: No exit plan found formulated and/or executed.

Socio-economic impacts of the project interventions: socioeconomic condition in general was developed due to project implementation by protection of important installations, improvement of flood protection and drainage, and increase of government revenue from the markets.

Sustainability of the project and its activities: Needs regular O&M activities to be institutionalized.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project is directly linked with ‘infrastructure’ theme, and it enabled local people to protect themselves from disaster risks.

Key issues identified and recommendations: there should have been an exit plan assigning responsibilities of O&M of the works to ensure sustainability of the project.

9.23 জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় চট্টগ্রাম জেলার রাউজান উপজেলার দেওয়ানজীঘাট, মোকামিপাড়া সহ হালদা নদীর বাম তীরের বিভিন্ন এলাকায় প্রতিরক্ষামূলক প্রকল্প implemented by BWDB

Implementation Period: November 2016 to June 2019

Thematic Area 3, Project 14

Status of component-wise implementation progress (physical and financial): the gross budget of the project as proposed was Taka 497.50 lakh and actual total expenditure was Taka 474.91 lakh. The works were divided into two packages, one of which was bank protection work at Dewanjee ghat area costing Taka 227.18 lakh against the budgeted amount Taka 212.32 lakh. The second package was for constructing bank protection work at Mukamipara area costing Taka 252.66 lakh against the budgeted amount of Taka 248.05 lakh. Both components were completed (a total of 0.360 km protective works) with slightly increased costs in contrast with the amount budgeted.

Status of achieving project objectives:

No.	Objectives	Status of achievements	Remarks
1	Protect all type of installations in the project area like homestead, schools, colleges, roads, ghats, mosques, temples etc. from flood water	Targeted installations are protected by completion of the project	NA
2	Increasing adaptation capability of local people to respond to climate change induced disasters	Climate change adaptation capability is increased	NA
3	Sustainable environmental improvement	Contributed as planned	NA

4	Socioeconomic development of local communities and people	Fully achieved	NA
5	Boosting of agricultural production by providing alternative irrigation facilities	Agricultural production is boosted up	NA

Tendering and procurement of the project works, goods and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: it remains in the hands of BWDB, where the evaluation finds the maintenance works need more attention and be regularly done.

The quality and quantity of the works of the project was maintained as per design and specifications developed and approved by the project and BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original proposed period of the project was from November 2016 to June 2018 which was revised once as to be from November 2016 to June 2019. Accordingly, the project was accomplished by June 2019 with no further delay. The time over run was reportedly about 60%.

Relevance and effectiveness of the project: the relevance of the project was reportedly high to the local context and community needs. While the effectiveness was moderately satisfactory as per opinions and views of the community people.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication was found in the evaluation.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: the project had no exit plan formulated and executed, instead the afterwork maintenance remained in the hands of BWDB which was found to be lacking (inadequately done).

Socio-economic impacts of the project interventions: reportedly, the socioeconomic development of the local communities and people was increasing; however, in specific those have contributed to increased safety and security of local installations as targeted, increased irrigation facilities and agricultural production. These have resulted in local people's overall socioeconomic development along with the capability to respond to natural calamities.

Sustainability of the project and its activities: the PCR refers to a fact that the project works need regular O&M activities; however, there was no institutional set-up established to look after the requirements related to greater sustainability of the project.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project components are directly related to 'infrastructure' theme of the strategy, and additionally those addressed the community people's 'food security, social protection and health' because of the project initiative.

Key issues identified and recommendations: an institutional set-up along with exit plan should have been in place and functional to secure proper and regular O&M activities and thus the sustainability of the project.

9.24 ভান্ডারিয়া উপজেলার বাঁধ কাম সড়কের স্লোপ প্রটেকশনসহ উন্নয়ন প্রকল্প implemented by LGED
Implementation Period: April 2014 to June 2015

Thematic Area 3, Project 15

Status of component-wise implementation progress (physical and financial): the total cost of the project as proposed was Taka 996.91 lakh and that remains the same up to the accomplishment of the project. However, the actual gross expenditure of the project was Taka 993.34 lakh assigning a cost overrun of about 99.6% (% of original cost). Component wise Taka 164.5 lakh was spent for improvement of 2.96 km embankment cum road against the budgeted amount of Taka 166.0 lakh, and Taka 828.43 lakh was spent for 21,210 sqm slope protection work against the set budget of Taka 832.0 lakh.

Status of achieving project objectives: Nothing mentioned about the status of achieving the project objectives in the PCR; however, the project had completed successfully achieved all its set objectives.

Tendering and procurement of the project works, goods and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the PCR refers to nothing about the status; however, the evaluation finds all the physical works done by the project remained moderately maintained requiring further attention of LGED.

The quality and quantity of the work of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original proposed period of the project was from April 2014 to June 2015, and which remain unchanged till the implementation ends. The project was implemented within the timeframe as it was planned.

Relevance and effectiveness of the project: highly relevant and effective in terms of protection of riverbank erosion and safety of local communities and their important installations.

Overlapping and/or duplication of similar other projects in the same areas: None found.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: No exit plan found formulated and/or executed by the project.

Socio-economic impacts of the project interventions: the project supports local communities to withstand natural disasters like river erosion and its diverse effects to their livelihoods and agricultural/socioeconomic development.

Sustainability of the project and its activities: Uncertain.

Comments on how the project design and its impacts relate to the thematic areas of the BCSSAP 2009: the project is directly linked with 'infrastructure' theme, and it contributed to enabling local people to withstand natural disasters.

Key issues identified and recommendations: O&M and sustainability of the project should have been stressed in the project plan and implementation following putting in place a practical exit plan.

9.25 জলবায়ু পরিবর্তনের প্রভাবে উপকূলীয় অঞ্চলে ক্ষতিগ্রস্ত সড়ক নির্মাণ/পুনঃনির্মাণ/পুনর্বাসন প্রকল্প (ভোলা জেলা)
implemented by LGED

Implementation Period: January 2016 to June 2017

Thematic Area 3, Project 16

Status of component-wise implementation progress (physical and financial): the total budget as proposed and approved was Taka 1000.00 lakh. Component wise Tk. 5.00 lakh and Tk. 995.00 lakh were estimated expenses respectively for the revenue and capital purposes. The capital item of the project was to rehabilitate 26.15 km rural paved roads.

Status of achieving project objectives: fully achieved.

Tendering and procurement of the project works, goods and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the project was completed by LGED and O&M responsibility lies with them. The evaluation finds O&M activities to be regularly and adequately undertaken.

The quality and quantity of the work of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period proposed from January 2016 to June 2017, and which remains unrevised. The project was implemented within the timeframe without any delay.

Relevance and effectiveness of the project: highly relevant effective as per public opinion and project report.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping/duplication found.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: No explicit plan formulated and executed.

Socio-economic impacts of the project interventions: the reconstruction of rural paved roads provide immense transportation opportunities for the local people that helps them ease carrying and marketing of agricultural products.

Sustainability of the project and its activities: LGED, the implementing agency, took responsibility for O&M, other than that it was very difficult to measure the sustainability of rural roads.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was undertaken within and linked with infrastructure theme that includes improvement and construction of road and flood embankment.

Key issues identified and recommendations: exit plan and mechanism to ensure sustainability of the project should have been in place and operational.

9.26 ভোলা জেলার সদর উপরজলাধীন জনবায়ু পরিবর্তন সহিষ্ণু সড়ক নির্মাণ প্রকল্প implemented by LGED
Implementation Period: December 2015 to June 2017

Thematic Area 3, Project 17

Status of component-wise implementation progress (physical and financial): the total budget as proposed and finally approved, without further revision, amounting to Taka 300.00 lakh. From among the budget, Taka 6.00 lakh was spent for revenue and taka 293.83 lakh for capital (i.e., improvement of rural roads) purposes against the budgeted amounts respectively taka 6.00 lakh and 294.00 lakh. 100% works are done.

Status of achieving project objectives: as per project objectives the project ensured (a) improvement of rural road connectivity, (b) generation of employment opportunity, and (c) provides sustainable livelihood for rural people of the project areas.

Tendering and procurement of project goods, works, and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: nothing mentioned about this in the PCR; however, the evaluation finds O&M activities of the roads need to be done regularly and adequately.

The quality and quantity of the works of the project components was maintained as per design and specifications approved by BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period as proposed was from December 2015 to June 2017, and it remains unchanged. The project was implemented within the stipulated timeframe.

Relevance and effectiveness of the project reportedly was very high as per people's opinion.

Overlapping and/or duplication of similar other projects in the same areas: None found like this.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: None formulated and executed under the project.

Socio-economic impacts of the project interventions: the project ensures connectivity for safe movement during the period of normal and natural disasters, increases socioeconomic activity, creates employment opportunities, and ensures sustainable rural services.

Sustainability of the project and its activities: the responsibility of O&M activity is vested upon LGED itself; however, the works need proper and adequate attention to be sustained.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was undertaken within the theme of infrastructure, and it fosters sustainable livelihood of vulnerable people, improves climate proof connectivity, and provides opportunities for agricultural production increase and marketing in the rural areas.

Key issues identified and recommendations: an exit plan with assigning clear O&M responsibilities should have been in place and operational.

**9.27 জলবায়ু পরিবর্তনজনিত ঝুঁকি মোকাবেলার জন্য মঠবাড়িয়া পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প
implemented by Mothbaria Pourashava, Pirojpur
Implementation Period: April 2014 to March 2017**

Thematic Area 3, Project 18

Status of component-wise implementation progress (physical and financial): the total cost of the project, as proposed and approved without any changes, was Taka 800.00 lakh. Component wise Taka 412.85 lakh was spent for construction of 2265m RCC drain against the allocated budget Taka 414.40 lakh, Taka 337.22 lakh was spent for re-excavation of 21,146m canal against the budgeted amount of Taka 338.67 lakh, and Taka 46.93 lakh was spent for distribution of 500 energy saving bulb and 333 span connection of wire against the same budget.

Status of achieving project objectives: 100% objectives achieved by construction of 2265m RCC drains, re-excavation of 21,146m canal to remove water logging problem of the Poura area, while in addition a bulk of energy saving bulbs and connecting cables were distributed as per plan.

Tendering and procurement of project works, goods, and services in 31 packages was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: O&M of the project works was done by Mathbaria Pourashava; while the evaluation finds there is more attention needed for the purpose.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the proposed original period of the project was from April 2014 to March 2016 which was revised once as to be from April 2014 to March 2017. While the implementation of the project was completed earlier by October 2016.

Relevance and effectiveness of the project was reportedly very high to the local context and demand.

Overlapping and/or duplication of similar other projects in the same areas: None found; however, the Pourashava also constructed similar works in addition to this project.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: No plan found either formulated and/or executed.

Socio-economic impacts of the project interventions: Progressive socioeconomic impacts of the drainage were found. The direct impacts were seen mostly economic and reflected in enhanced income of the Pouradewellers, while indirect impacts are related to social and cultural aspects of lives.

Sustainability of the project and its activities: O&M responsibility was vested upon the Pourashava.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project covers two different themes of the strategy i.e., infrastructure and low carbon emission. The project has resulted in a decrease of considerable amount of harmful carbon dioxide gas emission as well as providing solution of waterlogging problems for the time being.

Key issues identified and recommendations: an exit plan and O&M activities should have been institutionalized through joint participation of the Pourashava and its dwellers.

9.28 জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কমলগঞ্জ পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন
শীর্ষক প্রকল্প implemented by **Komolganj Pourashava, Moulvibazar**
Implementation Period: March 2015 to December 2016

Thematic Area 3, Project 19

Status of component-wise implementation progress (physical and financial): the total proposed and approved budget of the project was Taka 200.00 lakh. Component wise Taka 3.05 lakh was spent for the revenue purpose as it was allocated, and Taka 196.95 lakh was spent for 2.056 km drainage in 14 different locations under the Pourashava against the same amount of budget. No budget-expenditure variation was found.

Status of achieving project objectives: the project objective was 100% achieved by mitigating waterlogging problems of the Pourashava area through construction of 2.056 km RCC drains.

Tendering and procurement of 14 packages of project works, goods, and services as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the Pourashava holds the O&M responsibility; however, the evaluation findings suggest that the maintenance activity needs to be strengthened and regular.

Quality and quantity of the works of the project reportedly maintained as per approved design and specifications.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the project period was from March 2015 to December 2016 with having no further revision, and the completion of the project works done by the timeframe.

Relevance and effectiveness of the project: highly relevant and effective as per public opinion.

Overlapping and/or duplication of similar other projects in the same areas: None happened.

Exit plan of the project: no such plans found either formulated or executed.

Socio-economic impacts of the project interventions: Progressive socioeconomic impacts of the drainage were found. The direct impacts were seen mostly economic and reflected in enhanced income of the Pura dwellers, while indirect impacts are related to social and cultural aspects of lives.

Sustainability of the project and its activities: Uncertain, however, O&M activities require to be stronger and regularly undertaken.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project covers thematic area of infrastructure which provides a waterlogging free environment for the Pourashava dwellers.

Key issues identified and recommendations: an exit plan devising regular and adequate O&M services should be in place and functional.

9.29 জলবায়ু পরিবর্তন জনিত প্রভাব মোকাবেলার জন্য কালিয়াকৈর পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প implemented by Kaliakoir Pourashava, Gazipur
Implementation Period: October 2016 to June 2018

Thematic Area 3, Project 20

Status of component-wise implementation progress (physical and financial): The original budget of the project as proposed was Taka 200.00 lakh and which remains non-revised. The project works of 1365 m drainage were undertaken with the cost of Taka 200.00 lakh against the similar amount of budget by dividing them into nine different packages.

Status of achieving project objectives: as per project objectives (1) water logging problem was removed, (2) people were saved from waterborne diseases, (3) environment improved, and (4) reduced emission of methane gas from the waste sources.

Tendering and procurement of the project works, goods, and services in nine different packages was done as per PPA 2006/PPR 2008. The first tender invitation was done date 03.07.2027 and the final works completed dated 30.06.2018.

Status of procured goods/works/services and its maintenance: The Pourashava itself is held responsible for the O&M of the project at its own cost and by existing set-up, and reportedly no extra fund will be required for this purpose. However, the evaluation finds all the O&M work needs to be done on an adequate and regular basis.

Quality and quantity of the work was maintained as per design and specifications approved by the project.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility for the delay: the project was implemented within the set timeframe without any further delay.

Relevance and effectiveness of the project: the PCR supports the public opinion collected as the project was highly relevant to the local context and demand, as well as effectively delivered the favorable town environment within which people live in.

Overlapping and/or duplication of similar other projects in the same areas: None happened alike.

Studies conducted, if any, under the project: No studies conducted under the project.

Exit plan of the project: no such exit plan formulated and executed for the project sustainability.

Socio-economic impacts of the project interventions: due to improvement of drainage structures, communication system has been development, environment improved, water congestion has been removed, and as a result, there was a positive impact on socioeconomic activities.

Sustainability of the project and its activities: Can't be measured; however, this was found to be related with the performance of the Pourashava through undertaking O&M activities.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was directly linked with infrastructure theme of the strategy, and it helps reduce environmental impacts on the lives and livelihoods of the town dwellers.

Key issues identified and recommendations: the absence of an exit plan and the lack of institutional mechanism for the sustainability of the project should have been addressed properly.

9.30 রাজশাহী সিটি কর্পোরেশনের ২৮নং ওয়ার্ডের জলাবদ্ধতা নিরসনে অবকাঠামো উন্নয়ন প্রকল্প implemented by Rajshahi City Corporation (RCC)

Implementation Period: March 2016 to June 2018

Thematic Area 3, Project 21

Status of component-wise implementation progress (physical and financial): the original proposed budget was Taka 200.00 lakh, and which was revised as to be Taka 199.97 lakh (cost over run -0.03 (0.015%). The was 4358.75 meters against the target of 5011.70 meters RCC drains constructed with the cost of Taka 199.97 lakh against the budgeted amount of Taka 200.00 lakh.

Status of achieving project objectives: the objectives were to (1) alleviate waterlogging problem due to climate change, (2) improve the environmental aspects of the people of RCC, (3) proper drainage of flood/rainwater, and (4) improved the human health and productivity of the living environments, and all of those were fully achieved.

Tendering and procurement of the project works, goods and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: RCC has taken a programme for the effective and sound maintenance of the project; however, the evaluation finds those need to be strengthened and regularly maintained.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the project was originally proposed to be implemented during March 2016 to December 2017, which was revised once as to be from March 2016 to June 2018 with a time over run of about 27%. Accordingly, the project was implemented on time.

Relevance and effectiveness of the project: the project was highly relevant and effective as per public opinion as well as the project report.

Overlapping and/or duplication of similar other projects in the same areas: None happened. **Studies conducted, if any, under the project:** No studies conducted.

Exit plan of the project: no such exit plan formulated and executed in the project.

Socio-economic impacts of the project interventions: the improved drainage has established an effective drainage network system within the city. Improvement of the drainage management system has improved the city productivity and that contributed to socioeconomic development of the city dwellers.

Sustainability of the project and its activities: depend on the O&M activities which were found undertaking; however, the issue of adequacy is yet to be addressed.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was undertaken under the theme of 'infrastructure' and which relates to the environmental development of the city dwellers.

Key issues identified and recommendations: an exit plan and wherein the issue of sustainability should have been addressed and kept functioning.

9.31 লালমোহন পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প (২য়পর্যায়) implemented by Lalmohon Pourashava, Bhola

Implementation Period: June 2016 to December 2017

Thematic Area 3, Project 22

Status of component-wise implementation progress (physical and financial): the overall project budget as proposed was Taka 500.00 lakh and it was not revised. While the actual expenditure was Taka 498.96817 lakh. The tender contract amount was for Taka 499.7474 lakh including Tax and VAT. The works include 343 m RCC drain costing taka 4.83 lakh against the budget Taka 49.85 lakh, 800 m canal digging with costing taka 198.61 lakh against the budget 199.36 lakh, 110 m khalpar protection at graveyard with costing taka 10.81 lakh against the budget taka 10.95 lakh, 212 m RCC footpath construction at Shishu Park with Taka 138.79 lakh against the budget 138.86 lakh, and 135 m Shishu Park retaining wall at the cost of Tk. 100.91 lakh against the budget 100.98 lakh.

Status of achieving project objectives: the main objectives were to mitigate waterlogging problem to tackle climate change impact by constructing a total of 343 m RCC drain, 800 m canal digging, protection work of graveyard and prevent land sliding from khal, and constructing footpath and retaining wall of Poura Shishu Park, all of which were achieved fully.

Tendering and procurement of project works, goods and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the evaluation finds the construction works done by the Pourashava requires regular O&M, and due to lack of proper O&M parts of the works had been distorted.

The quality and quantity of the works of the project was reportedly maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original project period as proposed was from June 2016 to December 2017, and later revised as to be from Jun 2016 to December 2018. Accordingly, the project was implemented within the timeframe without any delay.

Relevance and effectiveness of the project: highly relevant and effective to the local context and public demand

Overlapping and/or duplication of similar other projects in the same areas: None happened alike.

Studies conducted, if any, under the project: No studies conducted under the project

Exit plan of the project: No such plan found formulated and/or executed.

Socio-economic impacts of the project interventions: the drainage system has contributed to reduce environmental degradation, while other works had impacted positively by providing protection of land sliding of local graveyard, scopes of smooth use of footpaths in PouraShishu Park among others.

Sustainability of the project and its activities: reportedly, the periodical O&M of the project was supposed to be undertaken by the Pourashava authority with their own capacity; however, the evaluation findings suggest that those were yet to be done in regular and adequate basis.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was directly linked with infrastructure theme and has contributed to the overall environmental improvement.

Key issues identified and recommendations: O&M issues through an institutional mechanism should have been developed, put in place and well-functioning.

9.32 জলবায়ু পরিবর্তনজনিত সৃষ্ট দুর্যোগ মোকাবেলায় ভোলা পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প implemented by Bhola Pourashava

Implementation Period: August 2014 to June 2016

Thematic Area 3, Project 23

Status of component-wise implementation progress (physical and financial): the total project budget was taka 300.00 lakh, and which was approved without any change. Component wise 100% budget was spent for capital purposes, while the cost of revenue was incurred by the Pourashava itself. Among the components, taka 280.00 lakh was spent for 1638 m drainage construction, taka 15.00 lakh for 1110 m canal digging/excavation and taka 5.00 lakh was spent for 6090 m drainage cleaning.

Status of achieving project objectives: the objectives of drainage construction, canal digging, and drainage cleaning were 100% achieved by the project.

Tendering and procurement of the project works, and services was done as per PPA 2006/PPR 2008

Status of procured goods/works/services and its maintenance: those constructed by the project require more attention for O&M activities.

Quality and quantity of the works of the project components maintained as per approved design and specifications.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period was from August 2014 to June 2016, and which remains non-revised. The implementation was completed within the timeframe.

Relevance and effectiveness of the project: Reportedly, the project design and implementation were highly relevant and effective to the local context and community demand.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: No such plan formulated and/or executed for the sustainability of the project.

Socio-economic impacts of the project interventions: the successful completion of the project had apparently contributed to the overall environmental improvement and to the reduction of GHG emission from the drainage source that provides better condition of lives and livelihoods of the town dwellers.

Sustainability of the project and its activities: Can't be measured since the project left no such institutional mechanism established and operational beyond the completion. However, the Pourashava itself looks after the O&M requirement of the project works done.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project components and objectives are found to be linked with 'infrastructure' and 'mitigation and low carbon development' themes of the strategy. The project is contributing to the environmental improvement as well as to the reduction of GHG emission from the waste source.

Key issues identified and recommendations: an exit plan and sustainability issues need to be taken care of by the implementing agency.

9.33 জলবায়ু পরিবর্তনের প্রভাব মোকাবিলায় খরাপ্রবণ ও উপকূলীয় লবণাক্ত এলাকার জন্য টেকসই ফসল ব্যবস্থা উন্নয়ন প্রকল্প implemented by BARI

Implementation Period: September 2010 to April 2017

Thematic Area 4, Project 1

Status of component-wise implementation progress (physical and financial): following an expansion of project period from 2 years to 7 years, the originally proposed gross budget was also increased from Taka 318.00 lakh to 600.00 lakh (almost doubled). Actual expenditure was 588.83509 lakh with 98.14% cost over-run (% of original cost). As per the original and revised schedule of the project cost, initially taka 318.00 lakh was approved for the first two years, then in the third and fifth year there were two rounds of cost revision done with an increased cost to taka 600.00 lakh. Component wise taka 479.12024 lakh was spent against the budget taka 488.21115 lakh for the revenue purpose (98.14%), and taka 109.71485 lakh was spent against the allocated budget taka 111.78885 lakh (98.14%) for the capital purpose. The capital budget was itemized for 192 nos. lab/office equipment and 312 nos. furniture for which the expenditure incurred.

Status of achieving project objectives:

<i>No.</i>	<i>Project objectives</i>	<i>Achievement of objectives</i>	<i>Remarks</i>
1	Collection and piloting of locally adapted different drought and saline tolerant crop varieties invented by different research institutions of the country	Several crop varieties including wheat, maize, potato, mustard, masur and mug bean are tested in 14 drought prone districts	NA
2	Testing/piloting of crop management in the farmers' field which are adaptive to different agricultural environment	Piloted/tested (researched) in 6 drought and 4 saline prone Agricultural Environment Zones (AEZs)	NA
3	Innovation of location specific crop management models prior to assessing climatic impacts on crop yield and productivity	Targeted location specific crop management models innovated	NA
4	Innovation of improved and sustainable drought and saline tolerant crop management models	Improved and sustainable drought and saline tolerant models innovated	NA
5	Provide training to farmers and other stakeholders on drought and saline tolerant crop management models	8,250 farmers, 150 scientists and agricultural officers, and 150 SAAOs and Scientific Assistants were trained.	NA
6	Massive inclusion of farmers in pilot production on innovated crop management models	413 h in drought prone and 340 h in salinity prone, a total of 753 h cultivated as pilot production	NA

Tendering and procurement of all relevant project goods and services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: reportedly all items procured for the project purpose are being used, while physical verification of any of those items couldn't be possible. More rightfully, the project was implemented as planned objectives and activities.

The quality and quantity of the works of the project was maintained as per design and specifications, as those are applicable for and to be noted that most of those did not follow any engineering design and specifications.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original project period proposed was from May 2010 to April 2012, and which was subsequently revised as to be from May 2010 to April 2017. While the project was implemented during September 2010 to April 2017. The reasons for such a huge periodical revision remain unknown (not even mentioned in the PCR).

Relevance and effectiveness of the project: the project design and activities were highly relevant to the country as well as local context, and the outcomes of the activities were 100% effective for their purpose. For example, several crop varieties and crop management models were innovated and scaled-up across the country suffering from droughts and salinity problems.

Overlapping and/or duplication of similar other projects in the same areas: None noticed alike.

Studies conducted, if any, under the project: The project itself was based on research that did not undertake any other studies within its design framework.

Exit plan of the project: No such exit plan was formulated and executed, and in other words this might not be considered relevant to the project, since the innovation and scaling up of climate tolerant crop varieties and management models among the farmers ensure the sustainability of the project activities.

Socio-economic impacts of the project interventions: Income of the farmers of the project sites increased and their lifestyle changed. The project has impacted creating a positive impact on socioeconomic activities of the farmers.

Sustainability of the project and its activities: the project outputs and outcomes were apparently as well as logically adopted by the farmers, farmers in the project sites in specific.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was linked with 'research and knowledge management' theme and by which farmers of the project sites became aware about the impact of climate change and realized to adapt with the climate change situation.

Key issues identified and recommendations: the PCCTF does not explicitly describe on how the project activities will be carried forward for the sake of its greater sustainability, which should have been based on an institutional set-up established.

9.34 বাংলাদেশের জলবায়ু ঝুঁকিপূর্ণ অঞ্চলে জন্মানোর লক্ষ্যে উপকূলীয় এলাকার কৌলি সম্পদ ব্যবহার করে লবন সহিষ্ণু ডাবলড হাঙ্গয়েড জাতের উদ্ভাবন প্রকল্প implemented by BSMRAU

Implementation Period: July 2016 to June 2019

Thematic Area 4, Project 2

Status of component-wise implementation progress (physical and financial): the total budget proposed was taka 50.00 lakh, and which remains non-revised for the implementation. Whereas the actual expenditure was taka 49.9535 lakh. Component wise taka 0.72 lakh was spent for staff (part time) payment (24 months), taka 5.00 lakh was spent for travel, taka 1.50 lakh was spent for printing and stationeries, taka 14.245 lakh spent for chemical/reagent against the budget of taka 14.28 lakh, taka 1.20 lakh was spent for honorarium of 4 MS students, taka 4.80 lakh was spent for 1 PhD student, take 0.94 lakh was spent against the budget of taka 1.00 lakh for other expenses, taka 0.70 lakh was spent for repair and maintenance, 3.9835 lakh was spent for Computer and IT against the budget 4.00 lakh, taka 1.983 against the budget of taka 2.00 lakh spent for F&F, taka 7.98 lakh was spent for laboratory equipment against the budget of taka 8.00 lakh, and taka 6.783 lakh was spent for electrical equipment against the budgeted amount 6.80 lakh.

