(3) Detailed Design of Environmental Studies for Construction of Urir Char–Noakhali Cross Dam

Project number: P144068

Grant amount: US$0.73 million

Background: Cross dams are structures between naturally accreted chars (or islands) or a char and the mainland. They are meant to accelerate the natural accretion process and increase land areas. The proposal of the Bangladesh Water Development Board (BWDB) to construct Urir Char–Noakhali Cross Dam was submitted for the first round of review. While the MC acknowledged the dam's potential impact on development, it also noted that environmental impacts need to be studied further. A study initiated in August 2010 (with Professor Mead Allison, associate director, Institute for Geophysics, University of Texas), revealed a considerable level of uncertainty in the results of the critical model.

While some recommendations were provided to improve the modeling, the project still carries safeguard risks. During subsequent discussions and further consultation with Professor Ainun Nishat (vice chancellor of BRAC University), it was agreed that the BWDB should submit a request to the BCCRF to fund preparatory studies for this dam rather than request funds for construction; the MC approved the proposal for such studies in June 2012.

Objectives and expected outcome: The main objective of the study is to update and finalize the detailed feasibility level of the Uri Char–Noakahli Cross Dam, tender designs in the first phase, and provide a detailed design and implementation plan. The detailed feasibility report should include technical, institutional, and economic analysis, social and environmental impact assessment, and procurement and financial management, among other aspects that are required to obtain project approval by the GoB.

Methodology and data: The study will involve an overall plan covering review of technical feasibility; economic analysis; updating of the environmental management plan; development of the social impact assessment and resettlement policy framework, if needed; development of a procurement, operation, and maintenance monitoring and evaluation framework; financial management; and packaging of contracts and preparation of detailed design. In particular, the study will investigate the following:

- Connectivity to be created between Urir Char Island and mainland
- Future accretion of new land to accommodate increasing population
- Climate-resilient infrastructure and livelihood opportunities of island communities
- Project benefits such as increased land for dwelling and production and direct overland road communications for island dwellers
- Negative impacts such as waterlogging in the Noakhali coast.

Updated status: The terms of reference for developing the feasibility study have been completed and reviewed by a panel of multidisciplinary experts from the World Bank. The call for expressions of interest for consultancy was posted on the United Nations Development Business website in January 2013. More than 20 firms expressed interest in the consultancy. After a careful review by the BWDB, the Bank, and university experts, Haskoning DHV Nederland B. V. was selected through international competitive bidding in October 2013. The inception report has been prepared and presented to the BWDB. Comments from the Bank team and the BWDB are reflected in the final inception report and will be accommodated in the preparation phase. Delivery of the detailed feasibility report is expected in December 2014.

(4) Innovations in Flood Risk Mitigation in Dhaka

Project number: P148929

Grant amount: US$0.3 million

Background: According to the recent coastal city flood vulnerability index (CCFVI), which was developed by researchers from the United Kingdom and the Netherlands, Dhaka is among the most climate-vulnerable megacities in the world (Balica, Wright, and van der Meulen 2012). Some of the main risks associated with climate change in Dhaka include an increase in heat waves, exposure to tropical cyclones, and the frequency, extent, and duration of flooding. The ongoing AAA on "Waterlogging of Urban Areas in a Changing Climate" aims to assess the extent of increased flooding in the greater Dhaka area under different climate scenarios. Vulnerability to floods is exacerbated by high population densities and vital infrastructure. The urban poor (living in slums and shanty towns often situated in low-lying areas, working in the informal economy, and with few assets) are among the most vulnerable populations (GoB 2009; World Bank 2010). With rapid and unplanned urbanization, their vulnerability is likely to grow unless appropriate adaptation measures are put in place.

Objectives and expected outcome: The main objective of the proposed activity is to build on the results of the ongoing AAA "Waterlogging of Urban Areas in a Changing Climate" and provide recommendations to the GoB for using innovative eco-engineering approaches to mitigating flood risk and adapting to climate change in the greater Dhaka area. Among the government, in particular, this study will target Dhaka North City Corporation (DNCC), Dhaka South City Corporation (DSCC), Dhaka Water and Sewerage Authority, the BWDB, and the Dhaka City Development Authority. The study will be based on an in-depth analysis of the ecological and hydrological characteristics of the broader delta, peri-urban area, and city and the strategies and interventions for mitigating flood risks that are being currently used. The goal is to develop an innovative pilot activity that is cost-effective and sustainable. Deliverables of this AAA include interim outputs such as a review of international experience with adaptive management in a delta context and use of eco-engineering approaches to mitigate flood risk, historical analysis of flood risk management within a delta context in the greater Dhaka watershed, and institutional and organizational capacity assessment of flood risk mitigation in Dhaka.

Methodology and data: The analysis will focus on the following:

- Assess urban flood risks in a delta context. Based on a review of existing literature, extensive field visits, and stakeholder consultations, the study will assess the main ecological and hydrological characteristics of the area at the level of the delta, peri-urban area, and city.
- Analyze the existing system for flood protection, ecosystems management, and governance. This component will undertake an in-depth assessment of infrastructural and other approaches currently being used to manage floods at the city level, the extent to which they have been effective, challenges in the existing network of flood management infrastructure, and associated costs of these interventions.
- Design an eco-engineering pilot. Based on the analysis conducted and extensive discussions with stakeholders, the study will propose a pilot demonstrating how flood risks can be reduced through a combination of the following:
  - Undertaking infrastructural, non-infrastructural, and ecosystems-based interventions, including modifying existing structures to improve the capacity of river systems

- Identifying interventions that should be undertaken at different scales—at the city level, in peri-urban areas, and at the broader delta level
- Assessing the impacts (reduced flood risks and other co-benefits) of innovative interventions
- Determining the costs and associated implementation arrangements of the proposed interventions and the feasibility of carrying them out in the current institutional context.