Status of achieving project objectives:

<i>No.</i>	<i>Objective</i>	<i>Actual achievement</i>	<i>Remark</i>
1	To analyze and map spatial temporal pattern of salinity and salinity induced drought utilizing state of the art geospatial tools and techniques	Map produced	NA
2	To assess loss and damage of crops due to salinity and salinity induced drought	Crop loss reviewed and assessed	NA
3	To characterize genetic resources having potential salt tolerant genes available in the saline affected area	Characterized both at morphological and molecular level	NA
4	To incorporate potential salt tolerant genes into agronomically superior varieties	Incorporated and evaluated	NA
5	To establish a pilot genetic resource center dedicated to higher education and research in the field of stress breeding	Pilot genetic resource center established at BSMRAU	NA

Tendering and procurement of project items i.e., goods and services, as reported, are done strictly adhering to the PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: It was not possible for the evaluation team to physically verify the status of procured goods and their maintenance, since those are scattered across the project sites beyond the project period. However, as reported, some of the key equipment and other materials are restored in the research centers and are being used for similar other purposes.

The quality and quantity of the works of the project was maintained as per design and specifications approved by the project and BCCT while financing. Notably, most project items i.e., goods and services were procured based on their technical specifications only but not based on the design.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period proposed to be from July 2016 to June 2018, which was revised once as to be from July 2016 to June 2019; and the project implementation was completed within the timeframe with any further delay.

Relevance and effectiveness of the project: the project design and activities were highly relevant to the country as well as local context to address issues related to climate induced situation, particularly in the field of agricultural development and extension. Therefore, the project outputs and outcomes were reportedly (both by the project officials concerned and the beneficiaries at field) 100% effective in terms of the project objectives.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication of similar other projects observed in the same areas.

Studies conducted, if any, under the project: The project itself is a research-based initiative, therefore no other studies within the project design framework were conducted.

Exit plan of the project: no such exit plan reportedly formulated and/or executed for the project. However, since the project was implemented targeting the farmers under stressed areas gained sustainable solution for continuing as well as increasing the agricultural productivity in the areas of salinity prone areas, they will carry forward the success of the project among the larger farmer communities over time.

Socio-economic impacts of the project interventions: Bangladesh is an agriculture-based country of economy, where increase in the varieties and productivity of agricultural crops will surely be resulted in increased income, improved social and economic wellbeing of the entire society. Although the project was undertaken under the theme of 'research and knowledge management', this was expected to support communities to foster their overall socioeconomic condition leading towards a better lives and livelihoods of the people in general.

Sustainability of the project and its activities: the nature of the project was to research and innovate saline tolerant crop varieties which lead communities across the coastal Bangladesh to apply tested solution in agricultural production and therefore it will be disseminated amongst the larger communities. This has built the foundation of the project activities to be sustained in future.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: The project is linked to 'research and knowledge management' theme in context where climate induced sea level rise is a major threat to the coastal area of Bangladesh. To prepare a climate change mitigation and adaptation measure it is essential to have spatial temporal information of salinity which are presently unavailable. Through this project, a GIS based salinity map of the study area has been prepared. Field sampling of soil and water for salinity assessment was collected.

Key issues identified and recommendations: an institutional set-up at every project site should have been more critical to keep tracking of the acceleration of dissemination of the project success, and for this to be in place and functioning well, community participation might have been effective.

9.35 পরমাণু কৃষি গবেষণার মাধ্যমে জলবায়ু পরিবর্তনশীল জাত/প্রযুক্তি উদ্ভাবন ও বিভিন্ন প্রতিবেশ অঞ্চলে অভিযোজন প্রকল্প implemented by BINA

Implementation Period: July 2014 to June 2017

Thematic Area 4, Project 3

Status of component-wise implementation progress (physical and financial): total budget of the project as proposed and approved was Taka 345.00 lakh, and the actual expenditure was 313.41 lakh. The cost over-run was 90.84% (% of original cost). Component wise taka 246.91 lakh was spent for revenue purpose against the budgeted amount taka 247.00 lakh, and which included research expenses (taka 215.00 lakh against the same) and operational expenses (31.91 lakh against 32.00 lakh). While taka 66.50 lakh was spent for capital purposes against the budgeted amount taka 98.00 lakh, and these were used for procuring the scientific equipment as listed in the tendering and procurement section.

Status of achieving project objectives: those were as below.

No.	Project objectives	Achievement status
1	নিউক্লিয়ার কলাকৌশল ব্যবহারের মাধ্যমে প্রতিকূল পরিবেশ সহনশীল (খরা, অম্ল, জলমগ্নতা ও লবণাক্ততা) স্বল্প জীবনকাল সম্পন্ন উন্নতজাত/প্রযুক্তি উদ্ভাবন	৯ টি জাত ও ৩টি প্রযুক্তি উদ্ভাবন করা হয়েছে।
2	ডাল ও শীম জাতীয় শস্যের জীবাণু সারের মাধ্যমে বিভিন্ন প্রতিকূল জলবায়ু অঞ্চলে উপযোগিতা মূল্যায়ন	মুগের উপর জীবাণু সারের প্রভাব পর্যবেক্ষণের জন্য ৩টি প্রদর্শনী ক্ষেত্রে স্থাপন। ৭-২৩ শতাংশ ফলন বৃদ্ধি।
3	জলবায়ু পরিবর্তনের কারণে ক্ষতিগ্রস্ত অঞ্চলের জন্য আধুনিক পরমাণু কৃষি গবেষণার লক্ষ্যে যন্ত্রপাতি, রাসায়নিক দ্রব্যাদি, গ্লাসওয়ার, আসবাবপত্র ইত্যাদি ক্রয়ের মাধ্যমে ফসলের জাত উদ্ভাবন/উন্নতকরণ	গবেষণার মাধ্যমে লক্ষিত জাত উদ্ভাবন সম্পন্ন।
4	বিনা উদ্ভাবিত এডভান্সড লাইন প্রযুক্তির স্থানভিত্তিক উন্নয়ন ও জলবায়ু প্রতিকূল অঞ্চলে মাঠ পরীক্ষণ, অর্থনৈতিক বিশ্লেষণ ও স্থানীয় কৃষি সমস্যা নিয়ে গবেষণার মাধ্যমে বাছাইকৃত জাত/প্রযুক্তি উদ্ভাবন	৪টি ফসলের অর্থনৈতিক বিশ্লেষণ সম্পন্ন।
5	বিনা উদ্ভাবিত জাত/প্রযুক্তিসমূহের জলবায়ু প্রতিকূল অঞ্চলে সম্প্রসারণে অঞ্চলভিত্তিক কৃষকের জমিতে উৎপাদনশীলতা যাচাই ও চাষাবাদে উদ্বুদ্ধকরণে সচেতনতামূলক কার্যক্রম	১৫৩৯টি প্রদর্শনী প্লট, ৮৫টি মাঠ দিবস, ১৮টি প্রশিক্ষণ, ৪টি কর্মশালা ও ৯৮.৬০ মেট্রিক টন বীজ বিনামূল্যে কৃষকের মাঝে বিতরণ সম্পন্ন।

Tendering and procurement of equipment, construction/erection/installation and goods and works were done as per PPA 2006/PPR 2008. Procured equipment includes weather station, soil moisture meter, soil EC meter, multi-parameter water quality meter and water EC meter. Construction item procured was a raised-bed Lysimeter (18 boxes).

Status of procured goods/works/services and its maintenance: all procured goods and works are being reportedly used by other projects of the implementing agency. The maintenance of the equipment is being done by BINA itself as per their plan. The evaluation team could not physically verify the status of procured goods and equipment.

Quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period as was proposed from July 2013 to June 2016 which was revised once as to be from July 2014 to June 2017, and the project was completed within the revised timeframe.

Relevance and effectiveness of the project: the relevance and effectiveness of the project activities was very high to the local contexts and community demand, as opined by the community level farmers.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: the project itself research to collect, analysis and innovate new climate tolerant crop varieties in the drought, acid, saline, and waterlogging regions using nuclear agriculture technologies and techniques. There were no other studies conducted within the project framework.

Exit plan of the project: the project had no such explicit exit plan formulated and/or executed.

Socio-economic impacts of the project interventions: Incomes of the local people were reportedly increased, and their lifestyle changed. Therefore, it has created a positive impact on socioeconomic development of the people of the project areas.

Sustainability of the project and its activities: adoption of the project outputs by the local farmers is expected to be contributing to the sustainability of the project activities.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: The project was directly linked with 'research and knowledge management' theme, and it has addressed problems related to climate resilient drought, submergence and salt tolerant crop varieties using advanced agricultural technologies.

Key issues identified and recommendations: an exit plan towards establishing a locally developed institutional mechanism should have been in place and functional to foster and sustain the project created impacts.

9.36 সমগ্র বাংলাদেশের শহরগুলোর (পৌরসভা/মিউনিসিপ্যালিটি) জৈব আবর্জনা ব্যবহার করে প্রোগ্রাম্যাটিক সিডিএম শীর্ষক প্রকল্প implemented by DoE

Implementation Period: April 2010 to June 2019

Thematic Area 5, Project 1

Status of component-wise implementation progress (physical and financial): the original project budget was proposed to be taka 1391.58 lakh, and which remains unchanged, whereas the actual expenditure was taka 1231.689 lakh. Component wise taka 49.9 lakh was spent for outsourcing of consulting services against the budget taka 50.00 lakh, taka 218.89 lakh was spent for construction of compost plants in Narayanganj CC against the budget taka 320.00 lakh, take 135.25 lakh was spent for construction of compost plant in Mymensingh CC against the budget taka 177.5 lakh, taka 220.39 lakh was spent for construction of compost plant in Rangpur CC against the budget 225.00 lakh, taka 171.43 lakh was spent for construction of compost plant in Cox's Bazar municipality against the budget taka 175.00 lakh, taka 86.55 lakh was spent for purchase of 2 types of bins against the budget taka 100.00 lakh, taka 92.56 lakh was spent for the purchase of truck against the budget taka 100.00 lakh, and the rest amount was spent for the revenue purpose.

Status of achieving project objectives: the objectives towards (1) reduction of GHG from municipal waste, (2) introduction of 3R (reduce, reuse and recycle) concept, (3) awareness raising among the city dwellers about 3R concept, (4) building clean and healthy city in Bangladesh, (5) providing alternative income generation activities to poor people of urban areas by converting waste into compost fertilizer, (6) providing additional financial assistance for waste management through selling CER in the international CDM market, and (7) improving soil quality by using organic fertilizer were fully (only objective 6 was partially) achieved as reported by the project.

Tendering and procurement of the project works/goods/services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the evaluation mission could not physically verify the status of all procured items; however, reportedly most of them were under effective use and well maintained.

The quality and quantity of the works was reportedly strictly maintained as per design and specifications approved by the project and the BCCT.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period proposed was from April 2010 to June 2012 which was revised (and expanded) for the period of April 2010 to June 2019 (350%-time over-run). The extension was made due to the construction works because city corporation/pourashava authorities took a long time to prepare land for the construction of compost plants. Accordingly, the project was completed within the revised timeframe.

Relevance and effectiveness of the project: the relevance and effectiveness of the project design and activities were high to the country context. Reportedly, the implementation of project brought a major solution of organic waste management in the cities and municipalities of Bangladesh, and thus contributed significantly to reduction of waste generated GHG emission to environment and creating opportunities to convert waste into organic fertilizer and employment generation for the urban poor people.

Overlapping and/or duplication of similar other projects in the same areas: No overlapping and/or duplication of the project was observed.

Studies conducted, if any, under the project: there were several study components within the project framework which were conducted accordingly. Those include baseline studies on (1) identification of waste production rate in 64 districts, (2) identification of physiochemical characteristics of waste generated in 64 districts of Bangladesh, (3) GHG emission in the municipal waste sector, (4) analysis of waste samples collected from 64 districts, (5) traffic survey for compost plant, and (6) environmental impact assessment (EIA) through outsourcing of consulting services/firms.

Exit plan of the project: there was no such exit plan formulated and/or executed in the project; however, the responsibility of the waste management using 3R concept was given to the respective municipalities and City Corporations.

Socio-economic impacts of the project interventions: Reportedly, there were significant impacts on socioeconomic activity due to the project. As a result of the project, the city dwellers are now aware about their duties and responsibilities in waste separation and segregation, every workers in the compost plant earn an average of 8,000 taka per month that help them for better livelihood, and it decreases spreading of several water and vector borne and air borne pathogens, thus those helped reducing chronic respiratory diseases carrier particles PM2.5 and PM10 emission are now minimized within acceptable range.

Sustainability of the project and its activities: Reportedly, lifestyle change of the community, improving environment quality monitoring require long time and needs to maintain. These are now depending on how the city and municipality authorities carry on their duties and responsibilities to keep the project activities functioning and left to their hands.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was under 'mitigation and low carbon development' theme of the national strategy, and it has provided sufficient knowledge and information on future trends about the climate change impacts, provided several capacity building trainings to cope up with the changed climatic condition.

Key issues identified and recommendations: an exit plan clearly defining the roles and responsibilities of the city and town authorities on how to keep the project activities functioning should have been developed and kept on place to ensure the sustainability of the project activities and impacts.

9.37 Eco-Restoration of Hill Forests, Cox's Bazar implemented by BFD

Implementation Period: July 2012 to June 2015

Thematic Area 5, Project 2

Status of component-wise implementation progress (physical and financial): the original project budget as proposed was taka 244.00 lakh, and which was revised (increased) once to taka 550.00 lakh with 134% cost over-run. While the actual gross expenditure was taka 545.251 lakh. Component wise taka 24.316 lakh was spent for supply and services against the budgeted amount taka 24.91 lakh, taka 13.78 lakh was spent for equipment against the budgeted amount taka 14.25 lakh, taka 21.99 lakh was spent for compost fertilizer and alluvial soils against the budgeted amount taka 22.00 lakh, taka 114.16 lakh was spent for acquisition of assets against the budget taka 115.94 lakh, and taka 406.275 lakh was spent for construction works against the budget taka 407.9 lakh.

Status of achieving project objectives: as per project objectives, reportedly (a) acquisition or purchase of assets, (b) plantations, c) constructions of compost plants and associated other works were 100% achieved.

Tendering and procurement of project works/goods/services was done as per PPA 2006/PPR 2008

Status of procured goods/works/services and its maintenance: reportedly the status of procured works/goods/services were in usable condition; however, the evaluation commission could not physically verify the most components of the project.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the project was designed for the period of July 2012 to June 2015, and which remain non-revised. Accordingly, the project was implemented within the timeframe.

Relevance and effectiveness of the project: the relevance of the project was reportedly (and as observed) was very high to the local context and community demand. Whereas the effectiveness of the project activities was moderately satisfactory as per the opinion of the local communities and stakeholders.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: No studies conducted within the project framework.

Exit plan of the project: no such exit plan either proposed, formulated, and/or executed for the project.

Socio-economic impacts of the project interventions: as per project report being verified by the community views, the project has widened the scope of alternative income generation of the local people which are expected to be helpful to uplift their socioeconomic condition in future.

Sustainability of the project and its activities: the O&M activity was proposed to be maintained by the revenue budget of the BFD; however, the evaluation could not verify whether there was enough budget provision for the purpose. Nonetheless, the sustainability potential is dependent on the project area which was reserve forest and biotic interference is completely prohibited. BFD staff always monitor the area by regular patrolling and supervision.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was linked with 'mitigation and low carbon development' theme, and it has assisted natural regeneration of the areas i.e., forest cover has increased to a large extent that will be helpful to reduce the adverse effect of climate change.

Key issues identified and recommendations: there should be an institutional set up established to look after the maintenance and sustainability issues of the project.

9.38 কাপ্তাই এলাকায় বাগান সৃজনের মাধ্যমে কার্বন সিংক তৈরী প্রকল্প implemented by BFD

Implementation Period: November 2012 to June 2015

Thematic Area 5, Project 3

Status of component-wise implementation progress (physical and financial): The gross project budget as proposed and approved was taka 1200.00 lakh of which taka 1196.09471 lakh was spent. Component wise taka 1.99925 lakh was spent for supply and services against the budgeted amount taka 2.00 lakh, taka 1194.09646 lakh was spent for the purpose of acquisition and procurement of assets against the budgeted amount of taka 1198.00 lakh. The gross variation between the budget and expenditure was reportedly (-)3.905%.

Status of achieving project objectives: the project has been able to achieve 100% of its targeted objectives, among which 2000 ha forest plantation was done, 1250 ha previous forests was restored, 689,492 cubic feet pulpwood supplied to Karnufuli paper mill, and by which employment opportunities for 140 thousand labor days were created.

Tendering and procurement of the project works/goods/services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: BFD personnel/staff are engaged to maintain the key project works (i.e., plantation and forest restoration) and they were found working well. The maintenance of other works/supplies couldn't be verified by the evaluation team.

Quality and quantity of the work was maintained by the project as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original project period as was proposed to be from November 2012 to June 2015 which remains non-revised, and the project implementation was completed within the timeframe without any further delay.

Relevance and effectiveness of the project: the relevance and effectiveness of the project activities was reportedly high to the local context and demand.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: No separate studies were conducted.

Exit plan of the project: no such exit plan either formulated/proposed and/or executed by the project.

Socio-economic impacts of the project interventions: plantation and forest restoration work have direct impacts over the lives and livelihoods of the local communities, especially for building capacities to withstand natural calamities. Apart from that, creating employment opportunities for thousands of local people (i.e., labourers) has contributed to the socioeconomic development of the communities.

Sustainability of the project and its activities: measuring sustainability of the project of this nature is difficult; however, it depends on how well maintenance and/or continuation of the

activities are done. The evaluation finds a great prospect of sustainability of the project upon the appropriate and adequate maintenance.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: The project activities have reduced significant amount of carbon emission to the environment by plantation and forest restoration, and this has resulted in local people's capacity to withstand natural disasters in future.

Key issues identified and recommendations: an exit plan entailing detailed plan for ensuring sustainability of the project and its results should have been in place and operational.

9.39 বায়োগ্যাস প্রযুক্তি সম্প্রসারণের মাধ্যমে কার্বন নিঃসরণ হ্রাস ও বিকল্প জ্বালানি ব্যবহার বৃদ্ধিকরণ প্রকল্প (২য় পর্যায়) implemented by IFRD

Implementation Period : March 2014 to February 2016

Thematic Area 5, Project 4

Status of component-wise implementation progress (physical and financial): the original project budget as proposed and approved was taka 1000.00 lakh and grossly taka 998.95 lakh was spent against the budget. Component wise taka 6.93 lakh was spent for 2 pay of staff against the budget taka 7.56 lakh, taka 21.70 lakh was spent for staff TA/DA against the budget taka 22.00 lakh, taka 4.43 lakh was spent for publication against the budget taka 4.50 lakh, taka 46.29 lakh was spent for training purposes (100% of the budget taka), taka 3.97 lakh was spent for procurement of raw materials and spares against the budgeted amount taka 4.00 lakh, taka 15.63 lakh was spent for other expenses against the budget of taka 15.65 lakh, and the most amount taka 900.00 lakh was spent for the subsidy to biogas plants against the same amount of budget.

Status of achieving project objectives:

<i>Objectives</i>	<i>Achievements</i>
To increase the usages of alternative energy through dissemination of Biogas plant	Under this project 5000 domestic size ($\approx 3\text{m}^3$) biogas plants have been installed in 15 districts of Bangladesh.
To encourage the organic farming by using the biogas slurry	The installed biogas produces 2,73,750 ton/year of biogas slurry which encourage the organic farming.
To keep sustainable environment by reducing deforestation	A country needs to have 25% of its area as forest to maintain ecological balance but Bangladesh has less than 10% forest. This project helps to reduce forest (30,000 trees) in every year.
To reduce the greenhouse gas emission	By the 5000 biogas plants 75,371.48 tons of greenhouse gas (CO_2) emission is reduced to the environment every year.
To ensure the health of mother and child by controlling the indoor air pollution	Under this project 5000 domestic size ($\sim 3\text{m}^3$) biogas plants have been given to village women reduce the indoor air pollution.

Tendering and procurement of the project works/goods/services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: this has been formulated by the project by training, troubleshooting, cleaning, work practices and surveillance to maintain working condition of disseminated biogas plants. The evaluation team finds some areas where plants are well maintained, and at the same time, in some areas there was a

lack of maintenance which was understood to be due to the activeness of the support agencies.

The quality and quantity of the works was maintained rightly as per design and specifications approved by the project and the BCCT through the proposal.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the proposed and approved project period was from March 2014 to February 2016, and which remains non-revised, while the actual implementation was completed between June 2014 to February 2016 (with a slightly delayed start because of the site selection and necessary project preparation at field).

Relevance and effectiveness of the project: the relevance and effectiveness of the project activities was very high to the local context and community demand. Those served people to reduce dependency on firewood and other electric equipment for cooking and heating purposes, and thus, reducing significant levels of carbon emission to the environment.

Overlapping and/or duplication of similar other projects in the same areas: in some areas of the project, reportedly there were a few duplications of similar other projects being undertaken by the NGOs; however, the most project areas were found be having no overlapping and/or duplication.

Studies conducted, if any, under the project: So far, no separate studies have been conducted.

Exit plan of the project: the project has no such exit plan formulated and/or executed; however, reportedly IFRD, BCSIR has been continuing a project on “Evaluation & study on social & environmental impact on the installation of Biogas plant under Different Biogas technology dissemination project of BCSIR” since 2010. Under this project IFRD has evaluated at least 100 installed biogas plants in 5-6 different districts every year. During this period scientists of IFRD evaluate and solve technical and maintenance problems of installed biogas plant.

Socio-economic impacts of the project interventions: The field findings on socioeconomic indicators such as educational status, land holdings, income from agricultural production and other sources are indicated that biogas plants have been installed by well-off farmers of the project areas. Reportedly, it was identified that most users had very similar experience with the technology due to their socioeconomic standing and access to conventional fuel sources, and this most likely indicates that social and economic impacts of biogas plants use fifer in conjunction with this variation in fuel resources used.

Sustainability of the project and its activities: Recruited agencies are reportedly committed to provide the technical backup support to the biogas plant users; however, sustainability of the project will largely depend on the continuation of the supports as committed since functioning of the installed plants in vital.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project is directly linked with ‘mitigation and low carbon development’ theme, and as per scientific calculated made by IFRD-BCSIR in the presence of 5000 biogas plant (so that total mass of carbon-di-oxide is 10019250 Kg/year) total reduced amount of greenhouse gas emission from 5000 biogas plant was 75371.48 ton/year. This is meant to be a fact that the total amount of greenhouse gas reduction from one unit of biogas plant was 15.07 ton/year.

Key issues identified and recommendations: as suggested by the project it needs to include some commercial plants (more than 100m³), to identify the exact location biogas plant GPS should be added, needs to increase amount of subsidy, and develop new biogas model for avoiding duplication.

9.40 সিংড়া পৌর এলাকায় সৌর বিদ্যুতায়িত সড়কবাতি স্থাপন শীষক প্রকল্প implemented by SingraPourashava, Natore
Implementation Period: July 2016 to December 2017

Thematic Area 5, Project 5

Status of component-wise implementation progress (physical and financial): the approved (with no revision) budget of the project was taka 199.65 lakh, and taka 199.63185 lakh was spent grossly for its successful accomplishment. Component wise installation of 363 (100%) solar power-based streetlights was done with the cost of taka 199.63185 lakh against the budgeted amount 199.65 lakh.

Status of achieving project objectives: the project target was to procure and install 363 solar power streetlights within the Pourashava area, which was fully achieved. As expected, the implementation of the project will reduce the electricity demand from the national grid and provide services through uninterrupted power supplies.

Tendering and procurement of the project goods/works/services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and their maintenance: the evaluation commission finds the solar based streetlights were mostly functional, while that requires more attention to keep all those installed light facilities well-maintained.

Quality and quantity of the work was maintained as per design and specifications proposed and approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period was from July 2016 to December 2017 with no revision, and therefore the project was completed within the timeframe.

Relevance and effectiveness of the project: as opined by the local communities and stakeholders, the relevance and effectiveness of the project was high considering the local context and community demand.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: No studies conducted.

Exit plan of the project: no such exit plan either formulated and/or executed by the project to ensure that project impacts are sustained and well-maintained. This was supposed to be done utilizing the revenue funds of the Pourashava which was not actually provisioned clearly.

Socio-economic impacts of the project interventions: The project has mostly indirect socioeconomic impacts, and allover benefits together produced energy in economic growth, poverty reduction and human development.

Sustainability of the project and its activities: the Pourashava itself is held responsible for O&M of the facilities installed by the project. Therefore, sustainability will depend on how the Pourashava will respond to the needs regarding it.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project is linked with 'mitigation and low carbon development' theme, and it covered 42.16 square km area of Singra Pourashava by enlightenment of all roads using solar lamps which played supportive role in tackling climate change impacts.

Key issues identified and recommendations: sustainability of the project should have been addressed by setting up an institutional mechanism involving the local stakeholders to share costs and roles.

9.41 নোয়াখালী জেলার হাতিয়া উপজেলাধীন জাহাজ্জার চর এলাকায় নবায়নযোগ্য শক্তি নির্ভর ১ মেগাওয়াট ক্ষমতাসম্পন্ন বিদ্যুৎকেন্দ্র স্থাপন প্রকল্প
implemented by Bangladesh Army
Implementation Period: March 2017 to June 2018

Thematic Area 5, Project 6

Status of component-wise implementation progress (physical and financial): the approved project budget was taka 200.00 lakh which remain non-revised; while actual gross expenditure was taka 199.97 lakh (i.e., the contract value). Component wise 1 No. 34 KWp renewable energy-based power plant was installed with a total cost of taka 199.97 lakh against the budgeted amount taka 200.00 lakh.

Status of achieving project objectives: the objective of the project was fully (100%) achieved by installing one unit of 34 KWp renewable energy-based power plant in the selected project location.

Tendering and procurement of the project works/goods/services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the evaluation team couldn't physically verify the power plant, however, as reported this condition of the plant has still been good in its functionality.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period as proposed was from January 2018 to June 2019, and which was revised once as to be from January 2018 to June 2020. While the project was implemented between the timeframe of January 2018 to December 2019 (well before the end target).

Relevance and effectiveness of the project: the project was reportedly highly relevant to the local (i.e., offshore island) context and community demand. The plant played an important role in reducing the use of fossil fuel and reducing carbon dioxide emissions with cover the electricity demand.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: no studies conducted

Exit plan of the project: no such exit plan either formulated, proposed, or executed by the project.

Socio-economic impacts of the project interventions: getting connected by the solar power system helped local people to access cooking, lighting, and alternative income generating facilities. Those in turn have resulted in improving the lives and livelihoods of the local people.

Sustainability of the project and its activities: this will depend upon the proper and adequate maintenance of the power plant, the responsibility of which was reportedly vested upon the implementing agency.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project helps/supports directly increasing adaptation capacity of the local people with the climate change and reducing carbon emission into the atmosphere.

Key issues identified and recommendations: sustainability through regular and adequate O&M activities should be ensured for the greater interest of the project.

9.42 Introduction of Solar Powered Irrigation Pump as well as Power Management and Distribution System to Mitigate Energy Crisis and Climate Change implemented by REB
Implementation Period: April 2010 to April 2012

Thematic Area 5, Project 7

Status of component-wise implementation progress (physical and financial): the total budget of the project as proposed was taka 1120.00 lakh which was revised once as taka 1111.47 lakh. While actual expenditure was taka 953.29 lakh. Component-wise taka 5.94 lakh was spent for the revenue purpose against the budget taka 26.51 lakh because of cutting down some item costs. The capital expenditure was 947.28 lakh against the budgeted amount taka 1084.96 lakh, and in total the overall cost was 85.76% of the approved cost.

Status of achieving project objectives: the main objective of the project was to convert 20 Nos. diesel pumps into solar powered irrigation pumps and at the off-season of irrigation, to distribute the produced power to the nearby consumers. The achievement of objectives was 100%.

Tendering and procurement of the project works/goods/services was accomplished as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the evaluation team couldn't physically verify the works since this was completed well before. However, the PCR refers to the fact that the primary O&M responsibility was vested upon the implementing agency appointed supplier for one year, and then it was handed over to the REB. REB/PBS personnel and the community people got the training by the supplier to continue the maintenance works.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period as proposed was from April 2010 to April 2012 and which was revised keeping the same timeframe. While the actual project implementation period was from April 2010 to October 2012, which was delayed 6 months (24%-time over-run) from the stipulated end period. The project period was extended over the original time without increasing quality and item-wise project cost.

Relevance and effectiveness of the project: the relevance and effectiveness of the project was reportedly very high to the local context and community demand.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: No such exit plan found either formulated or executed by the project.

Socio-economic impacts of the project interventions: Positive socioeconomic impact of the rural electrification project have been conspicuously evidenced.

Sustainability of the project and its activities depends on the O&M activities performed by REB, since there was no plan delineating the pathway on how to make the project activities sustainable.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project has contributed remarkably to reduction of carbon emission by installing solar powered system instead of electric supplies from the fossil fuel based national grid.

Key issues identified and recommendations: issues related to sustainability should be given priority to make the project objective 100% fulfilled.

9.43 Electrification in Local Area (Upazila Complex) by using Solar Energy implemented by REB

Implementation Period: July 2012 to November 2014

Thematic Area 5, Project 8

Status of component-wise implementation progress (physical and financial): the total project budget was taka 2460.80 lakh, and which remains non-revised till the end of project. However, component wise expenditures differed a lot, where the total actual expenditure was taka 1255.83 lakh (almost half of the approved budget). The revenue cost was reduced to taka 6.72 lakh only against the budgeted amount 173.80 lakh because supporting staff were not appointed and project continued with REB regular employees. While the capital cost was lowered to Taka 1249.11 lakh against the budgeted amount taka 2287.00 lakh because of (i) existing BREB office and furniture used instead of purchasing, and (ii) in the competitive bidding process much less cost was offered by the suppliers.

Status of achieving project objectives: the main objective of the project was to install 15 Nos. 30 KWp Solar Plants in 15 different Upazila Complexes to provide electricity by using renewable energy sources instead of fossil fuel and to reduce the carbon-dioxide and GHG emission by using solar energy for ensuring uninterrupted power supply at Upazila Complexes as well as saving significant amount of electricity from the main grid supply.

Tendering and procurement of turn-key contract for supply, installation, testing and commissioning of 30 KWp solar power plant with all necessary materials and related civil works on the roof top of 15 individual Upazila Complex including operation, troubleshooting, maintenance, and servicing was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the O&M responsibility was taken over by the respective Upazila Parishads after three years operation of the plants by the supplier. Now the systems are taken care of by the Upazila Parishads. The evaluation team couldn't physically verify all the systems, however, observation put an urgency of paying more attention for the UZ Parishads to undertake regular and adequate O&M activities.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: the original project period as proposed was from July 2012 to June 2014, which was revised once as to be from July 2012 to November 2014. Accordingly, the project was implemented within the timeframe.

Relevance and effectiveness of the project: reportedly, the relevance and effectiveness of the solar power based electric supply systems were very high to the local context and demand.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: there was no such exit plan either formulated or executed by the project.

Socio-economic impacts of the project interventions: Positive socioeconomic impacts of the rural electrification projects have been conspicuously evidenced. The direct impacts are mostly economic, reflected in enhanced income, employment, and optimized expenditure pattern, surpluses, savings, and asset building. The direct and indirect benefits together produced synergy in economic growth, poverty reduction and human development.

Sustainability of the project and its activities: BREB has reportedly provided a guideline and short training on operation management and maintenance of solar plan to the respective Upazila Authorities for ensuring optimal outcome as well as for sustainability of the project. As the long-term project viability and sustainability will depend greatly on its 'ownerships and institutionalization' of the capacity built by the project.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the project was directly linked with 'mitigation and low carbon emission' theme, and it has impacted largely to reduce emitting CO₂ and other GHGs from fossil fuel based electric supplies.

Key issues identified and recommendations: there were no such remarkable issues identified except institutionalizing the O&M system to make sure that the project outcomes are sustained.

9.44 Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System implemented by PDBF

Implementation Period: July 2017 to March 2019

Thematic Area 5, Project 9

Status of component-wise implementation progress (physical and financial): the original budget proposed for the project was Taka 300.00 lakh and which was unchanged. Component wise, only 750 nos. solar home systems were proposed to be procured and distributed among the selected households with a total amount of 296.25 lakh. Accordingly, 100% physical (i.e., supply, delivery, and installation of 750 nos. solar home systems) and financial progress were made. Year wise all expenditures were incurred during 2018-19.

Status of achieving project objectives: the objectives of the project were (a) providing electricity through solar power to increase the use of renewable energy to reduce GHG emissions, especially carbon dioxide and methane, (b) reducing dependence on national grid based electric supply replacing by solar power consumption, (c) raising awareness among the people to reduce CO₂ emission in the atmosphere, (d) encouraging the use of mobile, laptop and television technologies, and (e) playing vital role in improving the quality of lives of the rural population and promoting socioeconomic development in the former enclaves in Bangladesh. Reportedly, all the objectives were achieved in full.

Tendering and procurement: the allocated fund was 300.00 lakh while the Contract value was 296.25 lakh, and the goods were procured by inviting tender dated 1.3.2018, signing the contract dated 25.6.2018 and the works were completed by 31.3.2019 following the PPA 2006/PPR 2008 of the Government.

Status of procured goods/works/services and its maintenance: the maintenance of the supplied and installed solar home systems was vested upon the users themselves. The evaluation team finds nearly half of the systems are operational, where a few of them remain non-functional and quite a good number of systems are sold out by the recipients to meet their urgent family needs.

Quality and quantity of the works (i.e., installed solar home systems) were as per design and specifications.

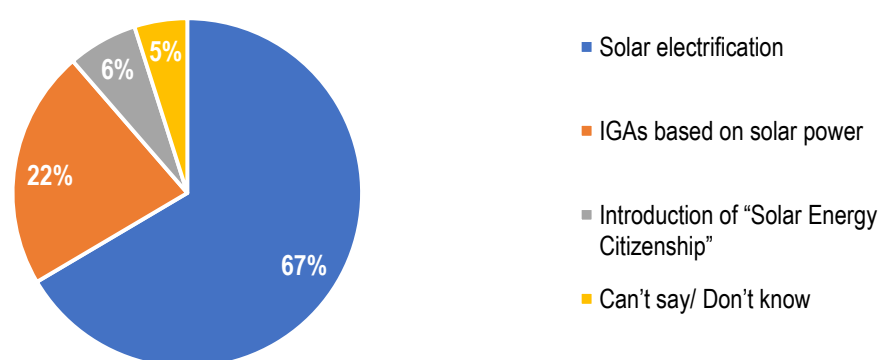
Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: The original proposed project implementation period was from July 2017 to September 2018, which was once revised from July 2017 to March 2019. Accordingly, the time over-run rate was shown 40%. The project was implemented according to the revised timeframe with no further delay.

Relevance and effectiveness of the project: the evaluation findings are reflective of the pie charts below.

Figure 9.26 :Perceived usefulness/relevance of the project with the local context (n=453)



Figure 9.27:CC adaptation measures taken by the project (n=453) multiple answers

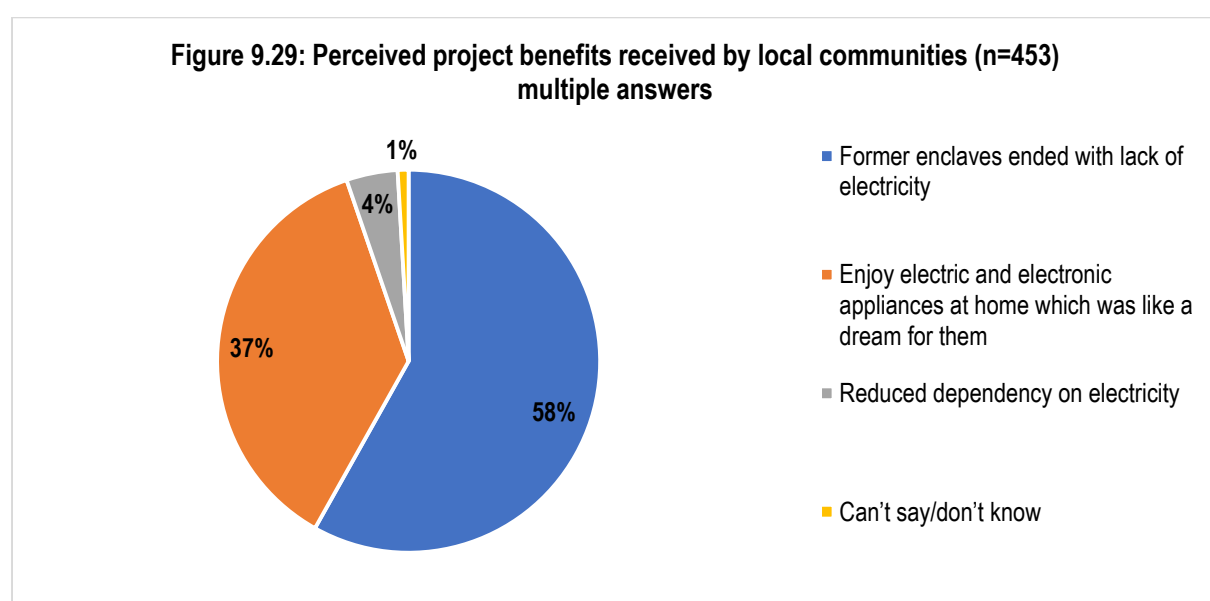
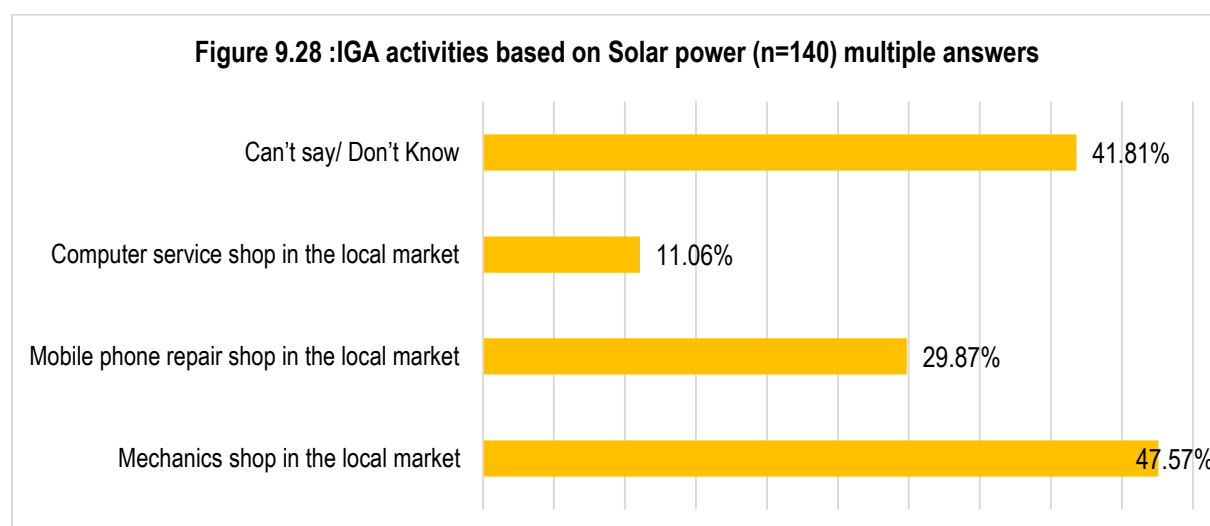


Overlapping and/or duplication: the evaluation finds no such overlapping and/or duplication of similar other projects in the same areas; however, the core merit of the project has been demolished by covering the same areas through national grid-based electricity supply following the installation of solar home (5 light and 1 fan package) systems. This has indirectly provoked the solar system recipients to be dependent on grid supplies and in some cases leaving solar systems unattended and even some of those were sold out.

Studies conducted, if any, under the project: the evaluation finds that there were no studies conducted.

Exit plan of the project: the project had no explicit exit plan formulated and executed (this happens apparently because of the project format lacking provision of exit plan to be incorporated).

Socio-economic impacts of the project interventions: these are reflected in the pie and bar charts presented below.



Sustainability of the project and its activities: Nothing was mentioned either in the PPCCTF or in the PCR regarding sustainability of the project. However, the evaluation finds no such institutional mechanism established to follow-up the use of systems; therefore, given the circumstances sustainability of the project seems to be threatened to an extent.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: The supply and installation of solar home systems provides opportunities to local people to be not dependent on fossil based grid electric supplies, and thus contribute to reduction of GHG emission into the atmosphere.

Key issues identified and recommendations: the best feature of the project is to support people of former enclaves not to be dependent on the fossil based electric supplies, and thereby contributing to reduction of GHG emission; however, this noble objective is somewhat threatened by immediate next construction and supplies of national grid electric connections to the same households. Apart from that, the solar home systems as provided by the project are left un-followed up, therefore, the sustainability of the project activities and its impacts were put at risks.

9.45 Forest Information Generation and Networking System implemented by BFD

Implementation Period: April 2011 to March 2013

Thematic Area 6, Project 1

Status of component-wise implementation progress (physical and financial): Estimated original cost of the project was taka 821.00 lakh, and which was once amended to taka 818.723 lakh, while the actual cost/expenditure of the project was taka 501.678 lakh. Component-wise taka 35.351 lakh was spent against the budgeted amount taka 47.343 lakh for the revenue purpose, and taka 466.327 lakh was spent against the budgeted amount taka 771.38 lakh for the capital expenditure purpose.

Status of achieving project objectives:

Project objectives	Status of achievement
জলবায়ু পরিবর্তনে বনের ঝুঁকি নির্ধারণের জন্য High Resolution Satellite Image ব্যবহার করে বন অধিদপ্তরের নিয়ন্ত্রনাধীন সকল বন এলাকার GIS ডাটাবেজ ও Digital Map প্রস্তুত এবং প্রস্তুতকৃত GIS ডাটাবেজ ও Map এর ভিত্তিতে বন এলাকাসমূহের নিয়মিত মনিটরিং	বন এলাকার ডিজিটাল ম্যাপ ও জিআইএস ডাটাবেজ প্রস্তুত করা হয়েছে। এসবের মাধ্যমে নিয়মিত মনিটরিং সম্ভব হচ্ছে
বন এলাকার জরিপ ও মনিটরিং এর জন্য বিদ্যমান GIS এবং Remote Sensing Tool সমূহ পর্যবেক্ষণ/পর্যালোচনা কওে যুগোপযোগী Tool উদ্ভাবন/নির্ধারণ করা যা বন ব্যবস্থাপনার সিদ্ধান্ত গ্রহণে সহায়তা করবে	নির্ধারণ করা হয়েছে যা এখনও ব্যবহার করা হচ্ছে
পরিবীক্ষণ ও মূল্যায়ন এবং জলবায়ু পরিবর্তনে বনের ঝুঁকি নির্ধারণের ক্ষেত্রে বন অধিদপ্তরের কর্মকর্তা-কর্মচারীদের দক্ষতা বৃদ্ধিকরণ	দক্ষতা বৃদ্ধি সম্ভব হয়েছে
মন্ত্রণালয়ে আধুনিক সার্ভার স্থাপন এবং অধিদপ্তরের সার্ভারকে সক্রিয় করে আইটি নেটওয়ার্ককে সমৃদ্ধকরণ	সম্পন্ন করা হয়েছে

Tendering and procurement of the project goods/works/services was done as per PPA 2006/PPR 2008.

Status of procured goods/works/services and its maintenance: the system is reportedly operational and being maintained by the BFD well.

The quality and quantity of the works of the project was maintained as per design and specifications approved.

Delays, if any, in implementation of the whole or any of the components of the project including reasons/responsibility of the delay: Implementation original: the original implementation period of the project as was proposed to be from January 2011 to December 2012, and which was revised once as to be from April 2011 to March 2013 (implementation Actual).

Relevance and effectiveness of the project: reportedly, the relevance and effectiveness of the project was high to the country context and as per needs of the BFD. The project outputs were according to the objectives, and a qualified firm was selected for preparing satellite image base maps. This has created the opportunity to prepare and update future forest maps as well.

Overlapping and/or duplication of similar other projects in the same areas: None observed alike.

Studies conducted, if any, under the project: No studies conducted

Exit plan of the project: reportedly, the major output of the project was to update satellite image-based forest maps of different forest areas and it was done successfully. For proper

forest monitoring these maps need to be updated at a regular interval (for our forests it is every five years). These forest maps were updated in 2017 and expected to be updated again in 2023.

Socio-economic impacts of the project interventions: the project was not having components directly linked with community development; however, by improving the forest monitoring and surveillance system the overall country's economic and socioenvironmental development will be achieved, and by which the socioeconomic condition of the people will be developed/uplifted.

Sustainability of the project and its activities: the O&M responsibility of the system developed through the project has been kept under BFD, and thus sustainability of the system will be depending on how they are continuing to play their roles in undertaking O&M activities.

Comments on how the project design and its impacts relate to the thematic areas of the BCCSAP 2009: the strategy emphasizes regular forest monitoring with the assistance of modern technology. As this project prepared satellite-based maps, the project has been able to contribute relevant thematic areas.

Key issues identified and recommendations: Improper vision to prepare first/initial project document that can be further addressed by undertaking a follow-up programme.

Section 10. Templates for Monitoring BCCT-Funded Projects



10.1 Introduction

Bangladesh Climate Change Trust (BCCT) has been funding projects being implemented by different government agencies across the country since its inception to mitigate the effects of climate change and adapt to them under six thematic areas, according to the BCCSAP. There is a dire need for monitoring the BCCT-funded projects to have a greater impact on the lives of the most vulnerable populations in the country. Towards this end, simple monitoring tools have been developed for the BCCT to monitor the projects funded.

Monitoring is an important component of the project management cycle, irrespective of its nature or type. It is one of the key elements that determine the project's success. The monitoring component has to be included at the very early stage of the project, i.e., during the project initiation phase. Needless to say, project monitoring is not something that is considered done once it is done. It must be carried out continuously at different phases of the project until it is phased out. The projects are usually monitored by the project managers or team leads.

However, it is one of the primary duties of the authorities to ensure that there is an effective monitoring system in place that will keep a hawk's eye on the project's progress. Often, it is observed that organizations that do not have an effective monitoring system find it difficult to understand why their projects went wrong and why they failed to create the desired impact, even though they were relatively successful.

It is imperative to convey data and information about an ongoing project to the managers, supervisors, board members, and stakeholders periodically. This allows them to have a clear idea of the status of the project at a given point in time. Besides the top management, the data and information must also be passed to the members of the project team and to other employees of the organization.

The senior members of the project team are usually responsible for documenting all changes that occur in the project from time to time. They can take advantage of using two-way flow project monitoring to ensure that the project is carried out effectively.

10.2 Monitoring in Reality

The importance of monitoring needs no description or elaboration. However, in a real-life situation, knowing how it works and what it does at different stages of the project cycle helps us understand it better. Listed below are the steps that will help project leaders monitor the project effectively and efficiently and assure the desired outcomes.

Step 1: Designing an Efficient Plan for Monitoring

In the project monitoring process, designing an effective plan is the most important activity. It might look simple, but there are lots of aspects that the project leadership must consider while designing a monitoring plan. The job of the project leader is to identify the key areas in the project lifecycle that need continuous attention. This will follow the identification of the key areas. Project Directors must set the targets that need to be achieved in the process. The project leadership must take note that they have to set targets that can be achieved by the team members. Ensuring resources are available to the team members, be they human, technological, or financial, is also a very important aspect. More importantly, apart from the outputs, project leaders also have to focus on the efficiency of their team and the quality of the output.

Step 2: Designing Effective Report Management Mechanism

It is essential for project leaders to hold regular meetings with team members, whether formal or informal in nature. They have to ensure that these meetings take place at regular

intervals. By doing this, project leaders will have a clear picture of the project's progress, which will help them identify problems that might hamper the progress and give them time to plan accordingly. They also have to keep an eye on the budget, and if they feel that the project might exceed the budget allocated, they have to pass this information to top management and policymakers. Assessing the team's performance in completing their tasks in line with the project's specified deadline is equally important.

Step 3: Recommendations for Project Improvement

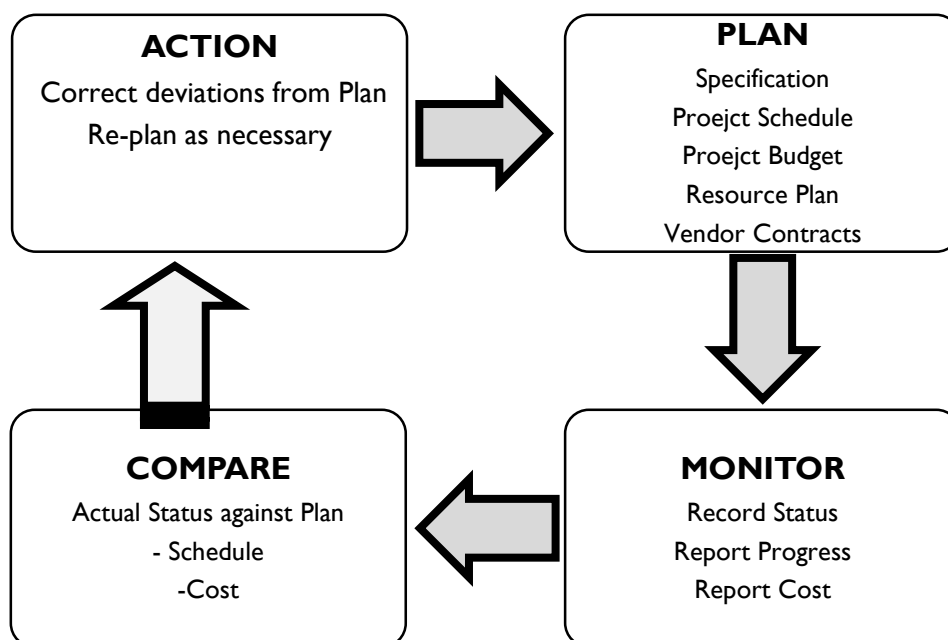
Receiving advice and feedback from the project advisors or from top management is one of the important activities in project monitoring. The project lead has to design the monitoring report in such a way that it effectively passes the information among the team members, top management, and other stakeholders directly linked to the project. This is important because feedback and advice from the top management will give the project leader better ideas for the project monitoring process.

Step 4: Ensuring guidelines and recommendations are followed accordingly

It is a very important task to ensure that the team is working according to the guidelines given by the client and that the recommendations made by the top management team are implemented by the production team. Project leads can also make use of technology for tracking the performance of their team members and giving recognition to the top performers in the team. This will boost the members' morale and also inspire the other members of the team.

As a matter of fact, monitoring is the systematic and continuous collection of information related to implementing a project that can show whether things are going according to plan. Monitoring is usually used to keep track of progress and to support management and accountability (which loosely means making sure you are doing what you said you would do).

Because monitoring focuses on both what is being done in a project and how it is being done, it helps you notice when there are problems to fix or things you might need to do differently. Monitoring focuses on project activities, outputs (what is produced by the activities of the project), and shorter-term outcomes (the shorter-term changes you hope to see). The project monitoring scenario can be depicted in the picture below:



10.3 Developing Indicators

Indicators are used in any monitoring system to measure the outcomes of the project in achieving the following:

- **Coverage:** the extent to which projects engage with stakeholders
- **Impact:** the extent to which projects deliver the intended results or bring about changes in behavior that support the project's objectives.
- **Sustainability:** the ability of stakeholders to continue to adapt beyond the lifetimes of projects
- **Replicability:** the extent to which experiences, results, and lessons are captured and disseminated for broader benefits.

Developing indicators

To have a better monitoring system, establishing the components of the result framework are very important. The result framework then guides the development of appropriate indicators to measure the outputs, outcomes, and impact. This is a very important step and should involve all key stakeholders to get their different perspectives. The indicators should be SMART and verifiable. If the information needed to verify an indicator cannot be found, the indicator will not be useful. Hence, it is highly important for BCCT's M&E framework to include a data source and a means of verification to check the selected indicators.

SMART Indicators

A SMART INDICATOR is an indicator that is:

- Specific, to the context
- Measurable
- Achievable (in a cost-effective way)
- Relevant to the BCCSAP thematic areas
- Time-bound

After developing indicators, identification of data sources guides the way in which one collects the right information to measure progress or impact according to an indicator. That is, from where will we get information to verify an indicator, how will we get it, how often, and how will we store this information?

10.4 Developing a Results Framework

The diagram below presents the anticipated cause and effect relationship between the inputs, activities, outputs, outcomes and impact of a results framework. The logic is that once the activities are implemented, the outputs will be achieved (sometimes in the form of products, goods, or services). The outputs then, in turn, start to bring about change (outcomes) in the form of intermediate results, eventually leading to impact.

The figure below presents an example of a results framework, including the outcome and impact components and their associated indicators, in addition to the assumptions underlying this results framework.

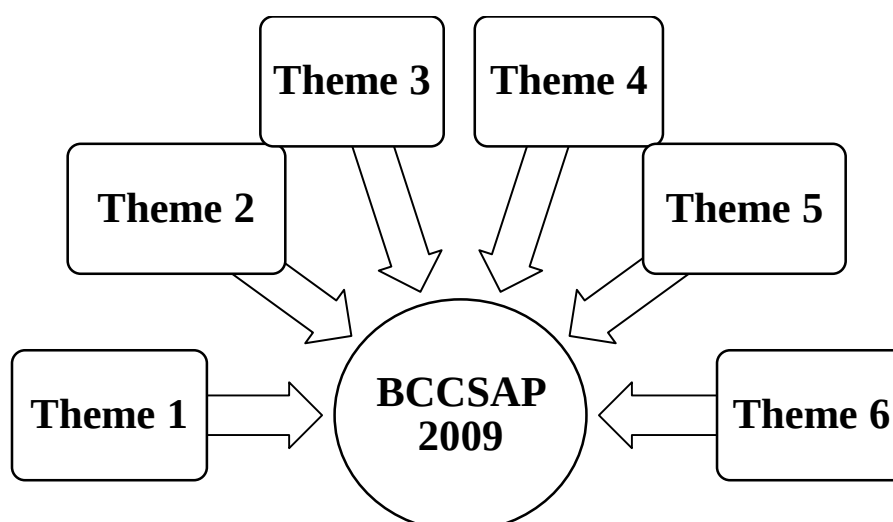
For BCCT projects, it is very likely that there will be a routine monitoring process, and it may happen that the BCCT team conducts process monitoring to see how the intended activities are being performed in the field or outcome monitoring to see what the projects are achieving in terms of the goals set during project design. Keeping the number of awarded projects in consideration, it will be easier for BCCT to conduct their monitoring exercise thematically, i.e., as per the six themes guided in the BCCSAP.

Impact	The overall effect of the BCCT-funded Projects: Positive and negative, primary and secondary long-term effects produced by the Project interventions, directly or indirectly, intended or unintended
	
Outcomes	The direct change resulting from the implementation of the BCCT-funded Project: The likely or achieved short term and medium
	
Outputs	The products, goods and/or services which result from BCCT-funded Project activities/ interventions.
	
Activities	Activities Actions/interventions implemented using the inputs in the aim of producing specific outputs.
	
Inputs	The financial human and material resources used for the Project activities/ interventions

10.5 BCCT Thematic Areas According to the BCCSAP 2009

The BCCAP of 2009 suggested six thematic areas where the BCCT would intervene to reduce climate vulnerability in Bangladesh. These are the following:

- **Theme 1:** Food Security, Social Protection and Health
- **Theme 2:** Comprehensive Disaster Management
- **Theme 3:** Infrastructure
- **Theme 4:** Research and Knowledge Management
- **Theme 5:** Mitigation and Low Carbon Development, and
- **Theme 6:** Capacity Building and Institutional Strengthening



Thematic Area 1: Food Security, Social Protection and Health

Objectives To ensure that the poorest and most vulnerable in society, including women and children, are protected from climate change and that all programmes focus on the needs of this group for food security, safe housing, employment and access to basic service, including health.

- Goals**
- Increase the resilience of vulnerable groups, including women and children, through development of community-led adaptation, livelihood diversification, better access to basic services and social protection (e.g. safety net, insurance) and scaling up;
 - Develop climate resilient cropping systems, fisheries and livestock systems, to ensure local and national food security;
 - Implement surveillance systems for existing and new disease risks and ensure that health systems are geared up to meet future demand;
 - Implement drinking water and sanitation programmes in areas at risk from CC.

Thematic Area 2: Comprehensive Disaster Management

Objectives To further strengthen the country's already proven disaster frequent and severe natural calamities.

- Goals**
- Strengthen the government's capacity and that of civil society partners and communities to manage natural disasters, and ensure that appropriate policies, laws and regulations are in place;
 - Strengthen community-based adaptation programmes and establish them in each of the disaster-prone parts of the country;
 - Strengthen our cyclone, storm surge and flood early warning systems to enable more accurate short, medium and long-term forecasts.

Thematic Area 3: Infrastructure

Objectives To ensure that existing assets (e.g., coastal and river embankments) are well-maintained and fit-for-purpose and that urgently needed infrastructure (e.g. cyclone shelters and urban drainage) is put in place to deal with the likely impacts of climate change.

- Goals**
- Repair and rehabilitate existing infrastructure and ensure effective O&M of the systems;
 - Plan, design and construct urgently needed new infrastructure to meet the changing conditions expected with CC;
 - Undertake strategic planning of future infrastructure needs, taking into account the likely (a) future patterns of urbanization and socioeconomic development; and (b) the changing hydrology of the country, because of CC.

Thematic Area 4: Research and Knowledge Management

Objectives To predict the likely scale and timing of climate change impacts on different sectors of the economy and socioeconomic group; to underpin future investment strategies; and to ensure that Bangladesh is networked into the latest global thinking on science, and best practices of climate change management.

Goals	- Model CC scenarios for Bangladesh by applying global CC models and methodologies at regional and national levels; - Model the likely hydrological impacts of CC on the Ganges-Brahmanputra-Meghna system to assess likely future system discharges and river levels in order to derive design criteria for flood protection embankments; - Monitor and research the impacts of CC on the macro-economy of Bangladesh and key sectors and contribute to developing a climate-proof national development plan; - Research the linkage between (a) CC, poverty and vulnerability and (b) CC, poverty and health in order to identify possible interventions to increase the resilience of poor and vulnerable HHs to CC; - Establish a Centre for Research and Knowledge Management on CC (or a network of centres) to ensure Bangladesh has access to the latest ideas and technologies from around the world and ensure that data is widely and freely available

Thematic Area 5: Mitigation and Low Carbon Development

Objectives	To evolve low carbon development options and implement these as the country's economy grows over the coming decades and the demand for energy increases.
Goals	- Develop a strategic energy plan and investment portfolio to ensure national energy security and lower greenhouse gas emissions; - Expand the social forestry programme on government and community lands throughout the country; - Expand the 'greenbelt' coastal afforestation programme with mangrove planting along the shoreline; - Seek the transfer of state-of the art technologies from developed countries to ensure that we follow a low-carbon growth path; - Review energy and technology policies and incentives and revise these, where necessary, to promote efficient production, consumption, distribution and use of energy.

Thematic Area 6: Capacity Building and Institutional Strengthening

Objectives	To enhance the capacity of government ministries and agencies, civil society and the private sector to meet the challenge of climate change and mainstream them as part of development actions.
Goals	- Review and revise relevant government policies to ensure that they take full account of CC and its impacts; - Mainstream CC in national, sectoral and spatial development planning and ensure that impacts on vulnerable groups and women are prioritized; - Build the capacity of key government ministries and agencies to take forward CC adaptation; - Build the capacity of the government to undertake international and regional negotiations/cooperation on CC; - Build the capacity of the government, civil society and the private sector on carbon financing to access various global climate funds; - Build the capacity for education and training of environmental refugees and facilitate their migration to other countries and integration in new societies.

It is critical that the projects awarded have a result framework so that the BCCT can easily track and monitor them. If the projects have their respective results frameworks, the following templates will be useful for process monitoring and impact monitoring:

Monitoring Checklist for the BCCTF

Name & Designation of the Visiting :

Date of Visit :

A. Basic Project Information

1.	Project Title:					
2.	Executing Agency:					
3.	Administrative Ministry:					
4.	Project Location:					
	Division	District	Upzilla	Union/ Pourasava	Village	Name of the Area/Site

5. Project Leadership (Project Director/ Team Leader) and Staffs	
Name of the PD/Leader:	Designation:
Change in Project Leadership: ☐ Yes ☐ No	How Many Times: ☐ Once ☐ Twice ☐ Thrice
Staff of Project:	
Approved Staff Number:	
Current Staff Number:	
<i>If there is any deviation then reason of deviation</i>	
Have Necessary Approval	☐ Yes ☐ No
6. Project Duration:	
Startup Date:	
Planned End Date:	
Project Period Extended: ☐ Yes ☐ No	Revised End Date:
7. Project Budget	
Budget Proposed:	Budget Approved:
Budget Modification: ☐ Yes ☐ No	Additional fund Allocated: ☐ Yes ☐ No
Revised Budget:	

Total Fund Released up to the Visiting	

B. Project Coverage

1. For how many Districts the project is being implemented (as planned)	Nos.
2. Project is functional in district (as of reporting date)	Nos.
3. For how many Upazilas the project is being implemented (as planned)	Nos.
4. Project is functional in Upazilas (as of reporting date)	Nos.
<i>Reasons for differences in numbers (if any):</i>	
5. For how many Union the project is being implemented (as planned)	Nos.
6. Project is functional in Union (as of reporting date)	Nos.
<i>Reasons for differences in numbers (if any):</i>	

C. Project Beneficiaries

1. How many people are supposed to get support from the project directly (as planned)	
2. Number of direct beneficiaries (as of reporting date)	
<i>Reason for differences (if any):</i>	
3. No of indirect beneficiaries (as planned)	
4. Number of indirect beneficiaries (as of reporting date)	
<i>Reasons for differences in numbers (if any):</i>	

D. Procurement Information

Description	Contract No & Date	Package No	Selection Method	Contractor's Name	Contract Value	Amount Invoiced	Invoice No & Date	Amount Paid	Contract Balance Carried Forward
Goods :									
Works:									
Services:									
Total:									

E. Procurement Related Observation (if any):

F. Activities/Package Wise Progress (As per the PPCCTF)

Sl. No.	Planned Activities	Total Work as per PP (With Unit of Measure)	Physical & Financial Target and Achievement up to the Previous Month of the Visiting Date (as per PD's Report)				Physical Progress Observed by Monitoring Team (with % of the Total Quantity) up to the Visiting Date	Comments
			Physical (with unit)		Financial (in Lakh BDT)			
			Target	Achievement	Target	Achievement		
1	2	3	4	5	6	7	8	9
Specific Observation (if any):								

G. Social & Environmental Observation (if any):

H. Comments of the Stakeholder (if any):

I. Comments of the Local Administration (if any):

J. Any Important Information in the Previous Monitoring Reports and Other Correspondences (if any):

K. Overall Observations/Comments of the Visiting Team:

L. Challenge/Limitation

M. Table of SWOT Analysis

Strength	Opportunity
Weakness	Threat

N. Recommendation:

O. Document/Record Review for Collecting these Information:

Sl. No.	Description	Up to Date (Yes/No)	Other Opinion

**Signature & Official Seal of the
Visiting Officer(s)**

Section 11. References & Participants Met



11.1 References

1. Bangladesh Climate Change Strategy and Action Plan (BCC&AP) 2009
2. Technical Project Proposals of 45 Projects under the Evaluation
3. Project Completion Reports (PCRs) of the 45 Projects under the Evaluation
4. BCCT Monitoring Reports
5. Monitoring and Field Visit Reports of the relevant Ministries
6. Project Preparation, Review, Approval, and Implementation Guidelines of BCCT
7. The Bangladesh Climate Change Trust Act 2010
8. Sixth and Seventh Five Year Plan of the Government of Bangladesh
9. Annual Report 2020-2021, BCCT

11.2 List of Participants Met:

1. Bangladesh Climate Change Trust (BCCT)

- 1) Mr. Nasir-Ud-Doula, Secretary, BCCT
- 2) Mr. Muhammad Mahfuzur Rahman, Director, Monitoring and Evaluation (M&E), BCCT
- 3) Mr. Md. Khairuzzaman, Director, Planning and Development, BCCT
- 4) Mr. Md. Yusuf Mehedi, Assistant Director (Finance), BCCT
- 5) Mr. Engr. Ahammad Shah, Assistant Director (Development, BCCT)
- 6) Mr. Md. Khair-Uz-Zaman, Assistant Director, BCCT

2. BARI (May 2010 to April 2012): Theme 1, Project 1 Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts

- 1) Farmers Group (12), Khunuya Char, Sherpur Sadar, Sherpur
- 2) Farmers Group (9), Pathalia Bokultola, Ward 1, Jamalpur Pourashava
- 3) Dr. Md. Monjur Kadir, Chief Scientific Officer, BARI, Jamalpur
- 4) Mr. Md. Shamim Ahmed, Farmer, Village- Khunuya Pagolpara, Sherpur Sadar, Sherpur
- 5) Mr. Md. Abdul Mannan, Farmer, BARI Jamalpur
- 6) Farmers Group (10), Village – Pathalia, Ward 1, Jamalpur Pourashava
- 7) Community Group (15), Village – Khunuya Char, Sherpur Sadar, Sherpur
- 8) Farmers Group (15), Village - Pagolpara, Sherpur Sadar, Sherpur

3. BADC (June 2011 to December 2013): Theme 1, Project 2: প্রতিকূলতা সহিষ্ণু খান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প

- 1) Mr. Md. Asaduzzaman, Deputy Director, BADC, Patuakhali
- 2) Ms. Sultana Razia, Deputy Director, BADC, Pulhat, Dinajpur
- 3) Md. Nannu Mia, Deputy Assistant Director, BADC, Barishal
- 4) Mr. Md. Monwar Hossain Khan, Deputy Director, BADC, Satkhira
- 5) Ms. Suborna Mondal, Deputy Assistant Director, BADC, Satkhira
- 6) Mr. Pintu Lal Halder, SAAO, SadarUpazila, Gopalganj
- 7) Md. Zafar Iqbal, BADC Dealer, Barishal
- 8) Farmers Group, Krishanbazar Rajbari, Dinajpur
- 9) Farmers Group, Ward 2, 7 No. Union, Dhalua
- 10) Farmers Group, Ward 5, Shibpur Union, Village – Damurtala, Satkhira Sadar Upazila, Satkhira
- 11) SAAO, DAE, Cox's Bazar
- 12) Farmers Group, Village – Purbo Sharia khali, 7 No. Kalipur Union, Patuakhali
- 13) Mr. Md. Nazimuddin Sohag, BADC Dealer, Notun Bazar, Bhola

4. DAE (July 2013 to December 2017): Theme 1, Project 3 বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প

- 1) UNO Azmeriganj, Habiganj
- 2) Farmers' group (15), Village – Jagatpur, Ajmiriganj Pourashava, Hobiganj
- 3) Farmers' group (13), Changshulakia, Kishoreganj Sadar Upazila, Kishoreganj
- 4) Farmers' group (10), Agriculture Advisory Center, Mithamoin, Kishoreganj
- 5) Farmers' group (9), Ward No. 7, Omarpara, Banaripara Pourashava, Barishal
- 6) Farmers' group (10), Diari Kashiari, Kolaroa, Satkhira
- 7) Mr. S.M Khaild Saifullah, District Training Officer, DAE Satkhira
- 8) Mr. A.K.M. Mamunur Rashid, SAAO, Kolaroa, Patuakhali
- 9) Md. Janu Mia, Gardener UNO Office, Farmer, Village-Jhalhathi, Upazila-Azmeriganj, Hobiganj
- 10) Mr. Md. Hemayet Hossain, SAAO, DAE Banaripara, Barishal
- 11) Mr. Md. Rafiqul Islam, SAAO, DAE Banaripara, Barishal

5. DPHE (January 2017 to June 2019): Theme 1, Project 4 জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প

- 1) Water users' group (10), Village – Madhabpasha, Upazila – Babuganj, Barishal
- 2) Mr. Engr. Md. Sumon, Assistant Engineer, DPHE Babuganj, Barishal
- 3) Mr. Md. Shamim Hossain, Mechanic, DPHE Babuganj, Barishal

6. DPHE (January 2017 to December 2019): Theme 1, Project 5 জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প (২য়পর্যায়)

- 1) Project visit report by Mr. Al-Amin Sarkar, Senior Assistant Head, LGD dated 2.12.2018
- 2) Water user group (9), Monpura, Bhola
- 3) Mr. Md. Selim, TW Mechanic, DPHE Monpura, Bhola

7. BWDB (May 2013 to December 2016): Theme 1, Project 6 জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় গোপালগঞ্জ জেলার কোটালীপাড়া উপজেলায় খাল পুনঃখনন প্রকল্প

- 1) Mr. Hasan Ahmed, Section Officer, BWDB, Madaripur Sadar Upazila
- 2) Mr. Kazi Imaranul Hasan, Village-Sadullahpur, Union: Sadullahpur, Upazila: Kotalipara, Gopalganj
- 3) Community groups (10), Village: Sadullahpur, Kotalipara, Gopalganj

8. BWDB (December 2013 to December 2016): Theme 1, Project 7 জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় মাদারীপুর জেলার মাদারীপুর সদর ও রাজৈর উপজেলায় খাল পুনঃখনন প্রকল্প

- 1) Monitoring report by Mr. Mirza Tarique Hikmat, Deputy Secretary, Ministry of Water Resources dated 27.3.2016
- 2) Monitoring report by Mr. Abi Abdullah, Deputy Director (Admin & Finance) and Mr. Rashed Mahmud, Maintenance Engineer, BCCT dated 03/02/2016
- 3) Project Visit report by Deputy Commissioner (DC) Madaripur dated 12/05/2015
- 4) Project Visit report by Mr. Md. Ayub Ali, Deputy Secretary, Ministry of Environment, Forest and Climate Change dated 23/02/2015
- 5) Mr. Md. Hasan Kabir, SAE-BWDB, Madaripur
- 6) Mr. Md. Yasin, Local Community Leader, Madaripur
- 7) Community group (10), Project areas, Madaripur

9. **BADC (April 2014 to April 2016):** Theme 1, Project 8 জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় শেরপুর জেলার নালিতাবাড়ি উপজেলাধীন চেলাখালী নদীতে রাবার ড্যাম নির্মাণ প্রকল্প
- 1) Project Visit and Monitoring Report undertaken by Mr. Md. Shafiqul Islam Laskar, Chairman, BADC dated 24/04/2016
 - 2) Farmers/community group (12), Uttar Sannyashivita Riverbank, Kochubari, Nalitabari, Sherpur
 - 3) Farmers/WMCA representatives (10), Sannyashivita, Nalitabari, Sherpur
 - 4) Mr. Md. Abdur Razzak, Carpenter, Sannyashivita, Nalitabari, Sherpur
 - 5) Mr. Maksumul Haque (Niloy), Sub-Assistant Engineer, BADC Nalitabari Unit, Sherpur
10. **CPP (January 2013 to December 2015):** Theme 2, Project 1 Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change
- 1) Community group (11), Monpura, Bhola
 - 2) Mr. Md. Mosharraf Hossain, 2 No. Hajirhat Union CPP Leader, Monpura Sadar, Bhola
 - 3) Mr. Md. Shahidul Islam, Clerk cum Wireless Operator, CPP Office, Monpura, Bhola
 - 4) Mr. Md. Hafiz Uddin Ahmed, CPP Officer, Mirsharai Pourashava, Chattogram
 - 5) Mr. Md. Saifullah Dider, CPP Team Leader, Mithachara, Mirsharai, Chattogram
 - 6) Community group (10), Mirsharai, Chattogram
11. **Khagrachai CHT Pourashava (January 2012 to December 2012):** Theme 3, Project 1 Establishment of Khagrachair Pourashavas as a Climate Resilient Town
- 1) Physical observation report by Dr. Md. Moniruzzaman, Director (Deputy Secretary) and Mr. Ahammad Shah, Assistant Director of Climate Change Unit of the Ministry of Environment, Forests and Climate Change dated 22/07/2012
 - 2) Mr. Dilip Kumar Biswas, Executive Engineer, Khagrachari CHT Pourashava
 - 3) Ms. Mst. Parvin Akter, Executive Officer, Khagrachari CHT Pourashava
 - 4) Community group (10), Khagrachari CHT Pourashava
12. **Patuakhali Pourashava (July 2012 to June 2013):** Theme 3, Project 2 Development of Infrastructure to Tackle Climate Change Impacts in Patuakhali Pourashava
- 1) Project works visit and observation report by Additional District Magistrate dated 4.4.2013
 - 2) Community groups (11), Shantibagh Ward No. 4, Patuakhali Pourashava
13. **DDM (July 2013 to December 2014):** Theme 3, Project 3 ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগ সহনশীল গৃহ নির্মাণ প্রকল্প
- 1) Project Monitoring Report dated 19.12.2014 by Mr. Abi Abdullah, Deputy Director (Admin & Finance) and Mr. Md. Mostafa Kamal, Deputy Director (Mitigation) of the BCCT
 - 2) Engr. Mohammad Mizanur Rahman, Upazila PIO, Brahmanbaria Sadar Upazila, Brahmanbaria
 - 3) Mr. Md. Lokman Hossain, Ward Member (local), Brahmanbaria Sadar
 - 4) Beneficiary group (10), Brahmanbaria Sadar, Brahmanbaria

14. LGED (January 2015 to December 2018): Theme 3, Project 4 পিরোজপুর জেলার ৪টি শিক্ষা প্রতিষ্ঠান কাম সাইক্লোন সেন্টার নির্মাণ প্রকল্প

- 1) Project visit and monitoring reports by Mr. Md. Yusuf Mehedi, Assistant Director (Mitigation) and Mr. Md. Iskandar Hossain, Deputy Director (Adaptation) of the BCCT dated 4.6.2018
- 2) Project visit and monitoring report by Mr. Mohammad Sayeed Ur Rahman, Deputy Secretary, Audit – 1 Section. LGD dated 13.12.2017
- 3) Project visit and monitoring report by Mr. Md. Iskander Hossain, Deputy Director (Adaptation) and Member Secretary of the BCCT Committee dated 7.5.2017
- 4) Project visit and monitoring report by Mr. Md. Mostafa Raihan, Deputy Director (Monitoring-2) and Mr. Md. Mostafa Kamal, Deputy Director (Monitoring-1) of the BCCT dated 15.2.2016
- 5) Community group (9), Southeast Vandaria beside 74 No. Cyclone Shelter, Ward No. 6, Vandaria, Pirojpur
- 6) Mr. Md. Badrul Alam, Upazila Engineer, LGED Vandaria, Pirojpur
- 7) Mr. Md. Delwar Hossain, Counsellor, Vandaria Pourashava

15. BWDB (July 2010 to June 2014): Theme 3, Project 5 চট্টগ্রাম জেলার বিভিন্ন উপজেলায় কর্ণফুলী, হালদা, ইছামতি নদী ও শিলক খাল এবং ইহাদের শাখা নদীর বিভিন্ন ভাঙ্গন কবলিত অংশে প্রতিরক্ষামূলক অবকাঠামো নির্মাণ প্রকল্প

- 1) Project visit and monitoring report by Mr. Dr. Hasan Mahmud, MP, Honorable Minister of the Ministry of Environment, Forests and Climate Change dated 22.9.2013, 9.9.2013 and 26.9.2013
- 2) Project visit and monitoring report by Mr. Sheikh Altaf Ali, Senior Secretary, Ministry of Water Resources dated 15.12.2011, 22.12.2012 and 13.01.2013
- 3) Project visit and monitoring report by Mr. Didarul Ahsan, Managing Director (Additional Secretary) of the BCCT dated 02.02.2012
- 4) Project visit and monitoring report by Mr. Prodip Kumar Mohottam, Deputy Chief, Ministry of Water Resources dated 04.02.2012
- 5) Project visit and monitoring report by Mr. Md. Abdul Momin, Deputy Secretary, Ministry of Water Resources & Mr. Dr. Md. Maniruzzaman, Director (Deputy Secretary) of BCCT dated 15.07.2012
- 6) Project visit and monitoring report by Mr. Md. Enamul haque, Executive Engineer BWDB & Mr. Md. Najibur Rahman, Executive Engineer BWDB dated 07.07.2013
- 7) Project visit and monitoring report by Mr. Abdul Majid Mollah, SE-BWDB, Dhaka dated 31.01.2014
- 8) Project visit and monitoring report by Mr. Engr. Saibeen Sultana, Assistant Programmer of the BCCT dated 24.06.2014
- 9) Mr. Pele Chakma, SAE-BWDB Chattogram
- 10) Mr. Md. Shofiul Bashar, UP Member, Rawjan, Chattogram
- 11) Community group (9), Dewajeeghat Hindupara, Noachara, Rawjan, Chattogram

16. BWDB (March 2011 to December 2015): Theme 3, Project 6 চট্টগ্রাম জেলার মিরশরাই উপজেলার উপকূলবর্তী এলাকায় সেচ ও যোগাযোগ ব্যবস্থার উন্নয়ন এবং মুহুরী এক্রিটেড এলাকায় সিডিএসপি বেড়ীবাধ উন্নয়ন প্রকল্প

- 1) Mr. Md. Sohag Ahmed, SAE-BWDB, Mirsharai, Chattogram
- 2) Mr. Md. Alauddin Siraji, GS, Korerhat Upazila AL, Mirsharai, Chattogram
- 3) Community group (10), Korerhat, Mirshari, Chattogram
- 4) Project visit and monitoring report by Mr. Mohammad Eftekhari Alam, Deputy Director (Monitoring), BCCT dated 07.05.2013
- 5) Project visit and monitoring report by Mr. Md. Mokhlesar Rahman Khan, Deputy Managing Director (Joint Secretary), BCCT dated 20.07.2013

17. BWDB (December 2012 to June 2016): Theme 3, Project 7 খুলনা জেলার বুপসা উপজেলার অন্তর্গত রামনগর-রহিমনগর এলাকায় বাধী পুনঃনির্মাণ ও নদীতীর সংরক্ষণ প্রকল্প

- 1) Project visit and monitoring report by Mr. Mirza Tarique Hikmat, Deputy Secretary, Ministry of Water Resources dated 21.12.2015
- 2) Project visit and monitoring report by Mr. Md. Rashedul Islam, Secretary and Ms. Shakila Yasmin, Deputy Director (Development) of BCCT dated 09.12.2013
- 3) Community Group (15), Ramnagar-Rahimnagar, Rupsha, Khulna
- 4) Mr. Md. Anwar Hossain, Local Elite, Ramnagar-Rahimnagar, Rupsha, Khulna

18. BWDB (February 2013 to June 2015): Theme 3, Project 8 মেঘনা নদীর ভাংগন হতে বরিশাল জেলার মেহেন্দিগঞ্জ উপজেলার উলানিয়া গোবিন্দপুর এলাকা রক্ষা প্রকল্প

- 1) Project visit and monitoring report by Mr. Abdul High Milton and Mr. Mostafa Kamal, Assistant Directors, CCTF dated 17.06.2014
- 2) Project visit and monitoring report by Mr. Md. Mizanur Rahman, Director, CCTF and by Mr. Eusuf Mehedi, Assistant Director dated 17.06.2014
- 3) Mr. Md. Kabir Munshi, UP Member, Ulania Gobindapur, Mehendiganj, Barishal
- 4) Community Group (8), Ulania Gobindapur, Mehendiganj, Barishal
- 5) Mr. Md. Raju Aarry, Local Elite, Ulania Gobindapur, Mehendiganj, Barishal
- 6) Community Group (12), North Ulania Gobindapur, Mehendiganj, Barishal

19. LGED (April 2013 to June 2015): Theme 3, Project 9 মুন্সিগঞ্জ জেলার লৌহজং উপজেলার পশ্চিম গাঁওদিয়া জামে মসজিদ হতে বেজগাঁও পূজামন্দির ভায়া খানকা শরীফ পর্যন্ত সড়ক কাম বেড়িবাধী নির্মাণ প্রকল্প

- 1) Project visit and monitoring report by Mr. Md. Abi Abdullah, Deputy Director (Admin & Finance) and Mr. Md. Iskandar Hossain, Assistant Director (Adaptation) of the BCCT dated 23 September 2014
- 2) Community Group (11), Paschim Gaodia, Louhajanj, Munshiganj

20. BWDB (April 2013 to June 2015): Theme 3, Project 10 জলবায়ু পরিবর্তনের ঝুঁকি নিরসনকল্পে নোয়াখালী জেলার সুবর্ণচর ও হাতিয়া উপজেলার গাবতলী মুইস সংলগ্ন মেঘনা নদীর তীর সংরক্ষণ প্রকল্প

- 1) Project visit and monitoring report by Mr. Iskandar Hossain, and Mr. Md. Iftekhar Alam, Assistant Directors (Monitoring) of BCCT dated 06.09.2014
- 2) Project visit and monitoring report by Mr. Belal Biswas, Deputy Chief and Mr. Rathindra Naath Roy, Assistant Chiefs (CCTF Monitoring) of BCCT dated 13.03.2015
- 3) Mr. Md. Nur Alam, Assistant Engineer, BWDB Noakhali
- 4) Mr. Syed Ershad Ali, Assistant Engineer BWDB, Noakhali Sadar Upazila
- 5) Community Group (10), Char Subarno, Noakhali

21. BWDB (July 2013 to June 2017): Theme 3, Project 11 ঢাকা জেলার কেরানীগঞ্জ উপজেলাধীন শূভাঢ্যা হতে আগানগর পর্যন্ত শূভাঢ্যা খাল পুনঃখনন ও তীর সংরক্ষণমূলক কাজ বাস্তবায়নের মাধ্যমে পরিবেশের ভারসাম্য রক্ষাকরণ প্রকল্প

- 1) Project visit and monitoring report by Mrs. Nushat Yeasmin, Deputy Secretary of the Ministry of Water Resources dated 08.11.2016
- 2) Project visit and monitoring report by Mr. Md. Abdul Kuddus, Managing Director, BCCTF and Mr. Abi Abdullah, Deputy Director of BCCTF dated 22.11.2014
- 3) Project visit and monitoring report by Mr. Dr. Engr. Ganoranjon Shill, Managing Director, BCCTF and Mr. Abi Abdullah, Deputy Director of the BCCTF dated 07.06.2016
- 4) Mr. Md. Masud Rana, Sub-Assistant Engineer, BWDB Motijheel, Dhaka
- 5) Mr. Md. Khorshed Alam, Chairman, Aganagar UP, Keraniganj, Dhaka

6) Community Group (10), Aganagar, Keraniganj, Dhaka

22. BWDB (November 2015 to June 2018): Theme 3, Project 12 জলবায়ু পরিবর্তনের প্রভাব হতে ভোলা সদর উপজেলার পশ্চিম ইলিশা ইউনিয়নের গাজীবাড়ি ও জাঙ্গালিয়া এলাকা রক্ষা প্রকল্প

- 1) Project visit and monitoring report by Mr. Md. Mizanur Rahman, Director of Monitoring & Evaluation, CCU, Ministry of EFCC dated 09.03.2018
- 2) Project visit and monitoring report by Mr. Md. Abi Abdullah, Deputy Director (Admin & Finance), Mr. Md. Eusuf Mahadi, Assistant Director (Mitigation), and Mr. Md Iftekhar Alam, Assistant Director (Evaluation-2) BCCT dated from 18.05.2017 to 19.05.2017
- 3) Community Group (17), Gazibari, Bhola Sadar Upazila
- 4) Mr. Faruk Gazi, Local UP Member, Gangalia UP, Gazibari, Bhola
- 5) Mr. Md. Monirul Islam, Sub-Assistant Engineer BWDB, Bhola Sadar Upazila

23. BWDB (October 2012 to December 2015): Theme 3, Project 13 টাংগাইল জেলার মির্জাপুর উপজেলাধীন হাট ফতেহপুর নামক স্থানে বংশাই নদীর তীর সংরক্ষণ প্রকল্প

- 1) Project visit and monitoring report by Ms. Rafiqua Sultana, Assistant Director, CCU of the MoEFCC dated 08.08.2014
- 2) Project visit and monitoring report by Mr. Abu Abdullah, Deputy Director, CCU of the MoEFCC dated 12.12.2014
- 3) Project visit and monitoring report by Mr. Ahammad Shah, Assistant Director, CCU of the MoEFCC dated 08.08.2014
- 4) Mr. Md. Shafiqul Islam, Sub-Assistant Engineer, BWDB Tangail
- 5) Mr. Md. Shahidul Islam, Executive Engineer, BWDB Tangail
- 6) Community Group (10), Hat Fatehpur, Mirzapur, Tangail

24. BWDB (November 2016 to June 2019): Theme 3, Project 14 জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় চট্টগ্রাম জেলার রাউজান উপজেলার দেওয়ানজীঘাট, মোকামিপাড়াসহ হালদা নদীর বাম তীরের বিভিন্ন এলাকায় প্রতিরক্ষামূলক প্রকল্প

- 1) Project visit and monitoring report by Mr. Md. Iskandar Hosan, Assistant Director of BCCT dated 16.04.2018
- 2) Project visit and monitoring report by Mr. Md. Mokkalas Rahman Sarker, Deputy Director of BCCT dated 27.04.2018
- 3) Project visit and monitoring report by Mr. Md. Ahammad Shah, Assistant Director of BCCT dated 23.02.2019
- 4) Project visit and monitoring report by Mr. Md. Akhteruzzaman, Audit and Accounts Officer of BCCT dated 23.02.2019
- 5) Project visit and monitoring report by Mr. Md. Mahmud Hasan, Deputy Secretary of the Ministry of Water Resources dated 09.05.2019
- 6) Mr. Md. Shamsul Arefin, Sub-Divisional Engineer BWDB Kaptai, Rangamati
- 7) Mr. Md. Shawkat Osman Chowdhury, UP Member, Dewanjeeghat Union, Rawjan, Chattogram
- 8) Community Group (12), Nowajishpur, Rawjan, Chattogram

25. LGED (April 2014 to June 2015): Theme 3, Project 15 ভান্ডারিয়া উপজেলার বীধ কাম সড়কের স্লোপ প্রটেকশনসহ উন্নয়ন প্রকল্প

- 1) Project visit and monitoring report by Mr. Md. Mizanur Rahman, Director (Monitoring & Evaluation) of BCCT dated 18.03.2015
- 2) Mr. Md. Habibur Rahman, Electrician, LGED Barishal
- 3) Mr. Md. Shahnur Alam, Surveyor, LGED Barishal
- 4) Community Group (15), Cha-Chari Nadi Mohona, Vandaria, Barishal

26. LGED (January 2016 to June 2017): Theme 3, Project 16 জলবায়ুর পরিবর্তনের প্রভাবে উপকূলীয় অঞ্চলে ক্ষতিগ্রস্ত সড়ক নির্মাণ/পুনঃনির্মাণ/ পুনর্বাসন প্রকল্প (ভোলা জেলা)

- 1) Project visit and monitoring report by Mr. Soroj Kumar Nath, Deputy Secretary (Development-1 Section), Local Government Division dated 27.04.2017
- 2) Project visit and monitoring report by Mr. Mohammad Iftekhar Alam, Deputy Director (Evaluation-2) and Mr. Abi Abdullah, Deputy Director (Admin & Finance), BCCT dated 02-03.12.2016
- 3) Community Group (10), Charfashon, Bhola
- 4) Mr. Md. Saidur Rahman, Sub-Assistant Engineer, LGED, Chafashon, Bhola
- 5) Mr. Md. Nur Hossain, Surveyor, LGED, Charfashon, Bhola

27. LGED (December 2015 to June 2017): Theme 3, Project 17 ভোলা জেলার সদর উপজলাধীন জলবায়ু পরিবর্তন সহিষ্ণু সড়ক নির্মাণ প্রকল্প

- 1) Project visit and monitoring report by Mr. Mohammad Iftekhar Alam, Deputy Director (Evaluation-2), Mr. Eusuf Mahadi, Deputy Director (Mitigation) and Mr. Abi Abdullah, Deputy Director (Admin & Finance), BCCT dated 08.06.2017
- 2) Project visit and monitoring report by Mr. Mohammad Iftekhar Alam, Deputy Director (Evaluation-2) and Mr. Abi Abdullah, Deputy Director (Admin & Finance), BCCT dated 11.12.2016
- 3) Community Group (11), Bhola Sadar Upazila, Bhola
- 4) Mr. Subrata Roy, Upazila Engineer, Bhola Sadar, Bhola
- 5) Mr. Md. Mosharraf Hossain, Local Elite, Project area, Bhola Sadar Upazila

28. Mothbaria Pourashava, Pirojpur (April 2014 to March 2017): Theme 3, Project 18 জলবায়ু পরিবর্তনজনিত ঝুঁকি মোকাবেলার জন্য মঠবাড়িয়া পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প

- 1) Project visit and monitoring report by Mr. Md. Mizanur Rahman, Director (Monitoring & Evaluation) of BCCT dated 18.03.2015
- 2) Project visit and monitoring report by Mr. Md. Eusuf Mahadi, Assistant Director (Admin) of BCCT dated 18.03.2015
- 3) Project visit and monitoring report by Mr. Md. Eusuf Mahadi, Assistant Director (Admin) and Mr. Md. Khyer-Uz-Zaman, Assistant Director (Monitoring) of BCCT dated 20.10.2015
- 4) Project visit and monitoring report by Mr. Md. Abdur Rouf Mia, Deputy Secretary, Local Government Department dated 12.04.2016
- 5) Community Group (12), Ward No. 9, Mathbaria Pourashava, Pirojpur
- 6) Community Group (7), Ward No. 7, Mothbaria Pourashava
- 7) Mr. Md. Abdus Salek, Executive Engineer, Barishal/Pirojpur

29. Komolganj Pourashava, Moulvibazar (March 2015 to December 2016): Theme 3, Project 19 জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কমলগঞ্জ পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প

- 1) Project visit and monitoring report by Mr. Dr. Engr. Jaan Ranjan Sill, Managing Director (Additional Secretary), BCCT dated 04.03.2016
- 2) Project visit and monitoring report by Mr. Jakaria, Deputy Secretary, Local Government Department dated 18.10.2016
- 3) Community Group (8), East of Mokbul Ali Sarak, Komolganj Pourashava
- 4) Community group (8), South to Bakth House Rasel, Komolganj Pourashava

30. Kaliakoir Pourashava, Gazipur (October 2016 to June 2018): Theme 3, Project 20 জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কালিয়কৈর পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প

- 1) Project visit and monitoring report by Mr. Dipak Kanti Paul, Managing Director (Additional Secretary), BCCT dated 03.12.2017
- 2) Project visit and monitoring report by Mr. Idris Siddiqui, Director (Joint Secretary), Local Government Division dated 07.05.2018
- 3) Project visit and monitoring report by Mr. Md. Abi Abdullah, Deputy Director of BCCT dated 03.12.2017
- 4) Project visit and monitoring report by Mr. Jamil Ahmed, Deputy Director, Local Government (DD-LG), Gazipur dated 14.03.2018 and 07.05.2018
- 5) Engr. Haripada Roy, Executive Engineer and Project Director, Kaliakoir Pourashava
- 6) Mr. Ad. Airf Hossain, Businessman, Digheer Par, Chandura, Kaliakoir
- 7) Community Group (15) at Kaliakoir Pourashava, Ward No. 3

31. Rajshahi City Corporation (March 2016 to June 2018): Theme 3, Project 21 রাজশাহী সিটি কর্পোরেশনের ২৮নং ওয়ার্ডের জলাবদ্ধতা নিরসনে অবকাঠামো উন্নয়ন প্রকল্প

- 1) Project visit and monitoring report by Mr. Md. Moklasar Rahman Sharkar, Deputy Director and Mr. Rayhan, Assistant Director of BCCT dated 18.03.2016
- 2) Project visit and monitoring report by Mr. Md. Abu Sharif Uddin, Chief Executive Officer, RCC dated 18.12.2016
- 3) Project visit and monitoring report by Mr. Md. Moklasar Rahman Sharkar, Deputy Director of BCCT dated 18.03.2017
- 4) Community Group (13), Ward No. 28, Motihar, Rajshahi City Corporation (RCC)
- 5) Mr. Md. Kamrul Hasan, Secretary of Ward 28 Counsilar Office, Matihar, RCC

32. Lalmohan Pourashava, Bhola (June 2016 to December 2017): Theme 3, Project 22 লালমোহন পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প (২য় পর্যায়)

- 1) Project visit and monitoring report by Mr. Md. Abi Abdullah, Deputy Director, BCCT dated 18.04.2017
- 2) Project visit and monitoring report by Mr. Md. Eusuf Mahadi, Assistant Director (Mitigation), and Mr. Md. Aktaruzzaman, Audit and Accounts Officer of BCCT dated 01.04.2017
- 3) Project visit and monitoring report by Mr. Md. Eusuf Mahadi, Assistant Director (Mitigation), BCCT dated 18.10.2018
- 4) Project visit and monitoring report by Mr. Md. Abdus Salam, Director, Local Government Division Barishal dated 20.08.2018
- 5) Project visit and monitoring report by Mr. Md. Eusuf Mahadi, Assistant Director (Mitigation), BCCT dated 01.04.2017
- 6) Community Group (9), Lalmohon Pourashava, Bhola
- 7) Mr. Md. Kamal Hossain, Assistant Engineer, Lalmohon Pourashava
- 8) Mr. Md. Mehedi Hasan, Sub-Assistant Engineer, Lalmohon Pourashava

33. Bhola Pourashava (August 2014 to June 2016): Theme 3, Project 23 জলবায়ু পরিবর্তনজনিত সৃষ্ট দুর্যোগ মোকাবেলায় ভোলা পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প

- 1) Project visit and monitoring report by Mr. Md. Abi Abdullah, Deputy Director (Admin & Finance) and Mr. Md. Mostafa Kamal, Assistant Director (Mitigation), BCCT dated 28.06.2015
- 2) Project visit and monitoring report by Mr. Md. Mizanur Rahman, Director (M&E), and Mr. Md. Mostafa Kamal, Assistant Director (Evaluation-1) of BCCT dated 11.03.2016

- 3) Project visit and monitoring report by Mr. Monwar Hossen, DDLG, Bhola dated 17.06.2016
- 4) Community Group (13), Bhola Pourashava, Ward No 4
- 5) Community Group (7), Bhola Pourashava
- 6) Mr. Md. Zakir Hossen, Sub-Assistant Engineer, Bhola Pourashava
- 7) Mr. Md. Abdus Sattar, Executive Engineer, Bhola Pourashava

34. BARI (September 2010 to April 2017): Theme 4, Project 1 জলবায়ু পরিবর্তনের প্রভাব মোকাবিলায় খরাপ্রবণ ও উপকূলীয় লবণাক্ত এলাকার জন্য টেকসই ফসল ব্যবস্থা উন্নয়ন প্রকল্প

- 1) Farmers Group (13), Farm adjacent to Agricultural Research Institute, Dinajpur Rajbari
- 2) Mr. Md. Ashiqur Rahman, Scientific Assistant, BARI Dinajpur
- 3) Mr. Md. Asaduzzaman, Scientific Assistant, BARI Mymensingh
- 4) Farmers Group (12), Atghoria, Pabna
- 5) Dr. Md. Shamim Hossain Molla, Scientific Assistant, BARI Pabna
- 6) Mr. Md. Abu Bakkar Siddique, Assistant Scientific Officer, BARI Pabna
- 7) Farmers Group (9), Bhara Shimla, Kaliganj, Satkhira
- 8) Mr. Md. Ali Ahmed Fakir, Scientific Officer, BARI Satkhira
- 9) Mr. S.M. Motiar Rahman, Assistant Scientific Officer, BARI Khulna
- 10) Farmers Group (10), Village- Bagmara, Bagerhat SadarUpazila, Bagerhat
- 11) Mr. Md. Sheikh Abdus Salam, Trainer, TTM Bagerhat Sadar
- 12) Farmers Group (15), Katla Bari, Valuka, Mymensingh
- 13) Farmers Group (14), Chingra, Dumuria, Khulna
- 14) Mr. Ramesh Chandra Mondal, SAAO, Dumuria, Khulna
- 15) Community Group (8), Charchat, Rajshahi
- 16) Mr. Md. Jasim Uddin, SAAO, Charchat, Rajshahi
- 17) Farmers Group (9), Arjuntola, Bagerhat Sadar
- 18) Mr. Nirmal Kumar Das, Trainer, BARI Bagerhat Sadar
- 19) Farmers Group (14), Sonakhali, valuka, Mymensingh
- 20) Farmers Group (9), Puthia, Rajshahi
- 21) Mr. Md. Golam Saqlain, SAAO, Puthia, Rajshahi
- 22) Field Visit and Monitoring Report by Mr. Dr. Md. Abdur Rouf, Joint Secretary and Mr. Imrul Hasan, Assistant Chief, Ministry of Agriculture dated 05.03.2016
- 23) Field Visit and Monitoring Report by Mr. Dr. Jaan Rangan Shil, Managing Director and Mr. Abi Abdullah, Deputy Director of BCCT dated 14.10.2013 and 6-7 November 2015

35. Bangabandhu Sheikh Mujibur Rahman Agricultural University, BSMRAU (July 2016 to June 2019): Theme 4, Project 2 বাংলাদেশের জলবায়ু ঝুঁকিপূর্ণ অঞ্চলে জন্মানোর লক্ষ্যে উপকূলীয় এলাকার কৌলিসম্পদ ব্যবহার করে লবন সহিষ্ণু ডাবলড হ্যাঞ্জয়েড জাতের উদ্ভাবন প্রকল্প

- 1) Field Visit and Monitoring Report by Ms. Sherin Zinnat Jahan, PA to Managing Director, Mr. Md. Mostafa Raihan, Assistant Director, BCCT dated 05.07.2017
- 2) Field Visit and Monitoring Report by Mr. Mollah Mohammad Anisuzzaman, Deputy Chief (Planning – 2), Ministry of Education dated 22.06.2019

36. BINA (July 2014 to June 2017): Theme 4, Project 3 পরমাণু কৃষি গবেষণার মাধ্যমে জলবায়ু পরিবর্তনশীল জাত/প্রযুক্তি উদ্ভাবন ও বিভিন্ন প্রতিবেশ অঞ্চলে অভিযোজন প্রকল্প

- 1) Field Visit and Monitoring Report by Mr. Dr. Md. Abdur Rouf, Joint Secretary (PPB), and Mr. S.M Imrul Hasan, Senior Assistant Chief of the Ministry of Agriculture dated 19.06.2016

- 2) Field Visit and Monitoring Report by Mr. Abi Abdullah, Deputy Director (Admin & Finance), and Mr. Md. Jane Alam, Assistant Director (Protocol & Public Relations), BCCT dated 02.02.2016
 - 3) Field Visit and Monitoring Report by Mr. Abi Abdullah, Deputy Director (Admin & Finance), and Mr. Md. Mostafa Raihan, Assistant Director (Monitoring - 2), BCCT dated 12.12.2014
 - 4) Farmers Group (9), Iswardi, Pabna
 - 5) Mr. Khan Jahan Ali, Scientific Officer, BINA, Pabna
 - 6) Mr. Md. Habibur Rahman, Assistant Scientific Officer, BINA, Pabna
 - 7) Farmers Group (18), Betmari Village, Melandah, Jamalpur
 - 8) Farmers Group (9), Patuli Village, Trishal, Mymensingh
 - 9) Farmers Group (8), Kazigram Village, Trishal, Mymensingh
 - 10) Farmers Group (15), Rashatola Village, Nalitabari, Sherpur
 - 11) Mr. Md. Robiul Islam Akand, Scientific Officer, BINA Gopalganj
 - 12) Mr. Sourav Adhikari, Scientific Officer, BINA Sub-Center, Noakhali
 - 13) Mr. Md. Raihan Sikdar, Scientific Officer, BINA Sub-Center, Subornachar, Noakhali
 - 14) Mr. Md. Ashiqur Rahman, Scientific Officer, BINA, Noakhali
 - 15) Farmers Group (10), Subornochar, Noakhali
 - 16) Farmers Group (10), Hardada 6 No. Vomra Union, BINA, Satkhira
 - 17) Mr. Dr. Md. Babul Akter, Senior Scientific Officer, BINA, Satkhira
 - 18) Mr. Md. Moshir Rahman, Scientific Officer, BINA, Satkhira
 - 19) Farmers group (10), Mongal kata, Sunamganj Sadar
 - 20) Farmers Group (9), Berigaon, Sunamganj Sadar
 - 21) Mr. ABM Shafiul Alam, Sr. Scientific Officer, BINA, Khagrachari
 - 22) Mrs. Anka Marma, Field Workers, BINA, Khagrachari
 - 23) Farmers Group (10), Khagrachari Sadar
 - 24) Farmers Group (8), Nachole, Chapai Nawabganj
 - 25) Mr. Md. Aminul Islam, SAAO, Nachole, Chapai Nawabganj
 - 26) Mr. Liuan Marak, School Teacher, Haluaghat, Mymensingh
 - 27) Mr. Md. Mobarak Hossain, SAAO, Melandah, DAE, Jamalpur
 - 28) Mr. Md. Shameem Akand, Scientific Officer, BINA, Jamalpur
 - 29) Mr. Dr. M. Shahidul Islam, Principal Scientific Officer, BINA, Mymensingh
- 37. DoE (July 2016 to June 2019): Theme 5, Project 1** সমগ্র বাংলাদেশের শহরগুলোর (পৌরসভা/মিউনিসিপ্যালিটি) জৈব আবর্জনা ব্যবহার করে প্রোগ্রাম্যাটিক সিডিএম শীর্ষক প্রকল্প
- 1) Field Visit and Monitoring Report by Mr. Abi Abdullah, Deputy Director (Admin & Finance), and Mr. Md. Akhtaruzzaman, Audit and Accounts Officer, BCCT dated 18.11.2015
 - 2) Field Visit and Monitoring Report by Mr. Md. Eusuf Mahadi, Assistant Director (Evaluation), BCCT dated 04.11.2013
- 38. DoF (July 2012 to June 2015): Theme 5, Project 2 Eco-Restoration of Hill Forests, Cox's Bazar**
- 1) Project Site Visit and Monitoring Report by Mr. Md. Rashedul Islam, Secretary (Joint Secretary) and Mr. Md. Khayer-Uz-Zaman, Assistant Director (Admin & Finance) of BCCT dated 16.04.2015
 - 2) Monthly Implementation Progress Report (Financial Year 2014-2015) by the BCCT submitted on 24 June 2015
 - 3) Mr. Md. Nazmul Hossain, Station Officer, Forest Range Office, Ramu, Cox's Bazar
 - 4) Mr. Md. Mashekur Rahman, UP Member, Ramu, Cox's Bazar
 - 5) Forest Community Group (10), Ramu, Cox's Bazar

39. Department of Forest (November 2012 to June 2015): Theme 5, Project 3 কাপ্তাই এলাকায় বাগান সৃজনের মাধ্যমে কার্বন সিংক তৈরী প্রকল্প

- 1) Mr. Kazi Maksudur Rahman Babu, Chairman of Kaptail National Park Committee, Rangamati
- 2) Mr. Md. Anwar Hossain, Station Officer, Forest Department, Kaptai, Rangamati
- 3) Community Group (10), Carbon Sink Garden, Kaptai, Rangamati

40. IFRD (March 2014 to February 2016): Theme 5, Project 4 বায়োগ্যাস প্রযুক্তি সম্প্রসারণের মাধ্যমে কার্বন নিঃসরণ হ্রাস ও বিকল্প জ্বালানি ব্যবহার বৃদ্ধিকরণ প্রকল্প (২য়পর্যায়)

- 1) Dr. S.M. Asaduzzaman Sujan, Former Project Director, IFRD-BCSIR
- 2) Project Visit and Monitoring Report by Mr. Md. Mokhlesar Rahman Sarkar, DMD and Mr. Md. Mostafa Kamal, Assistant Director of BCCT dated 21.11.2015
- 3) Project Visit and Monitoring Report by Mr. Abi Abdullah, Deputy Director (Admin & Finance) and Mr. Md. Mostafa Raihan, Assistant Director (Monitoring – 2) of BCCT dated 06.06.2015
- 4) Project Visit and Monitoring Report by Mr. Khondkar Md. Asaduzzaman, Secretary, Ministry of Science and Technology dated 05.01.2015
- 5) Project Visit and Monitoring Report by Mr. Md. Rashadul Islam, Secretary and Ms. Shakila Yasmin, Assistant Director of BCCT dated 04.10.2014
- 6) Project Visit and Monitoring Report by Mr. Abi Abdullah, Deputy Director (Admin & Finance), Mr. Md. Akhtaruzzaman, Audit & Accounts Officer and Mr. Md. Muktanur, Assistant Librarian of BCCT dated 27-28.03.2015
- 7) Community Group (11), Village-Dupakuri, Kendua, Jamalpur
- 8) Mr. Md. Abdul Kuddus, Farmer cum Biogas Plant Owner, Dupakuri, Kendua, Jamalpur
- 9) Mr. Md. Hafizur Rahman, Project Implementation Contractor, Jamalpur Sadar
- 10) Community Group (13), Village – Bogabaid, Ward No. 11, Jamalpur Pourashava
- 11) Community Group (11), Pourakoli Sonatola, Bagerhat
- 12) Mr. Jimi Sarkar, Director, Supti Mohila Unnyaon Sangstha, VIP Road, Bagerhat
- 13) Community Group (9), Shibganj, Chapai Nawabganj
- 14) Mr. Md. Zakir Hossain, Field Supervisor, IFRD, Shibganj, Chapai Nawabganj
- 15) Community Group (14), Anupampur, Charghat, Rajshahi
- 16) Mr. Md. Dahidul Islam, Field Supervisor, IFRD Charghat, Rajshahi
- 17) Community Group (10), Village – Sherkol, Singra, Natore
- 18) Mr. Sree Pran Nath, Field Supervisor, IFRD Singra, Natore
- 19) Community Group (15), Baburbazar, Dimla, Nilphamari
- 20) Mr. Md. Motiar Rahman, Agent, Dimla, Nilphamari
- 21) Mr. Md. Ruhul Ameen Mia, SAAO, Madaripur
- 22) Mr. Md. Monwar Hossain, Upazila Engineer, Madaripur Sadar
- 23) Community Group (7), Madaripur Sadar, Madaripur

41. Singra Pourashava, Natore (July 2016 to December 2017): Theme 5, Project 5 সিংড়া পৌর এলাকায় সৌর বিদ্যুতায়িত সড়কবাতি স্থাপন শীষক প্রকল্প

- 1) Project Visit and Monitoring Report by Mr. Md. Mizanur Rahman, Director (M&E) of BCCT dated 12.11.2017
- 2) Project Visit and Monitoring Report by Mr. Md. Razzakul Islam, Deputy Director (In Charge) of Local Government, Natore dated 11.12.2017
- 3) Community Group (8), Village – Ningoin, Singra, Natore
- 4) Mr. Md. Asaduzzaman Bablu, Ningoin, Singra, Natore

42. Bangladesh Army (March 2017 to June 2018): Theme 5, Project 6 নোয়াখালী জেলার হাতিয়া উপজেলায় জাহাজের চর এলাকায় নবায়নযোগ্য শক্তি নির্ভর ১ মেগাওয়াট ক্ষমতাসম্পন্ন বিদ্যুৎকেন্দ্র স্থাপন প্রকল্প

- 1) Project Visit and Monitoring Report by Mr. Md. Mostafa Kamal, Assistant Director (Negotiation) of BCCT dated 16.11.2018
- 2) Project Visit and Monitoring Report by Mr. Sifat Md. Ishtiaq Bhuiyan, Assistant Chief, and Mr. Hamidur Rahman, Administrative Officer, Ministry of Defense dated 06.11.2018
- 3) Project Visit and Monitoring Report by Mr. Md. Khair-Uz-Zaman, Assistant Director (Monitoring - 1) of BCCT dated 28.04.2018
- 4) Project Visit and Monitoring Report by Mr. Sifat Md. Ishtiaq Bhuiyan, Assistant Chief, Ministry of Defense dated 23.12.2019
- 5) Project Visit and Monitoring Report by Mr. Nasir-Ud-Doula, Director (M&E), BCCT, Mr. Sifat Md. Ishtiaq Bhuiyan, Assistant Chief, Ministry of Defense, and Mr. Md. Mostafa Kamal, Assistant Director (Negotiation), BCCT dated 10.10.2019

43. REB (April 2010 to April 2012): Theme 5, Project 7 Introduction of Solar Powered Irrigation Pump as well as Power Management and Distribution System to Mitigate Energy Crisis and Climate Change

- 1) Project Visit and Monitoring Report by Mr. Md. Enamul Haque, Honorable Minister, Ministry of Power, Energy and Mineral Resources and Mr. Md. Abul Kalam Azad, PD-REB dated 25.03.2012
- 2) Project Visit and Monitoring Report by Mr. Md. Abul Kalam Azad, Secretary, Power Division and Mr. S.M. Alamgir Kabir, Chairman, PDB, and Mr. Brigadier General Main Uddin, Chairman, REB dated 31.03.2012
- 3) Mr. Md. Fazlul Haque, Assistant Engineer, REB Mirzapur, Tangail
- 4) Mr. Md. Ananda, Local UP Member, Mirzapur, Tangail
- 5) Users Group (9), Mirzapur, Tangail
- 6) Community Group (9), Village- Kismat Narail, Haluaghat, Mymensingh
- 7) Community Group (10), Village – Roghunathpur, Satkhira Sadar Upazila, Satkhira
- 8) Mr. Md. Shariful Islam, Powerhouse Coordinator, Patkelghata, Satkhira
- 9) Mr. Md. Sheik Shohidur Rahman, Wiring Inspector, Patkelghata, Satkhira
- 10) Community Group (15), Khamar Bozra, Gabtoli Bazar, Kalapani, Kurigram
- 11) Mr. Md. Nazmul Haque, Solar Irrigation Driver, Gabtoli, Ulipur, Kurigram
- 12) Community Group (9), Pachroshia, Shibganj, Chapai Nawabganj

44. REB (July 2012 to November 2014): Theme 5, Project 8 Electrification in Local Area (Upazila Complex) by using Solar Energy

- 1) Project Visit and Monitoring Report by Ms. Rafiq Sultana, Assistant Director (Evaluation - 2) & Mr. Md. Iskandar Hosan, Assistant Director (Adaptation) of BCCT dated 19.06.2014
- 2) Mr. Zunayedur Rahman, Deputy Director/Manager, PBS, Chunarughat, Hobiganj
- 3) Community Group (14), Chatmohor, Pabna
- 4) Mr. Engr. Sultan Mahmud, Upazila Engineer, LGED, Chatmohor, Pabna
- 5) Community Group (10), Dumuria, Khulna
- 6) Mr. Md. Abdul Mazed, UDC Entrepreneur, Dumuria, Khulna
- 7) Mr. Sajal Chakrobarti, LGED Upazila Electrician, Shantiganj, Sunamganj
- 8) Mr. Mizanur Rahman Suman, Computer Operator, Upazila Office, Haluaghat, Mymensingh
- 9) Mr. Md. Monirul Islam, Executive Engineer, BREB Mymensingh Zone
- 10) Mr. Rafid Arshad Anik, AJ Engineer, PBS Mithamoin, Kishoreganj
- 11) Mr. Plaban Paul, PIO, Chunarughat, Hobiganj
- 12) Mr. Rakibuzzaman, Wiring Inspector, PBS Zonal Office, Sunamganj

- 13) Mr. Dilip Roy, Sub-Assistant Engineer, REB, Gopalganj Sadar
- 14) Mr. Abu Taleb Sheikh, Electrician, LGED, Tungipara, Gopalganj
- 15) Community Group (8), Tungipara, Gopalganj
- 16) Community Group (10), Mollarhat, Bagerhat
- 17) Mr. Mssum Reza, Electrician, Mollarhat, Bagerhat
- 18) Electrician Group (7), Haluaghat Upazila Parishad, Mymensingh
- 19) Community Group (7), Shantiganj, South Sunamganj
- 20) Community Group (14), Chunarughat Upazila, Hobiganj
- 21) Solar System Technician Group (10), Mithamoin, Kishoreganj
- 22) Community Group (8), Shibganj, Chapai Nawabganj
- 23) Mr. Md. Mosharraf Hossain, Sub-Assistant Engineer, PBS, Madaripur
- 24) Community Group (10), Madaripur Sadar

45. PDBF (July 2017 to March 2019): Theme 5, Project 9 Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar Home Systems

- 1) Field Visit Monitoring Report by Mr. Md. Mokhlesur Rahman Sarker, DMD dated 30.7.2018, and by Mr. Md. Akhtaruzzaman, Audit & Accounts Officer dated 21.9.2018 of the BCCT
- 2) Solar system consumer group (14), Duhuli, Nababrindaban Radhakrishna Mondir, Nilphamari
- 3) Mr. Lemon Wahid, PDBF Officer, Nilphamari Sadar Upazila, Nilphamari
- 4) Solar system consumer group (15), 1No, Chilahati Union, Debiganj, Panchagarh
- 5) Ms. Shamima Begum, PDBF Officer, Debiganj, Panchagarh
- 6) Solar system consumer group (12), Pathardubi former enclave, Bhurungamari, Kurigram
- 7) Mr. Md. Mokhlesur Rahman, PDBF Officer, Bhurungamari, Kurigram
- 8) Solar system consumer group (15), VetorKuthir, Bashpachai, Sadar Upazila, Lalmonirhat
- 9) Mr. Md. Anwar Hossain, Upazila Officer, PDBF Lalmonirhat Sadar
- 10) Ms. Ismat Ara Khanam, Upazila Officer, PDBF Hatibandha, Lalmonirhat
- 11) Mr. Kartik Chakroborti, Upazila Officer, PDBF Patgram, Lalmonirhat
- 12) Mr. Md. Mozibur Rahman (telephone), Upazila Officer, Ambari, Dinajpur (former UO Hatibandha, Lalmonirhat during project implementation)
- 13) Mr. Md. Azizur Rahman, President of Former Enclave Doikhawa 1 No. Veluguri Union, Hatibandha, Lalmonirhat
- 14) Mr. Monwar Parvez, Accountant, Sadar Upazila PDBF Office, Lalmonirhat
- 15) Mr. Ranobir C. Roy, Field Officer, Sadar Upazila PDBF Office, Lalmonirhat
- 16) Mr. Ferdous Taposh, Field Officer, Sadar Upazila PDBF Office, Lalmonirhat

46. DoF (April 2011 to March 2013): Theme 6, Project 1 Forest Information Generation and Networking System

- 1) Mr. Md. Zaheer Iqbal, Former Project Director, Deputy Conservator of Forests, Bangladesh Forests Department (BFD), Ministry of Environment, Forests and Climate Change

Section 12. Annexure



Annex 12.1 Household Survey Questionnaire (8 Sets both in English and Bangla)
Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Household Survey Questionnaire – 1.1

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change of the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area was identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information
Project Name: Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts
Implementing Agency: Bangladesh Agricultural Research Institute (BARI)
Implementation Period: 01 May 2010-30 April 2012

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

	Section: 1	<i>(Please check the appropriate box)</i>
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No

3	If yes, can you please describe your understanding about Climate Change?	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture ☐ It damages livestock, poultry, fisheries ☐ It affects our water ☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought ☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources /homestead plants ☐ Others (please specify)
5	Do you think climate change /environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think the problems that are affecting you most?	☐ River erosion ☐ Cyclone/ Tornado ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No

8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

Section: 2 <i>(Please check the appropriate box)</i>		
9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য় পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loud speaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

13	What climate change adaptation measures were taken through the project implemented in your area?	☐ New variety of crops introduced ☐ Cultivation in water logged areas introduced ☐ New crops introduced for char lands ☐ New improved seeds provided ☐ Appropriate training provided to increase farm productivity ☐ Others (please specify)
14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Worked on improving farm productivity of our farmers ☐ New farming technology for char lands introduced ☐ Can't say

Section: 3 <i>(Please check the appropriate box)</i>		
15	In your locality the project entitled the <i>Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts</i> project was implemented over a two-year period. Due to the implementation of the project the following outcomes were expected to be made. The following questions would help us in capturing those	
a.	Farm productivity of the target crops in the project areas	☐ Increased ☐ No change ☐ Decreased ☐ Can't say
b.	Modern cultivation practices for lentil/pulse and oil seeds introduced in the project areas	☐ Agreed ☐ No idea ☐ Never heard of such cultivation ☐ Can't say
c.	Environment friendly cultivation of maize and pulses helped in improving the soil health in the project areas	☐ Agreed ☐ No idea ☐ Never heard of such cultivation ☐ Can't say

Section: 4 <i>(Please check the appropriate box)</i>		
16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with farmers and local people before commencing the project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I have seen the construction workers working ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work ☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ The unused char lands became source of earning for families ☐ Increased food security for the families ☐ Through farming regularly, the soil health of the char lands improved ☐ Can't say
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say

19	Please justify your answer given in the earlier question	☐ We got improved seeds, increased yield ☐ We can use drought reliant seeds for crops and oil seeds ☐ Char lands are no longer a curse for us ☐ Cultivation of Maize is very profitable ☐ (If any other, please write).....
20	What more you work you think needed to be done to solve the climate challenge in your locality	☐ We need better seeds for other crops to produce crops all the year round ☐ We need support for fertilizer and other agricultural inputs ☐ We need more information on coping with climate challenges through training or information dissemination tools ☐ Can't say
21	Any other suggestion you would like to share...	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Survey Questionnaire - 1.2

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change of the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area that is identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information	Project Name: প্রতিকূলতা সহিষ্ণুধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প Implementing Agency: Bangladesh Agricultural Development Corporation (BADC) Implementation Period: Original: Jun 2011 to Jul 2013; Amended Jun 2011 to Dec 2013

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

Section: 1 (Please check the appropriate box)		
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No
3	If yes, can you please describe your understanding about Climate Change?	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture

		☐ It damages livestock, poultry, fisheries ☐ It affects our water ☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought ☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources /homestead plants ☐ Others (please specify)
5	Do you think climate change/environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think the problems that are affecting you most?	☐ River erosion ☐ Cyclone/ Tornado ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No
8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC)

		☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

Section: 2 (Please check the appropriate box)		
9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য়পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loud speaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP)

		☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)
13	What climate change adaptation measures were taken through the project implemented in your area?	☐ Climate tolerant seeds introduced ☐ Climate tolerant seeds distributed among farmers ☐ Farmers are producing salinity and/or drought tolerant crops (wheat, lentils and oil seeds) to ensure food security ☐ Others (please specify)
14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Worked on improving farm productivity of our farmers ☐ Disaster (salinity and drought) adaptive seeds reduced and distributed ☐ Others (please specify)

Section: 3 (Please check the appropriate box)

15	In your area Adversity tolerant wheat, lentils and oil seeds production, processing and distribution project was implemented. Through this project salinity and drought tolerant seeds of mentioned crops were produced and distributed among farmers in the area. Due to implementation of the project some of the outcomes were expected. The following questions were designed to capture those.	
a.	Farmers are cultivating adverse climate (salinity, drought) tolerant wheat, lentils and oil seeds in the project areas	☐ Agreed ☐ No idea ☐ Never heard of such cultivation ☐ Can't say
b.	Farmers received adverse climate (salinity, drought) tolerant wheat, lentils and oil seeds from the project areas for cultivation	☐ Agreed ☐ No idea ☐ Never heard of such cultivation ☐ Can't say

Section: 4 (Please check the appropriate box)

16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with people before commencing project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I have seen the construction workers working ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work ☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ The challenge of salinity and drought in crop cultivation significantly reduced ☐ The farmers are not waiting for good time to come for cultivation ☐ The food security of the area ensured

		☐ Others (please specify) ☐ Can't say
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say
19	Please justify your answer given in the earlier question	☐ We got improved seeds, increased yield ☐ We can use salinity reliant and drought reliant seeds for crop production ☐ (If any other, please write).....
20	What more you work you think needed to be done to solve the climate challenge in your locality	☐ We need more high yielding varieties to increase crop production ☐ We need to get our soil fertility back ☐ (If any other, please write).....
21	Any other suggestion you would like to share...	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Survey Questionnaire – 1.3

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change of the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area that is identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information	Project Name: বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প Implementing Agency: Department of Agriculture Extension Implementation Period: July 2013- June 2016; Extended: December 2017

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

	Section: 1	<i>(Please check the appropriate box)</i>
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No
3	If yes, can you please describe your understanding about Climate Change?	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture ☐ It damages livestock, poultry, fisheries ☐ It affects our water

		☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought ☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources/ homestead plants ☐ Others (please specify)
5	Do you think climate change/environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think are the problems that are affecting you most?	☐ River erosion ☐ Cyclone/ Tornado ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances. ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No
8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE)

		☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

Section: 2 (Please check the appropriate box)		
9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য় পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loud speaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)
13	What climate change adaptation measures were taken through the project implemented in your area?	☐ Farmers were encouraged to produce crops using floating beds. ☐ Water logging issues could not be resolved but alternative farming was introduced

		☐ Farmers are producing vegetables and spices in floating beds during the water logging period ☐ Others (please specify)
14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Vegetable cultivation on floating beds ☐ General awareness on floating beds built ☐ Water logging is no longer a barrier for producing vegetables in the area ☐ Others (please specify)

Section: 3 (Please check the appropriate box)

15	The following project was implemented in your area entitled Project on Extension of floating vegetable and spices production technology as an adaptation approach in the flood and water logging areas. Due to implementation of the project some of the outcomes were expected to be produced. The following questions are attempts to capture some of those.	
a.	Farmers had developed floating vegetable and spices beds in waterlogged areas	☐ Seen such floating beds ☐ Never seen such floating beds in the area ☐ Heard about it but did not see ☐ Can't say
b.	If you have seen such floating beds, can you please tell us how many such floating beds you came across?	☐ 1- 3 ☐ 4- 7 ☐ 8- 10 ☐ More than 10 ☐ Can't say
c.	Roughly how many farmers used to practice floating bed cultivation in the waterlogged areas, as long as you are concerned?	☐ 5- 10 ☐ 11-15 ☐ 16- 20 ☐ More than 20 ☐ Can't say
d.	As far as you know, how many farmers received seed preservation pots delivered from the project?	☐ 5- 10 ☐ 11-15 ☐ 16- 20 ☐ More than 20 ☐ Can't say
e.	How popular the floating bed cultivation has become in your area?	☐ Very popular during water logging period ☐ Farmers did not accept this cultivation of their own ☐ Water logging is no longer a problem and thus farmers forget it ☐ Can't say

Section: 4 (Please check the appropriate box)

16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with people before commencing project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I have seen the construction workers working ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work

		☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ Water logging is no longer a problem for a section of farmers ☐ Farmers are not sitting idle when the farm lands go under water for a longer period of time ☐ The food security of the area ensured ☐ Others (please specify) ☐ Can't say
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say
19	Please justify your answer given in the earlier question	☐ Farmers get floating beds to produce vegetables and spices ☐ Could overcome the water logging challenge that used keep the farmers idle for months ☐ (If any other, please write).....
20	What more you work you think needed to be done to solve the climate challenge in your locality	☐ We need more support to more farmers build floating beds ☐ More training on reserving seeds using seed reservation pots ☐ General awareness on floating bed cultivation should be increased to get more farmers on board ☐ (If any other, please write).....
21	Any other suggestion you would like to share...	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Survey Questionnaire – 1.4

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change of the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area that is identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information	Project Name: জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলা নিরাপদ পানি সরবরাহ প্রকল্প Implementing Agency: Department of Public Health Engineering (DPHE) Implementation Period: Jan 2017 to Dec 2018; Extended: Jun 2019

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

	Section: 1	(Please check the appropriate box)
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No
3	If yes, can you please describe your understanding about Climate Change?	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture ☐ It damages livestock, poultry, fisheries

		☐ It affects our water ☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought ☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources/ homestead plants ☐ Others (please specify)
5	Do you think climate change/ environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think are the problems that are affecting you most?	☐ River erosion ☐ Cyclone/ Tornado ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No
8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE)

		☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

Section: 2 (Please check the appropriate box)		
9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য় পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loud speaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)
13	What climate change adaptation measures were taken through the project implemented in your area?	☐ Installation of deep tube wells keep people away from drinking saline water in the coastal areas ☐ Others (please specify)

14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Installation of Deep tube wells ☐ Raised platforms for hand tube wells to keep those free from salinity contamination ☐ Others (please specify)

Section: 3(Please check the appropriate box)

15	The activities entitled Project on Supplying safe water in the climate change affected Babuganj and Muladi Upazila in Barishal was implemented in your area. Like other projects a number of outcomes were expected through this one as well. This section is an attempt to capture the outcomes.	
a.	No of people having access to safe drinking water	☐ Increased ☐ It is same ☐ Safe drinking water is not accessible ☐ Can't say
b.	Water borne diseases in the area have	☐ Decreased ☐ It is same ☐ Increased ☐ There is no water borne diseases in the area ☐ Can't say

Section: 4(Please check the appropriate box)

16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with people before commencing project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I have seen the construction workers working ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work ☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ People got access to safe drinking water ☐ Safe drinking water reduced the prevalence of water borne diseases in the area ☐ Others (please specify) ☐ Can't say
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say
19	Please justify your answer given in the earlier question	☐ Safe drinking water is a concern for coastal people and ☐ (If any other, please write).....
20	What more work you think needed to be done to solve the climate challenge in your locality	☐ Access to safe water for all people in the coastal areas ☐ Repairing roads and embankments damaged due to natural calamities on priority basis ☐ (If any other, please write).....
21	Any other suggestion you would like to share...	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Survey Questionnaire – 1.5

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area that is identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information	Project Name: Safe Water Supply Project in Climate change affected Manpura and Charfashion Upazila under Bhola District (2 nd phase) Implementing Agency: Department of Public Health Engineering (DPHE) Implementation Period: Jan 2017 to Dec 2017

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

Section: 1 <i>(Please check the appropriate box)</i>		
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No
3	If yes, can you please describe your	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture

	understanding about Climate Change?	☐ It damages livestock, poultry, fisheries ☐ It affects our water ☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought ☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources/ homestead plants ☐ Others (please specify)
5	Do you think climate change /environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think the problems that are affecting you most?	☐ River erosion ☐ Cyclone/ Tornado ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No
8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI)

		☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

Section: 2 (Please check the appropriate box)		
9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য় পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loudspeaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)
13	What climate change adaptation measures were taken through the project implemented in your area?	☐ Installation of deep tube wells keep people away from drinking saline water in the coastal areas ☐ Others (please specify)

14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Installation of Deep tube wells ☐ Raised platforms for hand tube wells to keep those free from salinity contamination ☐ Others (please specify)

Section: 3(Please check the appropriate box)

15	The Safe Water Supply Project in Climate change affected Manpura and Charfashion Upazila under Bhola District (2 nd phase) was implemented in your area. Through this project a number of outcomes were expected. This section is an attempt to capture the outcomes.	
a.	No of people having access to safe drinking water	☐ Increased ☐ It is same ☐ Safe drinking water is not accessible ☐ Can't say
b.	Water borne diseases in the area have	☐ Decreased ☐ It is same ☐ Increased ☐ There is no water borne diseases in the area ☐ Can't say

Section: 4(Please check the appropriate box)

16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with people before commencing project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I have seen the construction workers working ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work ☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ People got access to safe drinking water ☐ Safe drinking water reduced the prevalence of water borne diseases in the area ☐ Others (please specify) ☐ Can't say
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say
19	Please justify your answer given in the earlier question	☐ Safe drinking water is a concern for coastal people and ☐ (If any other, please write).....
20	What more work you think needed to be done to solve the climate challenge in your locality	☐ Access to safe water for all people in the coastal areas ☐ Repairing roads and embankments damaged due to natural calamities on priority basis ☐ (If any other, please write).....
21	Any other suggestion you would like to share...	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Survey Questionnaire – 2.1

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change of the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area that is identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information	Project Name: Enhancing the capacity of CPP volunteers and Coastal Fishermen to cope with Climate Change (ECCVCFCC) Implementing Agency: Cyclone Preparedness Programme (CPP) Implementation Period: 01 Jan 2013 to 31 Dec 2015 Extended 31 Dec 2016

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

Section: 1 <i>(Please check the appropriate box)</i>		
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No
3	If yes, can you please describe your	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture

	understanding about Climate Change?	☐ It damages livestock, poultry, fisheries ☐ It affects our water ☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought ☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources/ homestead plants ☐ Others (please specify)
5	Do you think climate change /environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think the problems that affecting you most?	☐ River erosion ☐ Cyclone/ Tornado ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No
8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP)

		☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (PDBF)

Section: 2 (Please check the appropriate box)		
9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু খান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য় পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ রাস্থাঘাট ডিয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loud speaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (PDBF)
13	What climate change adaptation measures were taken through the project implemented in your area?	☐ Appropriate training provided to volunteers and sea going fishermen ☐ Equipments distributed to the volunteers to be used during disaster

		☐ Others (please specify)
14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Organized training for volunteers ☐ Organized training for sea going fishermen ☐ Distributed gears for volunteers ☐ Other (please specify)

Section: 3 (Please check the appropriate box)

15	Enhancing the capacity of CPP volunteers and Coastal Fishermen to cope with Climate Change (ECCVCFCC). Due to the implementation of the project some outcomes were expected, and the following question may capture the perception of those outcomes.	
a.	CPP volunteers became more skilled and motivated	☐ Agreed ☐ Not aware of any such training ☐ I don't know any such volunteers ☐ Can't say
b.	CPP volunteers are supplied with sufficient gears and other tools	☐ Seen them with new gears ☐ Never seen them with any gears ☐ I don't know any such volunteers ☐ Can't say
c.	Sea going fishermen received training of safety and security during natural calamities	☐ Yes, received training ☐ Never heard of such training for fishermen ☐ No idea ☐ Can't say
d.	Trained CPP volunteers are seen in action during emergencies with rescue, sheltering, first aid and relief distribution	☐ Yes, seen them working ☐ Never find them during emergencies ☐ They only make announcement through loud speaker ☐ Can't say

Section: 4 (Please check the appropriate box)

16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with people before commencing project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work ☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ The volunteers are trained who will help communities in rescuing, transferring them to shelter and distributing relief ☐ The volunteers will share early warning of any disasters in the area ☐ They will distribute relief materials
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say

19	Please justify your answer given in the earlier question	☐ Trained volunteers are assets to communities ☐ Sea going fishermen can save their lives and boats as they will be more aware of the disasters ☐ (If any other, please write).....
20	What more you work you think needed to be done to solve the climate challenge in your locality	☐ We need more shelters ☐ Sea going fishermen need radios which can receive signals from deep into the sea. ☐ Timely distribution of available relief materials after disaster
21	Any other suggestion you would like to share...	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Survey Questionnaire – 3.3

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change of the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area that is identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information	Project Name: ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প
	Implementing Agency: Department of Disaster Management
	Implementation Period: 01 Jul 2013 to 30 Jun 2014; Extended 31 Dec 2014

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

Section: 1 (Please check the appropriate box)		
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No
3	If yes, can you please describe your understanding about Climate Change?	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture ☐ It damages livestock, poultry, fisheries ☐ It affects our water ☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought

		☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources/ homestead plants ☐ Others (please specify)
5	Do you think climate change /environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think the problems that are affecting you most?	☐ River erosion ☐ Cyclone/ Tornado/loss of houses and assets ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No
8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

Section: 2 (Please check the appropriate box)

9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য় পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loud speaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)
13	What climate change adaptation measures were taken through the project implemented in your area?	☐ Climate smart/ disaster tolerant houses built ☐ Others (please specify)
14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Worked on improving farm productivity of our farmers ☐ Disaster (salinity and drought) adaptive seeds reduced and distributed ☐ Floating vegetable cultivation introduced

		☐ Tube well installed for safe drinking water ☐ Deep Tube well installed for safe drinking water ☐ Training for volunteers organized ☐ Disaster adaptive houses built ☐ Solar system installed at households

Section: 3 (Please check the appropriate box)

15	Climate resilient house construction for the 2013 tornado affected households in Brahmanbaria district was implemented in your area. Due to the implementation of the project some outcomes were expected, and these have to be captured	
a.	Families are living in climate safe houses	☐ Agreed, they are living safely ☐ The affected families are still living in the old houses ☐ I don't know any such house construction in the area ☐ Can't say

Section: 4(Please check the appropriate box)

16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with people before commencing project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I have seen the construction workers working ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work ☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ The poor households got new homes of their own ☐ These are believed to be climate effect protective i.e. not fragile against tornado or similar calamities ☐ Can't say
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say
19	Please justify your answer given in the earlier question	☐ The poor and marginalized household got strong enough houses to live ☐ They now live a fearless life during natural calamities ☐ (If any other, please write).....
20	What more work you think needed to be done to solve the climate challenge in your locality	☐ We need more shelter house to protect us during disaster ☐ we need to build embankments to save our locality from river erosion ☐ The people in this area need safe drinking water facilities ☐ (If any other, please write).....
21	Any other suggestion you would like to share...	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Survey Questionnaire - 5.9

This survey is being conducted under the Climate Change Trust Fund (CCTF) under the Ministry of Environment, Forest and Climate Change the Government of Bangladesh. The project aimed at mitigating the climate change effect on your area that is identified by the government agencies after several rounds of discussion with relevant stakeholders in your area. The project activities have been completed and we would like to know about the benefits produced through implementing this project. It is expected that as a concerned citizen you will share your opinion freely and fairly. You are selected as one of respondents in the survey randomly. It may take 30-40 minutes and we will move ahead only with your consent. Thanks in advance for sharing your valuable time.

Project Information	Project Name: Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System (1 st Revised) Implementing Agency: Palli Daridro Bimochon Foundation (PDBF) Implementation Period: July 2017 to September 2018; Extended: March, 2019

Respondent Information	
Name:	
Age: Yrs	Gender: ☐ Male ☐ Female
Father/Husband's name:	
Education: ☐ Masters or above/ equivalent ☐ Bachelor/equivalent ☐ HSC/ equivalent ☐ SSC /equivalent ☐ Up to Class X ☐ Up to Class V ☐ Can read and write ☐ Never attended schools	
Occupation: ☐ Farmer ☐ Agricultural labor ☐ Rikshaw/ Van driver ☐ Teacher ☐ Service ☐ Petty business ☐ Trader ☐ Labor (industry) ☐ Transport worker ☐ Imam ☐ Fishing ☐ Carpenter ☐ Street Vendor ☐ Mechanic ☐ Business ☐ Handicrafts ☐ Cottage industry ☐ Poultry	
Village:	Union:
Upazila:	Zila:
Respondent's Cell Phone Number: 01.....	
Signature of the respondent:	Date: / / 2022
Interviewer's name:	Signature:

	Section: 1	<i>(Please check the appropriate box)</i>
1	How long you have been living in this area?	☐ Less than 2 years ☐ 3- 4 years ☐ 5-6 years ☐ 7-8 Years ☐ More than 10 years
2	Have you ever heard about the term "Climate Change"?	☐ Yes ☐ No
3	If yes, can you please describe your understanding about Climate Change?	☐ It affects our environment ☐ It causes cyclone/ tornado ☐ It affects our agriculture ☐ It damages livestock, poultry, fisheries

		☐ It affects our water ☐ It allows salinity intrusion into sweet water ☐ It causes lack of drinking water ☐ It damages educational institutes ☐ It causes drought ☐ It causes river erosion ☐ It causes land slide ☐ It causes excessive rain fall ☐ It caused Flash Flood ☐ It causes water logging ☐ It causes global warming ☐ It damages crop land /land fertility ☐ Can't say
4	(If answered any option other than ' <i>can't say</i> ' please ask) How climate change affects your life and livelihoods?	Due to climate change - ☐ Damages our households and assets ☐ Damages crops and crop land ☐ Dried up our rivers and other water bodies ☐ Causes death of many people ☐ Damages road and embankments ☐ Damages forest resources /homestead plants ☐ Others (please specify)
5	Do you think climate change /environmental hazards are one of the biggest challenges for the people in your area?	☐ Yes ☐ No
6	If yes, what do you think the problems that are affecting you most?	☐ River erosion ☐ Cyclone/ Tornado ☐ Drought ☐ Water logging/ no land for cultivation ☐ Too much rain/lack of rain ☐ Land slide ☐ Flash flood /Flood ☐ Salinity (drinking water/ crop land) ☐ Lack of electricity ☐ Water level degradation ☐ Pollution (water/air etc.) ☐ Lack of power to operate irrigation pump household appliances ☐ Other (please specify)
7	Have you ever participated in a discussion organized by any government agency to resolve the issues of your concern?	☐ Yes ☐ No
8	If yes, can you please name the agency/ department/ office?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)

Section: 2 (Please check the appropriate box)

9	Are you aware of any project implemented to resolve any of the issues of your concern related to climate change issue in your locality?	☐ Yes ☐ No
10	If yes, can you please name the project?	☐ Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts ☐ প্রতিকূলতাসহিষ্ণু ধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প ☐ বন্যা ও জলাবদ্ধতা প্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প ☐ জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্ত ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহ (২য় পর্যায়) ☐ Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change ☐ ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগসহনীয় গৃহনির্মাণ প্রকল্প ☐ Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System
11	If yes, how did you get to know about the project?	☐ Through project signboard ☐ Attended a meeting/ workshop of the project ☐ Attended a discussion during the inception phase of the project ☐ Through local News/media ☐ There was announcement through loud speaker (PSA) ☐ Invited to a training by the project team ☐ Heard from the elected local government representatives ☐ From a contractor ☐ Worked as labor/ volunteer during project implementation
12	Which agency/ office/ department has implemented the above-mentioned project?	☐ Bangladesh Agricultural Development Corporation (BADC) ☐ Bangladesh Agricultural Research Institute (BARI) ☐ Cyclone Preparedness Programme (CPP) ☐ Department of Agricultural Extension (DAE) ☐ Department of Disaster Management (DDM) ☐ Department of Public Health Engineering (DPHE) ☐ Palli Daridro Bimochan Foundation (DBF)
13	What climate change adaptation measures were taken through the project implemented in your area?	☐ Reduced dependence on electricity from national grid which is produced through fossil fuel ☐ Used renewable energy to contribute less on GHG emission ☐ Others (please specify)
14	Can you please mention (at least) one of the activities of the project you have just mentioned?	☐ Solar system installed at households ☐ People are enjoying lights and electric devices at home ☐ Can't say

Section: 3(Please check the appropriate box)		
15	Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System (1 st Revised) was implemented in your area. Due to the implementation of the project there were supposed to be some outcomes, which are to be captured through this survey.	
a.	Families in the former enclaves are illuminated through solar power at homes	☐ Agreed, they are enjoying solar power at home ☐ Only a few families are enjoying this power ☐ I don't know such availability of solar power in the former enclaves ☐ Can't say
Section: 4(Please check the appropriate box)		
16	Can you please tell us one of the features of the project implemented in your area?	☐ They consulted with people before commencing project work ☐ The work is visible to everyone ☐ I heard about the project but never seen any activities ☐ I have seen the construction workers working ☐ I know some people who attended meetings/ trainings ☐ I am not aware of the work ☐ Can't say anything
17	Can you please share some benefits of the project implemented in your area?	☐ The powerlessness in the former enclaves ended through this project ☐ Please can enjoy electric and electronic equipments at home through solar power which was like a dream to them ☐ The life of the former enclave communities have observed a real change through solar power
18	Your perception on the usefulness of the project implemented in your locality	☐ Very useful ☐ Useful ☐ Somewhat useful ☐ Not useful at all ☐ Can't say
19	Please justify your answer given in the earlier question	☐ We have lightened up our households and use home alliances through solar power. ☐ (If any other, please write).....
20	What more you work you think needed to be done to solve the climate challenge in your locality	☐ We need better road infrastructural support ☐ We need electricity to get uninterrupted power supply in the former enclaves ☐ We need safe drinking water/ arsenic free water ☐ We need to use solar power to reduce demand for expensive electricity
21	Any other suggestion you would like to share...	

Annex 12.2 KII Checklists and Guidelines (English & Bangla)

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Key Informant Interview Checklist

This is a set of questions that may be asked during interviewing key stakeholders of the project implemented under the BCCT. This is not an exhaustive list but some basic questions. Supplementary questions emerged from the discussion may be asked to gather important aspects related to this evaluation.

Name of the Project:	
Name of the respondent:	
Position:	Duration at current position:
Department:	
Interviewer:	Date:

1. How long you had been involved with this project and in what capacity?
2. According to your understanding as a responsible government official, how important is to contribute to achieving the national goals of the climate change adaptation and mitigation?
3. Would you please share the rationale of this project undertaken in this area?
4. How was this project formulated? Was there any stakeholder consultation during the design phase of the project?
5. As far as you remember, can you please describe the key features of the project?
6. According to your understanding, what were the intended benefits of the project, especially in adaptation with climate change impacts?
7. According to your understanding how relevant was the project for the people in the area in terms of climate change adaptation?
8. From your experience, how this project contributed in adaptation with the climate change impacts in the area?
9. What according to you are the contributing factors to implement the project successfully?
10. Did you face any challenge during project implementation? How did you overcome that?
11. From your experience can you please share us some of the common causes of delayed project implementation at field level?
12. How these can be resolved to better implement projects?
13. Do you think the allocated budget was enough to implement such a project? If no, how much should have been the budget?
14. How was the suggested procurement system under BCCTF project? Did you face any challenge in the procurement process during project implementation?
15. According to your experience of implementing BCCT project do you think procurement process causes delay in project implementation?
16. What measures need to be taken so that such projects can be implemented smoothly and contribute more to the national causes?
17. In the project area what more can be done to make the people more aware and confident about adaptation with climate change impacts?
18. From your experience, can you please suggest which area should be given priority in adaptation and mitigation of climate change impacts in Bangladesh?

Annex 12.3 FGD Facilitation and Reporting Guidelines (English & Bangla)

Impact Evaluation 45 Projects implemented by different agencies under Bangladesh Climate Change Trust Fund (BCCTF)

Guidelines for Focus Group Discussion

Instructions: You are invited to participate in a group discussion on a long-standing local issue for which you have suffered a lot. Recently the problem was addressed by a government agency. Here, we are going to discuss about that problem and the solution offered.

1. You are one of the randomly selected citizens of the area who has been living in this area for years and you are in the best position to share your ideas and opinions.
2. You have every right to deny your participation in the discussion or leave any time during the discussion.
3. Your participation is totally voluntary. As it is an evaluation of government initiative, you are not entitled to receive any honorarium for spending your time and sharing your opinion.
4. Your identity will not be disclosed to anybody or in any form in the evaluation report.
5. This discussion may take a little more than an hour. If you cannot manage time, please let us know beforehand.
6. While you are free to express your opinion, you are requested to respect the same for your fellow colleagues. Please don't get into any debate during discussion as we follow the principle "*we agree to disagree*".
7. Please don't speak all at the same time, rather share your opinion and help others do the same.
8. Remember: It is not an exam and thus there is no correct or wrong answer. Share what you feel by heart.

Section 1		
	Issues	Instructions
1	How long you have been living in this area?	
2	Why this area is famous for? Can you name some of them?	Probe
3	What are the main problems you have been suffering for years?	
4	Have you observed any government initiative to resolve any of the problems you have just mentioned?	Probe and record the names of the initiatives mentioned.
5	If yes, which government agency had implemented this project?	Probe

Section 2		
	Issues	Instructions
1	What do you mean by climate change impacts in our lives and livelihoods?	
2	How climate change has been impacting your areas/ communities?	Probe
3	Due to climate change impacts for you have suffered most in the recent past?	Probe; try to get the issues/ problem they suffered due to climate change
4	Do you think the project implemented in your area was the most urgent ones to be addressed keeping climate change impacts in consideration?	
Section 3 Thematic Area 1: Food security, social protection and health		
	Issues	Instructions

1	Do you think food security, social protection or overall health system is affected due to climate change impacts in your area? If so, how?	
2	How adversity tolerant seeds help in improving food security in your area?	
3.a	Have you seen farmers growing crops in char lands with improved seed variety which were usually kept idle for years? Which crops?	Probe
3.b	Did you hear about the saline tolerant or drought tolerant seeds produced, distributed among farmers for cultivation in your area? Which seeds were distributed?	Probe
3.c	Have you seen floating bed cultivation in your area? How effective was that cultivation technology in water logging areas? Which crops were produced through the floating beds cultivation?	Probe
3.d	How safe water supply in your area especially installation of deep tube well helped improving quality of health in your area? Are you aware of the installation of deep tube well in your area? Can you please share how many deep tubewell were installed in your area (as far as you know)?	Probe
3.e	How important was to re-excavate the canals in your area? How this activity helped in reducing water logging and improving navigability in the water ways? Did this help improving the irrigation facility to increase agricultural production in your area?	Probe
3.f	How Rubber Dam helped in improving the irrigation facility in your area? Do you think this Dam contributed to increasing boro production in your area?	Probe

Section 4		
	Issues	Instructions
1	Can you please share the benefits derived from the implemented project?	Probe and list down
2	How this project benefited different occupational groups, i.e., farmers, fishermen, students, business community, and the people in general?	
3	Which group benefited most according to your understanding?	
4	Do you think the poor and the marginalized groups did get any direct benefit from the implemented project?	

Section 5		
	Issues	Instructions
1	Do you think the benefits of the implemented project will be long-lasting? If so, why?	Probe
2	Do you think since the implementation of the project, people became more aware of the climate change impacts than earlier? Why do you think so?	Probe
3	According to your understanding what more can be done so that the people in general get will feel safer?	
4	Any suggestion you want to forward in regard to have a climate adaptive society?	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Guidelines for Focus Group Discussion

Instructions: You are invited to participate in a group discussion on a long-standing local issue for which you have suffered a lot. Recently the problem was addressed by a government agency. We are going to discuss the problem and the solution here.

1. You are one of the randomly selected citizens of the area who has been living in this area for years and you are in the best position to share your ideas and opinions.
2. You have every right to deny your participation in the discussion or leave any time during the discussion.
3. Your participation is totally voluntary. As it is an evaluation of government initiative, you are not entitled to receive any honorarium for spending your time and sharing your opinion.
4. Your identity will not be disclosed to anybody or in any form in the evaluation report.
5. This discussion may take a little more than an hour. If you cannot manage time, please let us know beforehand.
6. While you are free to express your opinion, you are requested to respect the same for your fellow colleagues. Please don't get into any debate during discussion as we follow the principle "*we agree to disagree*".
7. Please don't speak all at the same time, rather share your opinion and help others do the same.
8. Remember: It is not an exam and thus there is no correct or wrong answer. Share what you feel by heart.

Section 1

	Issues	Instructions
1	How long you have been living in this area?	
2	Why this area is famous for? Can you name some of them?	Probe
3	What are the main problems you have been suffering for years?	
4	Have you observed any government initiative to resolve any of the problems you have just mentioned?	Probe and record the names of the initiatives mentioned.
5	Which government agency had implemented this project?	Probe

Section 2

	Issues	Instructions
1	What do you mean by climate change effects in our lives and livelihoods?	
2	How climate change has been affecting your areas/ communities?	Probe
3	Due to climate change effects for you have suffered most in the recent past?	Probe; try to get the issues/ problem they suffered due to climate change
4	Do you think the project implemented in your area was the most urgent ones to be addressed keeping climate change effects in consideration?	

Section 3	Thematic Area 3: Infrastructure	
	Issues	Instructions
3	Under BCCT there were several infrastructure projects implemented in different parts of the country, including roads, embankments, drainage system, shelter house, riverbank protection, climate resilient road construction, eliminating water logging problems etc. Can you please share us which infrastructure project was implemented in your area?	Probe
3.a	Can you please tell us how climate change effects such as cyclone, floods tidal surge has been affecting infrastructure in your area?	Probe
3.b	How this damage has been affecting your lives and livelihoods in your area?	
	Do you think the right project was undertaken to solve the climate change effect in your area?	Probe
3.c	How the improvement of drainage system helped your community in terms of improvement of overall environment?	Probe
	Did these drainage constructions help in reducing water logging and arresting the spread of water borne diseases?	
3.e	How many shelters cum school buildings were built in your area?	Probe
	Are these really the most needed infrastructure in your area?	
	What benefits are producing through these new buildings in your area?	
3.f	Construction of riverbank protection work must be very important to save communities from river bank erosion, saving household. Crops etc. How happy are you with the quality of the riverbank protection work in your area?	Probe
	Did this work contribute to increased crop production and mobility of the people in terms of transportation of agricultural produces, students' movement, and market accessibility?	
	Do you think the protection work or embankment re-construction work done at the place where it was most needed?	
	Did this work really solve your problem?	
3.g	Did re-excavation of canals facilitate irrigation to croplands?	Probe
	Did this work improved navigability that helps transportation through water ways in your area?	
	Did it reduce water logging in the area?	
3.h	The project on building climate tolerant roads was built to give roads a long life in case of natural calamities like cyclone, tidal surge or floods. Are you aware of the construction of such climate resilient roads in your area?	Probe
	Can you please share some key features of the climate resilient roads?	
	How this road contributed to the lives and livelihoods of the people in your area?	
	Is that road became climate resilient, according to your experience?	

Section 4		
	Issues	Instructions
1	Can you please share the benefits derived from the implemented project?	Probe and list down
2	How this project benefited different occupational groups, i.e., farmers, fishermen, students, business community, and the people in general?	
3	Which group benefited most according to your understanding?	
4	Do you think the poor and the marginalized groups did get any direct benefit from the implemented project?	

Section 5		
	Issues	Instructions
1	Do you think the benefits of the implemented project will be long-lasting? If so, why?	Probe
2	Do you think since the implementation of the project, people became more aware of the climate change effects than earlier? Why do you think so?	Probe
3	According to your understanding what more can be done so that the people in general get will feel safer?	
4	Any suggestion you want to forward in regard to have a climate adaptive society?	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

Guidelines for Focus Group Discussion

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1. You are one of the randomly selected citizens of the area who has been living in this area for years and you are in the best position to share your ideas and opinions.
2. You have every right to deny your participation in the discussion or leave any time during the discussion.
3. Your participation is totally voluntary. As it is an evaluation of government initiative, you are not entitled to receive any honorarium for spending your time and sharing your opinion.
4. Your identity will not be disclosed to anybody or in any form in the evaluation report.
5. This discussion may take a little more than an hour. If you cannot manage time, please let us know beforehand.
6. While you are free to express your opinion, you are requested to respect the same for your fellow colleagues. Please don't get into any debate during discussion as we follow the principle "*we agree to disagree*".
7. Please don't speak all at the same time, rather share your opinion and help others do the same.
8. Remember: It is not an exam and thus there is no correct or wrong answer. Share what you feel by heart.

Section 1

	Issues	Instructions
1	How long you have been living in this area?	
2	Why this area is famous for? Can you name some of them?	Probe
3	What are the main problems you have been suffering for years?	
4	Have you observed any government initiative to resolve any of the problems you have just mentioned?	Probe and record the names of the initiatives mentioned.
5	Which government agency had implemented this project?	Probe

Section 2

	Issues	Instructions
1	What do you mean by climate change impacts in our lives and livelihoods?	
2	How climate change has been affecting your areas/ communities?	Probe
3	Due to climate change impacts for you have suffered most in the recent past?	Probe; try to get the issues/ problem they suffered due to climate change
4	Do you think the project implemented in your area was the most urgent ones to be addressed keeping climate change impacts in consideration?	

Section 3 | Thematic Area 2: Comprehensive disaster management

	Issues	Instructions
3	How is disaster impacting your lives and livelihoods especially in the coastal areas?	
3.a	Have you ever seen volunteers helping people during disaster? Are they trained enough to provide necessary support before, during and after disaster?	Probe

	Are you aware of any training provided to these volunteers in your area? Who provided this training?	
	Do you find any important role for the volunteers trained by different government agencies and NGOs?	
3.b	Did you find the volunteers adequately trained or equipped to deliver the services expected of them?	Probe
3.c	In coastal areas, a lot of sea going fishermen live. Do you think they are trained enough to save their lives during cyclone?	Probe
	Are you aware of any training provided to the sea going fishermen by any agency? If so, can you please share how many sea going fishermen trained so far in your area?	
3.d	Would you please share some of the activities of CPP volunteers in your area i.e., support provided by them including emergency rescue, sheltering, first aid and relief activities?	Probe

Section 4

	Issues	Instructions
1	Can you please share the benefits derived from the implemented project?	Probe and list down
2	How this project benefited different occupational groups, i.e., farmers, fishermen, students, business community, and the people in general?	
3	Which group benefited most according to your understanding?	
4	Do you think the poor and the marginalized groups did get any direct benefit from the implemented project?	

Section 5

	Issues	Instructions
1	Do you think the benefits of the implemented project will be long-lasting? If so, why?	Probe
2	Do you think since the implementation of the project, people became more aware of the climate change impacts than earlier? Why do you think so?	Probe
3	According to your understanding what more can be done so that the people in general get will feel safer?	
4	Any suggestion you want to forward in regard to have a climate adaptive society?	

Impact Evaluation of the Climate Change Trust Fund Projects under Bangladesh Climate Change Trust (BCCT)

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1. You are one of the randomly selected citizens of the area who has been living in this area for years and you are in the best position to share your ideas and opinions.
2. You have every right to deny your participation in the discussion or leave any time during the discussion.
3. Your participation is totally voluntary. As it is an evaluation of government initiative, you are not entitled to receive any honorarium for spending your time and sharing your opinion.
4. Your identity will not be disclosed to anybody or in any form in the evaluation report.
5. This discussion may take a little more than an hour. If you cannot manage time, please let us know beforehand.
6. While you are free to express your opinion, you are requested to respect the same for your fellow colleagues. Please don't get into any debate during discussion as we follow the principle "*we agree to disagree*".
7. Please don't speak all at the same time, rather share your opinion and help others do the same.
8. Remember: It is not an exam and thus there is no correct or wrong answer. Share what you feel by heart.

Section 1

	Issues	Instructions
1	How long you have been living in this area?	
2	Why this area is famous for? Can you name some of them?	Probe
3	What are the main problems you have been suffering for years?	
4	Have you observed any government initiative to resolve any of the problems you have just mentioned?	Probe and record the names of the initiatives mentioned.
5	Which government agency had implemented this project?	Probe

Section 2

	Issues	Instructions
1	What do you mean by climate change effects in our lives and livelihoods?	
2	How climate change has been affecting your areas/ communities?	Probe
3	Due to climate change effects for you have suffered most in the recent past?	Probe; try to get the issues/ problem they suffered due to climate change
4	Do you think the project implemented in your area was the most urgent ones to be addressed keeping climate change effects in consideration?	

Section 3 Thematic Area 4: Research and knowledge management

	Issues	Instructions

3	There has been numerous efforts to introduce climate resilient crop varieties in Bangladesh. The scientists are trying different crops to make them climate adaptive especially in the costal and drought prone areas. Are you aware of any research activity implemented in your area? If so, which agency has conducted this activity in your area?	Probe
3.a	Which crops have been tried in your area? According to your understanding how local farmers did respond to this initiative? How many farmers in your area did try these new varieties in your area? Did these new crops really grow in adverse conditions i.e. salinity prone crop fields, drought prone crop fields? What is your understanding about the yield taste of the new crops especially the Rice promoted through research findings?	Probe
3.b	How welcoming was the modern crop management system proposed by the farmers in your area? Do you think the new crop management system really helped increasing yield and increasing income of the farmers?	Probe

Section 4

	Issues	Instructions
1	Can you please share the benefits derived from the implemented project?	Probe and list down
2	How this project benefited different occupational groups, i.e., farmers, fishermen, students, business community, and the people in general?	
3	Which group benefited most according to your understanding?	
4	Do you think the poor and the marginalized groups did get any direct benefit from the implemented project?	

Section 5

	Issues	Instructions
1	Do you think the benefits of the implemented project will be long-lasting? If so, why?	Probe
2	Do you think since the implementation of the project, people became more aware of the climate change effects than earlier? Why do you think so?	Probe
3	According to your understanding what more can be done so that the people in general get will feel safer?	
4	Any suggestion you want to forward in regard to have a climate adaptive society?	

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7. Please don't speak all at the same time, rather share your opinion and help others do the same.
8. Remember: It is not an exam and thus there is no correct or wrong answer. Share what you feel by heart.

Section 1

	Issues	Instructions
1	How long you have been living in this area?	
2	Why this area is famous for? Can you name some of them?	Probe
3	What are the main problems you have been suffering for years?	
4	Have you observed any government initiative to resolve any of the problems you have just mentioned?	Probe and record the names of the initiatives mentioned.
5	Which government agency had implemented this project?	Probe

Section 2

	Issues	Instructions
1	What do you mean by climate change effects in our lives and livelihoods?	
2	How climate change has been affecting your areas/ communities?	Probe
3	Due to climate change effects for you have suffered most in the recent past?	Probe; try to get the issues/ problem they suffered due to climate change
4	Do you think the project implemented in your area was the most urgent ones to be addressed keeping climate change effects in consideration?	

Section 3 Thematic Area 5: Mitigation and low carbon development

	Issues	Instructions
3	One of the reasons for climate effect globally is carbon emission. Are you aware of carbon emission in your area?	

3.a	Are you aware of any carbon emission reducing initiative in your area?	Probe
	Better waste management contributes to reducing carbon emission in many ways.	
	Are you aware of any waste management initiative in your area?	
	What activities were performed under the waste management initiatives in your area?	
	Did you find composting as one of the activities of waste management initiative in your area?	
	Did farmers use the compost produced through the waste management initiative in your area?	
	How many composting plant were constructed under the waste management initiative in your area?	
3.b	For eco-restoration plantation of trees is important especially planting trees appropriate for hill areas?	
	How many sapling beds were established and how many different types of plants were distributed among the farmers?	
	How many eco-tourism sites were developed under the recent initiative of eco-restoration in your area?	
	Did you observe compost and alluvial used for gardening in the area?	
3.c	How many acres of land used for Pulp wood production in your area?	Probe
	Do you think forest resources increased due to plantation of trees in the area?	
	How many people do you think get benefited from this plantation initiative in your area and how?	
3.d	How many biogas plants established in your area as an alternative energy source?	Probe
	How many farmers are practicing organic farming in the area?	
	From your observation how forestation area increased due to this intervention	
3.e	How many solar lights installed in your area?	
	Do you think installation and use of solar lights would reduce the demand for electricity from national grid?	
3.f	Are you aware of a solar based power plant installed in your area?	
	What benefits you are getting from this plant?	
	Can you please tell how many households are getting power from the solar plant in your area?	
3.g	How many solar power plants installed in your area?	
	How many households/ consumers receiving solar power from these plants?	
	Can you please how long be the distribution line constructed for solar power in your area?	
	How many farmers are trained to operate and maintain solar power-based irrigation pumps?	
3.h	How many solar power plants installed and commissioned in the area?	
	How many Upazila complexes had come under solar power network under this project?	
	In your Upazila how many personnel are trained on operation and maintenance of solar plants?	

	Can you please tell how much electricity consumption is reduced due to the use of solar power?	
3.i	How many households are enjoying solar power in your area?	
	Can you please tell the amount of power (electricity) saved due to availability of solar power?	
	Other than illuminating households, what else can be done through solar power?	

Section 4

	Issues	Instructions
1	Can you please share the benefits derived from the implemented project?	Probe and list down
2	How this project benefited different occupational groups, i.e., farmers, fishermen, students, business community, and the people in general?	
3	Which group benefited most according to your understanding?	
4	Do you think the poor and the marginalized groups did get any direct benefit from the implemented project?	

Section 5

	Issues	Instructions
1	Do you think the benefits of the implemented project will be long-lasting? If so, why?	Probe
2	Do you think since the implementation of the project, people became more aware of the climate change effects than earlier? Why do you think so?	Probe
3	According to your understanding what more can be done so that the people in general get will feel safer?	
4	Any suggestion you want to forward in regard to have a climate adaptive society?	

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Section 1

	Issues	Instructions
1	How long you have been living in this area?	
2	Why this area is famous for? Can you name some of them?	Probe
3	What are the main problems you have been suffering for years?	
4	Have you observed any government initiative to resolve any of the problems you have just mentioned?	Probe and record the names of the initiatives mentioned.
5	Which government agency had implemented this project?	Probe

Section 2

	Issues	Instructions
1	What do you mean by climate change effects in our lives and livelihoods?	
2	How climate change has been affecting your areas/ communities?	Probe
3	Due to climate change effects for you have suffered most in the recent past?	Probe; try to get the issues/ problem they suffered due to climate change
4	Do you think the project implemented in your area was the most urgent ones to be addressed keeping climate change effects in consideration?	

Section 3 Thematic Area 6: Capacity building and institutional development

	Issues	Instructions
3.a	Was GIS designed and updated for management and REDD+ programmes	Probe
	Are you aware that planting site is selected, and planting data is updated?	
	How many staff was trained on GPS and GIS mapping?	

	Do you think implementation of this project really strengthen the capacity of the RIMS unit and how?	

Section 4

	Issues	Instructions
1	Can you please share the benefits derived from the implemented project?	Probe and list down
2	How this project benefited your institution?	
3	Which group benefited most according to your understanding?	
4	Do you think all sections of your office equally benefitted from this project?	

Section 5

	Issues	Instructions
1	Do you think the benefits of the implemented project will be long-lasting? If so, why?	Probe
2	Do you think since the implementation of the project, the people became more aware of the climate change effects than earlier? Why do you think so?	Probe
3	According to your understanding what more can be done so that the people in general get will feel safer?	
4	Any suggestion you want to forward in regard to have a climate adaptive society?	

Annex 12.4 Case Study Documentation and Reporting Guidelines

Impact Evaluation of 45 Projects implemented by different under Bangladesh Climate Change Trust (BCCT)

Case Study Template

Instruction: A case study is a self-contained story about how a community/ an agency/ department overcame the prevailing problem/s through implementing a project, please remember, **a good case study** is a story of a context/ situation who has a problem but who wins out in the end. Please use your judgment to best describe the situation you have observed. **Please don't apply your imagination.**

	Issues
1	Clear headline (Like a newspaper headline, it should give the most important information. A subtitle with supporting details is optional)
2	Snapshot: The description of the Project you have chosen to write a Case
3	Implementer's name: Which department/ agency implemented the project?
4	Problem: State the problem/goal, consequences, the people/ community had long been facing/ suffering from etc. If possible, include quotes of beneficiaries.
5	Solution: What did the project do to solve the long-standing issue in the project area?
6	Results: Describe the results and the benefits, as well as any additional benefits that came of the project. If possible, include quotes of beneficiaries.
7	Conclusion: Share additional praise from the community and words of advice they have for other people/communities facing the same situation yet.
8	Please do not forget to capture photographs of the sight) especially if any infrastructure is built / crops produced/embankments, drain constructed etc. .

Annex 12.5 Physical Observation and Verification Checklist

Protective works project (PWP)

Project Name: Protective work in the different areas of Karnaphuli, Halda, Ischamoti river and Shilock Khal and their branches canal, structure construction under Chittagong district.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
Bangladesh Water Development Board	1,999.50	01-Jul-10	30-Jun-12	30-Jun-14	• C.C block • Sand filled Geo-bag • Geo textile with filter • Sand and Cement
Indicators			Observation		
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result taken before. • Geo-bag quality considering test result. • Sand F.M considering the test results. • Quality casting					

PWP=Protective works project

Project Name: Re -construction of embankment and river bank protection work in Ramnagar- Rahimnagar area under Rupsha Upazila of Khulna district

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
Bangladesh Water Development Board	1,376.38	31-Dec-12	30-Jun-14	30-Jun-16	• C.C block • Sand filled Geo-bag • Geo textile with filter Sand and Cement
Indicators			Observation		
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result taken before. • Geo-bag quality considering test result. • Sand F.M considering the test results. • Quality casting			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average		

PWP=Protective works project

Project Name: Protection of Ulania and Gobidapur area from erosion of the Meghna river in Mehendiganj Upazila under Barishal district.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
Bangladesh Water Development Board	1,999.90	01-Feb-13	30-Jun-14	30-Jun-15	• C.C block • Sand filled Geo-bag • Geo textile with filter Sand and Cement
Indicators				Observation	
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result taken before. • Geo-bag quality considering test result. • Sand F.M considering the test results. • Quality casting				☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average	

PWP=Protective works project

Project Name: Bank protective work at the left bank of the Meghna River outfall of Gabtali sluice at Hatiya Upazila in the district of Noakhali to mitigate the risk of the disaster due to climate change

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
2	3	4	5	6	7
Bangladesh Water Development Board	598.78	01-Apr-13	30-Jun-14	30-Jun-15	• C.C block • Sand filled Geo-bag • Geo textile with filter • Sand and Cement
Indicators			Observation		
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result • Geo-bag quality considering test result. • Sand F.M considering the test results. • Quality casting			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average		

PWP=Protective works project

Project Name: Bank protective work at the left bank of the Meghna River outfall of Gabtali sluice at Hatiya Upazila in the district of Noakhali to mitigate the risk of the disaster due to climate change

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
Bangladesh Water Development Board	598.78	01-Apr-13	30-Jun-14	30-Jun-15	• C.C block • Sand filled Geo-bag • Geo textile with filter • Sand and Cement
Indicators			Observation		
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result • Geo-bag quality • considering test result. • Sand F.M considering the test results. • Quality casting			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average		

PWP=Protective works project

Project Name:Re-excavation of Shubhadya Khal including slope protection work from Shubhadya to Aganagar to mitigate the environmental impact in UpazilaKeraniganj in Dhaka district

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
Bangladesh Water Development Board	1,000.00	01-Jul-13	30-Jun-14	30-Jun-17	• C.C block • Sand filled Geo-bag • Geo textile with filter Sand and Cement
Indicators				Observation	
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result • Geo-bag quality • considering test result. • Sand F.M considering the test results. • Quality casting				☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average	

PWP=Protective works project

Project Name: Mitigation of natural disaster by protection of Gazibari and Jangalia area in west Ilisha union under Bhola Sadar from erosion of the Tentulia river due to climate change impact

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
Bangladesh Water Development Board	500.00	01-Nov-15	30-Jun-17	30-Jun-18	• C.C block • Sand filled Geo-bag • Geo textile with filter Sand and Cement
Indicators				Observation	
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result • Geo-bag quality • considering test result. • Sand F.M considering the test results. • Quality casting •				☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average	

PWP=Protective works project

Project Name: Bank protection work at Dewanji Ghat Hindupara and Mukamipara along the left bank of Halda river in Rauzan Upazila under Chittagong district to mitigate the hazards due to climate change

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
Bangladesh Water Development Board	500.00	01-Oct-16	30-Jun-18	30-Jun-19	• C.C block • Sand filled Geo-bag • Geo textile with filter Sand and Cement
Indicators				Observation	
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result • Geo-bag quality • considering test result. • Sand F.M considering the test results. • Quality casting				☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average	

PWP=Protective works project

Project Name:Slope protection and improvement work for road cum-embankment of Bhandaria Upazila

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
1	2	3	4	5	6
LGED	1,000.00	01-Apr-14	30-Jun-15		• C.C block • Sand filled Geo-bag • Geo textile with filter Sand and Cement
Indicators				Observation	
• Shape and Size of the C.C block. • Cement and Sand quality. • Proper casting • Check the strength of the C.C block as per test result • Geo-bag quality • considering test result. • Sand F.M considering the test results. • Quality casting				☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ No report available ☐ Test not done ☐ Good ☐ Average	

Project category: WSP

Project name: Safe water supply project in climate change affected Babugonj and Muladi Upazila at Barishal district

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
DPHE	200.00	01-Jan-17	31-Dec-18		Deep tube well 227 Nos 38 mm dia with raised platform. • Rehabilitation of village water supply scheme. • Latrine construction for sanitation development.
Indicators			Observation		
• Functional or not • Platform is alright or not • Drainage system in place and functional or not • Location of the project accessible to all or not • Quality of Water - Smell: Good/bad - Clean or not - Arsenic contamination: Yes/ No (check the test result) • Iron content within limit or not • Turbidity test			☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Good ☐ Bad ☐ Could not verify ☐ Clean ☐ Not clean ☐ Could not verify ☐ Yes ☐ No ☐ Report verified ☐ Report not available ☐ Within limit ☐ Test not done ☐ Could not verify ☐ Done and report available ☐ Not done		

Project category: WSP

Project name: Safe water supply project in climate change affected Monpura and Charfession Upazila at Bhola district

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
DPHE	167.45	01-Jan-17	31-Dec-17	31-Dec-19	Deep tube well 227 Nos 38 mm dia with raised platform. • Rehabilitation of village water supply scheme. • Latrine construction for sanitation development.
Indicators			Observation		
• Functional or not • Platform is alright or not • Drainage system in place and functional or not • • Location of the project accessible to all or not • • Quality of Water - Smell: Good/bad - Clean or not - Arsenic contamination: Yes/ No (check the test result) - • Iron content within limit or not • Terbitity test			☐ Yes ☐ No ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Good ☐ Bad ☐ Could not verify ☐ Clean ☐ Not clean ☐ Could not verify ☐ Yes ☐ No ☐ Report verified ☐ Report not available ☐ Within limit ☐ Test not done ☐ Could not verify ☐ Done and report available ☐ Not done		

Project category: Canal Re-excavation project (CRP)

Project Name: Re- excavation of drainage Khals in Upazila Kotalipara, District Gopalganj to mitigate the adverse impact of climate change project.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
BWDB	1,198.64	01-May-13	30-Jun-14	31-Dec-16	• Length of canal. • Width of canal. • Depth of canal. • Slope of the bank of the canal. • Volume of the deposited soil. • Road/embankment construction by the deposited soil.
Indicators			Observation		
• Length, Width and Depth of the Canal • Slope of the Canal • Survey done accurately by accurate TBM. • Pre work/ post work taken to calculate accurate volume of soil. • Remove the obstruction if any, for free flow in the canal.			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify		

Project category: Canal Re-excavation project (CRP)

Project Name: Re- excavation of Khals in Upazila Madaripur Sadar and Rajoir, District Madaripur to mitigate the adverse impact of climate change project.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
BWDB	700.00	01-Dec-13	30-Jun-14	31-Dec-16	• Length of canal. • Width of canal. • Depth of canal. • Slope of the bank of the canal. • Volume of the deposited soil. • Road/embankment construction by the deposited soil.
Indicators			Observation		
• Length, Width and Depth of the Canal • Slope of the Canal • Survey done accurately by accurate TBM. • Pre work/ post work taken to calculate accurate volume of soil. • Remove the obstruction if any, for free flow in the canal.			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify ☐ Yes ☐ No ☐ Could not verify		

Project category: IP=Infrastructure project (IP)

Project Name: Establishment of Khagrachari Pourashava as a climate resilient town.

Implementin g Agency	Approved Estimated Cost	Project Beginnin g	Project Closing (Original)	Project Closing (Extended)	Component Description
Khagrachari Pourashava Khagrachari Hill tracts	169.47	01-Jan-12	31-Dec-12		• Drainage system improvement by canal digging. • Construction of flood shelters to protect the people from flood. • R.C.C Retaining wall construction to protect the land less people in hilly area.
Indicators			Observation		
• Canal measurement according to design. • Drainage system measurement according to design. • Checking of flood shelters according to design. • Foundation condition according to soil condition			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ Soil test report available ☐ Not done ☐ Could not verify		

Project category: IP=Infrastructure project (IP)

Project Name: Development of infrastructure to tackle climate change impacts in Patuakhali Pourashava

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
Patuakhali Pourashava	244.28	01-Jul-12	30-Jun-13		• Drainage system improvement by canal digging. • Installation of DHTWs
Indicators			Observation		
• Drainage system measurement according to design. • Installation of DHTW • Foundation condition according to soil condition			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ Functional ☐ Not Functional ☐ Soil test report available ☐ Not done ☐ Could not verify		

Project category: DRS= Disaster Resilient Shelter (DRS)

Project Name: Construction of Disaster Resilient Shelters for Tornado-2013 affected people in Brahmanbaria district.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
Dept. of Disaster Management	321.00	01-Jul-13	30-Jun-14	31-Dec-14	• Building materials such as Brick Cement, Sand (F.M) and M.S Rod should be as per specification • House should be well protected from river (flood) and other disaster activities.
Evaluation Indicators			Observation		
• Project completed on time. • Size of the House • Doors and windows • The quality of the construction must be as per drawing and specification. • Location of the households			☐ Yes ☐ Delayed ☐ As per specification ☐ Below par specification ☐ As per specification ☐ Below par specification ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ Protected from river erosion ☐ Not considered		

Project category: Cyclone Preparedness Project (CPP)

Project Name: Climate Resilient infrastructure development of 4 educational Institute cum-Cyclone shelter at district Pirojpur.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
LGED	1,200.00	01-Jan-15	30-Jun-17	30-Jun-18	• Land purchase, if required in the low-lying area. • Quality construction materials. • Super and sustainable infrastructure design.
Evaluation Indicators			Observation		
• Building i.e., school cum-Cyclone shelter should be safe distance from river. • Above the External Ground Level (EGL) • Sufficient space for people and livelihood			☐ Physical distance from river maintained ☐ Not maintained ☐ As per specification ☐ Not considered ☐ Could not verify ☐ Yes ☐ Not considered		

Project category: Irrigation project (IRP)

Project Name: Improvement of irrigation system and CDSP Embankment in Mirsarai Upazila, District Chittagong under CCTF project

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
BWDB	1,756.52	01-Jul-10	30-Jun-13	31-Dec-13	• Re-excavation of canal. • Construction of Sluices • Re-sectioning of embankment.
Evaluation Indicators			Observation		
• Re-excavation of different Canals (measuring width and depth) • Installation of Regulator • Protective wall on the bank of Feni River			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify		

Project category: Road construction project (RCP)

Project Name: Project for construction / re-construction / re-habilitation of roads damage by climate affects in coastal region (Bhola district)

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
LGED	1,000.00	01-Jan-16	30-Jun-17		• Brick chips • Road shoulder • Carpeting • Palasiding • Sub-grade • Sub-base
Evaluation Indicators			Observation		
• Road condition (when visited) • Road shoulder protection • Status of Brick chips • Protection of Carpeting edges • Status of Palasiding(strong and tilted)			☐ Good ☐ Average ☐ Poor ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below standard ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify		

Project category: Road construction project (RCP)

Project Name: Climate resilient road improvement project at Bhola Sadar Upazila under Bhola district.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
LGED	300.00	01-Dec-15	30-Jun-17	30-Jun-18	• Brick chips • Road shoulder • Carpeting • Palasiding • Sub-grade • Sub-base
Evaluation Indicators			Observation		
• Road condition (when visited) • Road shoulder protection • Status of Brick chips • Protection of Carpeting edges • Status of Palasiding(strong and tilted)			☐ Good ☐ Average ☐ Poor ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below standard ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify		

Project category: Water logging project (WLP)

Project Name: Development of drainage and environment to tackle climate change impact in Mothbaria Pourashava

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
Mothbaria Pourashava, Pirojpur	800.00	01-Apr-14	31-Mar-16	31-Mar-17	• Drainage system improvement • Drain construction • RCC drain
Evaluation Indicators			Observation		
• Design of the RCC drainage • Size and shape of the drain (length, width, depth) • Construction material according to design and specification. • O & M activities (post construction) of RCC drain.			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below standard ☐ Could not verify ☐ Visible ☐ Not visible ☐ Could not verify		

Project category: Water logging project (WLP)

Project Name: Improve water logging situation through construction of drain and other protective measures to protect Kamalgonj Municipal area for improvement of environment.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
Kamalgonj Pourashava Sylhet	200.00	01-Mar-15	31-Mar-16	31-Dec-16	• Drainage system improvement • Drain construction • RCC drain
Evaluation Indicators			Observation		
• Design of the RCC drainage • Size and shape of the drain (length, width, depth) • Construction material according to design and specification. • O & M activities (post construction) of RCC drain.			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below standard ☐ Could not verify ☐ Visible ☐ Not visible ☐ Could not verify		

Project category: Water logging project (WLP)

Project Name: To remove the water logging and improve the environment of Kaliakoir Pourashava

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
Kaliakoir Pourashava	200.00	01-May-15	31-Dec-16		• Drainage system improvement • Drain construction • RCC drain
Evaluation Indicators			Observation		
• Design of the RCC drainage • Size and shape of the drain (length, width, depth) • Construction material according to design and specification. • O & M activities (post construction) of RCC drain.			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below standard ☐ Could not verify ☐ Visible ☐ Not visible ☐ Could not verify		

Project category: Water logging project (WLP)

Project Name: Construction of drain to alleviate water logging problem under ward no-28 in Rajshahi City Corporation

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
Rajshahi City corporation	200.00	01-Mar-16	31-Dec-17	30-Jun-18	• Drainage system improvement • Drain construction • RCC drain
Evaluation Indicators			Observation		
• Design of the RCC drainage • Size and shape of the drain (length, width, depth) • Construction material according to design and specification. • O & M activities (post construction) of RCC drain.			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below standard ☐ Could not verify ☐ Visible ☐ Not visible ☐ Could not verify		

Project category: Water logging project (WLP)

Project Name: Project for reducing water logging and improving the environment in Lalmohan Pourashava to mitigate climate change effect.

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
Lalmohan Pourashava Bhola	500.00	01-Jun-16	31-Dec-17		• Drainage system improvement • Drain construction • RCC drain
Evaluation Indicators			Observation		
• Design of the RCC drainage • Size and shape of the drain (length, width, depth) • Construction material according to design and specification. • O & M activities (post construction) of RCC drain.			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per standard ☐ Below standard ☐ Could not verify ☐ Visible ☐ Not visible ☐ Could not verify		

Project: Rubber Dam

Project Name: Construction of Rubber Dam on Chillakhali River under Nalitabari Upazila of Sherpur District to mitigate climate change

Implementing Agency	Approved Estimated Cost	Project Beginning	Project Closing (Original)	Project Closing (Extended)	Component Description
2	3	4	5	6	7
BADC	1499.00	1-Apr-14	31-Dec-15	31-Apr-16	• Rubber bags
Evaluation Indicators			Observation		
• Length of Rubber bags • Height of Rubber bag • Thickness of rubber bag • Pump capacity			☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify ☐ As per specification ☐ Below par specification ☐ Could not verify		

Annex 12.6 Theme-wise distribution of sample size by 45 projects

No	Project Name	Implementing agency	Sampled districts/ areas	Distribution of sampling size					
				HQS	KII	FGD	CS/ IDI	PV	Total
Theme 1: Food Security, Social Protection and Health									
1	Farm Productivity and Food Security Enhancement of the Vulnerable Farmers in the Char Areas of Jamalpur and Sherpur Districts	BARI-MoA	Jamalpur, Sherpur	500	4	8	2	0	514
2	প্রতিকূলতা সহিষ্ণুধান, গম, ডাল ও তৈলবীজ উৎপাদন, প্রক্রিয়াজাতকরণ ও বিতরণ প্রকল্প	BADC-MoA	Mymensingh, Sunamganj, Cox's Bazar, Gopalganj, Patuakhali, Borguna, Satkhira, Dinajpur	704	12	16	8	0	740
3	বন্যা ও জলাবদ্ধতাপ্রবণ এলাকায় জলবায়ু পরিবর্তন অভিযোজন কৌশল হিসেবে ভাসমান সবজি ও মসলা উৎপাদন প্রযুক্তি সম্প্রসারণ প্রকল্প	DAE-MoA	Barishal, Bhola, Khulna, Bagerhat, Potuakhali, Satkhira	504	10	12	6	0	538
4	জলবায়ুপরিবর্তনের প্রভাবে ক্ষতিগ্রস্থ বরিশাল জেলার বাবুগঞ্জ ও মুলাদী উপজেলায় নিরাপদ পানি সরবরাহ প্রকল্প	DPHE-LGD	Babuganj and Muladi Upazilas of Barishal district	430	6	4	2	4	442
5	জলবায়ু পরিবর্তনের প্রভাবে ক্ষতিগ্রস্থ ভোলা জেলার মনপুরা ও চরফ্যাশন উপজেলায় নিরাপদ পানি সরবরাহপ্রকল্প (২য়পর্যায়)	DPHE-LGD	Monpura and Charfashion Upazilas of Bhola district	430	6	4	2	4	442
6	জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় গোপালগঞ্জ জেলার কোটালীপাড়া উপজেলায় খাল পুনঃখনন প্রকল্প	BWDB-MoWR	Gopalganj	N/A	4	2	0	1	7
7	জলবায়ু পরিবর্তনের প্রভাব মোকাবেলায় মাদারীপুর জেলার মাদারীপুর সদর ও রাজৈর উপজেলায় খাল পুনঃখনন প্রকল্প	BWDB-MoWR	Madaripur	N/A	4	2	0	1	7
8	জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় শেরপুর জেলার নালিতাবাড়ি উপজেলাধীন চেল্লাখালী নদীতে রাবার ড্যাম নির্মাণ প্রকল্প	BADC-MoA	Sherpur	N/A	4	2	1	1	8
Theme 2: Comprehensive Disaster Management									
9	Enhancing the Capacity of CPP Volunteers and Costal Fisherman to Cope with Climate Change	CPP-MoDMR	Kishorganj, Hobiganj, Chottogram, Madaripur, Pabna	705	8	10	5	0	728
Theme 3: Infrastructure									

No	Project Name	Implementing agency	Sampled districts/ areas	Distribution of sampling size					
				HQS	KII	FGD	CS/IDI	PV	Total
10	Establishment of KhagrachairPourashava as a Climate Resilient Town	Khagrachari Pourashava, MoCHTA	Khagrachari	N/A	5	1	1	1	8
11	Development of Infrastructure to Tackle Climate Change Impacts in Patuakhali Pourashava	PotuakhaliPourashava, LGD	Patuakhali	N/A	3	2	0	1	6
12	ব্রাহ্মণবাড়িয়া জেলার টর্নেডো ২০১৩ এ ক্ষতিগ্রস্ত মানুষের জন্য দুর্যোগ সহনশীল গৃহ নির্মাণ প্রকল্প	DDM-MoDMR	Brahmanbaria	430	3	3	2	5	438
13	পিরোজপুর জেলার ৪টি শিক্ষা প্রতিষ্ঠান কাম সাইক্লোন সেন্টার নির্মাণ প্রকল্প	LGED-LGD	Pirojpur	N/A	3	2	0	2	9
14	চট্টগ্রাম জেলার বিভিন্ন উপজেলায় কর্ণফুলী, হালদা, ইছামতি নদী ও শিলক খাল এবং ইহাদের শাখা নদীর বিভিন্ন ভাঙ্গন কবলিত অংশে প্রতিরক্ষামূলক অবকাঠামো নির্মাণ প্রকল্প	BWDB-MoWR	Chottogram	N/A	4	2	2	1	9
15	চট্টগ্রাম জেলার মিরেশ্বরই উপজেলার উপকূলবর্তী এলাকায় সেচ ও যোগাযোগ ব্যবস্থার উন্নয়ন এবং মুহুরী এফ্রিটেড এলাকায় সিডিএসপি বেড়ীবাধ উন্নীতকরণ প্রকল্প	BWDB-MoWR	Chottogram	N/A	3	2	2	1	8
16	খুলনা জেলার রূপসা উপজেলার অন্তর্গত রামনগর-রহিমনগর এলাকায় বাধী পুনঃনির্মাণ ও নদীতীর সংরক্ষণ প্রকল্প	BWDB-MoWR	Khulna	N/A	4	2	1	1	8
17	মেঘনা নদীর ভাংগন হতে বরিশাল জেলার মেহেন্দিগঞ্জ উপজেলার উলানিয়া গোবিন্দপুর এলাকা রক্ষা প্রকল্প	BWDB-MoWR	Barishal	N/A	4	2	0	1	7
18	পশ্চিম গাঁওদিয়া জামে মসজিদ হতে বেজগাঁও পূজামন্দির ভায়া খানকা শরীফ পর্যন্ত সড়ক কাম বেড়ীবাধী নির্মাণ প্রকল্প	LGED-LGD	Munshiganj	N/A	4	2	0	1	7
19	জলবায়ু পরিবর্তনের ঝুঁকি নিরসনকল্পে নোয়াখালী জেলার সুবর্ণচর ও হাতিয়া উপজেলার গাবতলী সুইস সংলগ্ন মেঘনা নদীর তীর সংরক্ষণ প্রকল্প	BWDB-MoWR	Noakhali	N/A	4	2	0	1	7
20	ঢাকা জেলার কেরানীগঞ্জ উপজেলাধীন শুভাঢ্যা হতে আগানগর পর্যন্ত শুভাঢ্যা খাল পুনঃখনন ও তীর সংরক্ষণমূলক কাজ বাস্তবায়নের মাধ্যমে পরিবেশের ভারসাম্য রক্ষাকরণ প্রকল্প	BWDB-MoWR	Dhaka	N/A	4	2	0	1	7
21	জলবায়ু পরিবর্তনের প্রভাব হতে ভোলা সদর উপজেলার পশ্চিম ইলিশা ইউনিয়নের গাজীবাড়ি ও জাঙ্গালিয়া এলাকা রক্ষা প্রকল্প	BWDB-MoWR	Bhola	N/A	3	2	0	1	6

No	Project Name	Implementing agency	Sampled districts/ areas	Distribution of sampling size					
				HQS	KII	FGD	CS/IDI	PV	Total
22	টাংগাইল জেলার মির্জাপুর উপজেলাধীন হাট ফতেহপুর নামক স্থানে বংশাই নদীর তীর সংরক্ষণ কাজ বাস্তবায়ন প্রকল্প	BWDB-MoWR	Tangail	N/A	4	2	0	1	7
23	জলবায়ু পরিবর্তনের ঝুঁকি মোকাবেলায় চট্টগ্রাম জেলার রাউজান উপজেলার দেওয়ানজীঘাট, মোকামিপাড়া সহ হালদা নদীর বাম তীরের বিভিন্ন এলাকায় প্রতিরক্ষামূলক প্রকল্প	BWDB-MoWR	Chottogram	N/A	3	2	0	1	6
24	ভান্ডারিয়া উপজেলার বাঁধ কাম সড়কের স্লোপ প্রটেকশন সহ উন্নয়ন প্রকল্প	LGED-LGD	Pirojpur	N/A	3	2	0	1	6
25	জলবায়ুর পরিবর্তনের প্রভাবে উপকূলীয় অঞ্চলে ক্ষতিগ্রস্ত সড়ক নির্মাণ/পুনঃনির্মাণ/ পুনর্বাসন প্রকল্প (ভোলা জেলা)	LGED-LGD	Bhola	N/A	3	2	0	1	6
26	ভোলা জেলার সদর উপজেলাধীন জলবায়ু পরিবর্তন সহিষ্ণু সড়ক নির্মাণ প্রকল্প	LGED-LGD	Bhola	N/A	3	2	0	1	6
27	জলবায়ু পরিবর্তনজনিত ঝুঁকি মোকাবেলার জন্য মঠবাড়িয়া পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প	MothbariaPou urashava, Pirojpur- LGD	Pirojpur	N/A	4	2	1	1	8
28	জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কমলগঞ্জ পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন শীর্ষক প্রকল্প	KamalganjPou urashava, Moulvibazar- LGD	Moulvibazar	N/A	4	2	1	1	8
29	জলবায়ু পরিবর্তনজনিত প্রভাব মোকাবেলার জন্য কালিয়াকৈর পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প	KaliakoirPou rahsva, Gazipur – LGD	Gazipur	N/A	4	2	1	1	8
30	রাজশাহী সিটি কর্পোরেশনের ২৮-নং ওয়ার্ডের জলাবদ্ধতা নিরসনে অবকাঠামো উন্নয়ন প্রকল্প	Rajshahi City Corporation, LGD	Rajshahi	N/A	4	2	1	1	8
31	লালমোহন পৌর এলাকার জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প (২য় পর্যায়)	LalmohonPou rashava, Bhola – LGD	Bhola	N/A	3	2	0	1	6
32	জলবায়ু পরিবর্তনজনিত সৃষ্ট দুর্যোগ মোকাবেলায় ভোলা পৌর এলাকায় জলাবদ্ধতা নিরসন ও পরিবেশ উন্নয়ন প্রকল্প	Bhola Pourashava - LGD	Bhola	N/A	3	2	0	1	6
Theme 4: Research and Knowledge Management									

No	Project Name	Implementing agency	Sampled districts/ areas	Distribution of sampling size					
				HQS	KII	FGD	CS/IDI	PV	Total
33	জলবায়ু পরিবর্তনের প্রভাব মোকাবিলায় খরাপ্রবণ ও উপকূলীয় লবণাক্ত এলাকার জন্য টেকসই ফসল ব্যবস্থা উন্নয়ন প্রকল্প	BARI – MoA	Dhaka	N/A	5	0	0	0	5
34	বাংলাদেশের জলবায়ু ঝুঁকিপূর্ণ অঞ্চলে জন্মানোর লক্ষ্যে উপকূলীয় এলাকার কৌলিসম্পদ ব্যবহার করে লবন সহিষ্ণু ডাবলড হ্যাণ্ডয়েড জাতের উদ্ভাবন প্রকল্প	Bangabandu Sheikh Mujibur Rahman Agricultural University, SHED	Cox's Bazar, Moulvibazar	N/A	6	0	0	0	6
35	পরমাণু কৃষি গবেষণার মাধ্যমে জলবায়ু পরিবর্তনশীল জাত/প্রযুক্তি উদ্ভাবন ও বিভিন্ন প্রতিবেশ অঞ্চলে অভিযোজন প্রকল্প	BINA, MoA	Mymensingh, Sunamganj, Noakhali, Khagrachari, Gopalganj, Pabna, Satkhira, C-Nawabganj	N/A	6	0	0	0	12
Theme V: Mitigation and Low-Carbon Development									
36	সমগ্র বাংলাদেশের শহরগুলোর (পৌরসভা/মিউনিসিপ্যালিটি) জৈব আবর্জনা ব্যবহার করে প্রোগ্রাম্যাটিক সিডিএম শীর্ষক প্রকল্প	DoE-MoEFCC	Cox's Bazar, Gazipur, Mymensingh, Narayanganj	N/A	8	4	4	0	16
37	Eco-Restoration of Hill Forests, Cox's Bazar	FD-MoEFCC	Cox's Bazar	N/A	3	2	2	0	7
38	কাপ্তাই এলাকায় বাগান সৃজনের মাধ্যমে কার্বন সিংক তৈরী প্রকল্প	FD-MoEFCC	Rangamati	N/A	3	0	0	0	3
39	বায়োগ্যাস প্রযুক্তি সম্প্রসারণের মাধ্যমে কার্বন নিঃসরণ হ্রাস ও বিকল্প জ্বালানি ব্যবহার বৃদ্ধিকরণ প্রকল্প (২য়পর্যায়)	IFRD, MoPEMR	Jamalpur, Madaripur, Barishal, Bagerhat, Natore, Rajshahi, Nilphamari, Chapai Nawabganj	N/A	4	8	8	0	20
40	সিংড়া পৌর এলাকায় সৌর বিদ্যুতায়িত সড়কবাতি স্থাপন শীর্ষক প্রকল্প	SingraPouras hava, Natore - LGD	Natore	N/A	3	1	0	4	8
41	নোয়াখালী জেলার হাতিয়া উপজেলাধীন জাহাজ্জার চর এলাকায় নবায়নযোগ্য শক্তি নির্ভর ১ মেগাওয়াট ক্ষমতাসম্পন্ন বিদ্যুৎকেন্দ্র স্থাপন প্রকল্প	Bangladesh Army, MoD	Noakhali	N/A	3	0	0	1	4
42	Introduction of Solar Powered Irrigation Pump as well as Power Management and	REB, MoPEMR	Gazipur, Tangail, Satkhira, Chapai Nawabganj, Kurigram	N/A	9	6	3	3	21

No	Project Name	Implementing agency	Sampled districts/ areas	Distribution of sampling size					
				HQS	KII	FGD	CS/IDI	PV	Total
	Distribution System to Mitigate Energy Crisis and Climate Change								
43	Electrification in Local Area (Upazila Complex) by using Solar Energy	REB, MoPEMR	Mymensingh, Kishoreganj, Sunamgaj, Hobiganj, Pabna, Madaripur, Khulna, Gopalganj, Bagerhat, Chapai Nawabganj	N/A	14	10	0	5	29
44	Providing Electricity Facilities to the Household of Former Enclaves in Bangladesh through Solar System	PDBF, RDD-MLGRDC	Kurigram, Lalmonirhat, Nilphamari, Panchagarh	432	8	8	4	4	456
<i>Theme VI: Capacity Building and Institutional Strengthening</i>									
45	Forest Information Generation and Networking System	FD, MoEFCC	Dhaka	N/A	4	1	0	0	5
Total:				4,135	258	197	86	48	4,724