Updated status: The MC approved the proposal in November 2012, and a project concept note was still in draft status as of the end of 2013. A consultation mission is confirmed for the second week of February 2014.

(5) Scaling up Innovation in Disaster Risk Management in Bangladesh: A Proposal to Support Human and Financial Resilience to Natural Hazards

Project number: P130724

Grant amount: US$0.2 million

Background: The GoB has not sufficiently managed the fiscal risks associated with natural disasters and climate change because of the following issues related to the quality and type of information available to decision makers:

- Inaccurate measurement of losses means that calculations are inaccurate and the direct and indirect economic and social costs of disasters are not properly accounted for in fiscal policy.
- Complexity and uncertainty of risk analysis mean that it is difficult for decision makers to use information.
- Lack of such data further compromises the development of risk-financing strategies, including reserve funds, contingent loan agreements, and affordable insurance.

Objectives and expected outcome: The main objective is to analyze various institutional and financial aspects for creating a disaster risk financing and insurance strategy for Bangladesh. The study will discuss a series of complementary options for a national disaster risk financing strategy, based on a preliminary fiscal risk analysis and a review of the current budget management of natural disasters in Bangladesh. The results of this study will serve as a tool for the GoB as it develops long-term comprehensive risk management practices.

Methodology and data: The proposed study plans to include the following four components.

Component A: Natural disaster risk management data

- Current national disaster risk management strategy: What are the challenges around the existing strategy?
- Legal framework for emergency declaration: What is the legal framework for declaring a state of emergency?
- National disaster response: What is the GoB's response to natural disasters?
- Risk assessment and modeling: Have risk assessment and modeling been done in Bangladesh?
- Post-disaster needs assessment: How are post-disaster needs assessed and by which GoB entity?

Component B: Fiscal risk management of natural disasters

- Contingent liability of the GoB: What are the legal and stated contingent liabilities associated with disasters of the GoB?

- Fiscal risk assessment of natural disaster shocks: Is the GoB required to assess its fiscal exposure to natural disasters in its fiscal risk assessment?
- Ex post emergency budget reallocation: What is the GoB's ex post budget reallocation process?
- Annual contingency budget: What portion of the GoB's annual budget is allocated to its contingency budget for unforeseen events and other contingent budget lines?
- Ex post external assistance: What is the level of the GoB's dependency on external donors to finance natural disasters?
- Ex ante natural disaster financing: Is there a dedicated budget line for natural disasters?
- Ex ante contingent debt: Does the GoB use any contingent debt instruments?
- Ex ante insurance for public assets: Does the GoB purchase any insurance for public assets?
- Risk transfer through capital markets: Does the GoB use any instruments to transfer risk directly to the capital markets?

Component C: Institutional roles and responsibilities at the federal and local government levels

- Institutional framework: What are the legal financial responsibilities of central and local governments associated with natural disasters?
- Budget execution: Is there a special (streamlined) budget execution system in case of disasters?

Component D: Domestic catastrophe insurance market

- Property catastrophe insurance market: For what perils or market segments is catastrophe insurance available?
- Regulatory environment: Are insurance regulations set domestically, or is there a regional regulatory body?
- Agricultural insurance: Is agricultural insurance (crop, livestock, forestry, and aquaculture) offered?

Updated status: The MC approved the proposal in November 2012. The team is considering building on a similar ongoing ADB study and will develop the project concept after learning the status of the ADB study.[2]

[2] In January 2014, it became clear that this AAA was similar in scope to research being conducted by the ADB.

(6) Making Climate Data Relevant to Decision Making in Bangladesh: Spatial and Temporal Downscaling

Project number: P146094

Grant amount: US$0.3 million

Background: Climate change is a serious global threat. Initial experiences with adaptations in various countries show that early adaptation is effective for avoiding damage, provided the projections of future climate change are sufficiently accurate. Delayed adaptation, perhaps due to uncertainty, may lead to greater subsequent costs. Hence, integration of climate risk information in planning is now a priority for policy makers, public investment planners, environmental agencies, and donors. However, despite significant technical advances in forecasts of global mean temperatures for the next two to three decades, uncertainty about future climate variability at the subcontinental, national, and subnational scales is still significant (IPCC 2007). Direct uses of the global climate model (GCM) outputs are often not appropriate for adaptation planning due to their coarse spatial and temporal resolution. Hence, bridging the gap between the resolution of climate models and regional and local processes poses a

major problem. In recent years, as policy makers are calling for more information on local climate change scenarios, various statistical downscaling methods—for example, pattern scaling, weather generation, and empirical downscaling—are used to provide finer-resolution climate scenarios for modeling impacts. These downscaling methods are founded on statistical methods for characterizing present and future climate behavior at regional scale and depend on GCM outputs to run future scenarios.

Objectives and expected outcome: To understand the implications of climate change, this AAA will draw on a partnership among the World Bank, the Nature Conservancy, Climate Central, and Santa Clara University to produce statistical downscaled GCM projections for temperature and precipitation for Bangladesh on a spatial grid of 0.5° in latitude by 0.5° of longitude (approximately 50 by 50 kilometers) for the time periods 1961–1999, 2046–2065, and 2071–2100. To capture the uncertainty of the extent of climate change, nine GCMs, some with multiple runs for three different greenhouse gas emission scenarios, will be considered.

Methodology and data: The daily time-scale bias-corrected spatial disaggregation (BCSD) downscaling method will be used. Wood et al. (2002, 2004) describe the monthly version of this method. A daily variant of the BCSD similar to that of Abatzoglou and Brown (2011) will be used. The downscaling, bias correction, and trend preservation will use historically observed daily meteorological observation. The scope of study will include average (average climate value during future time change), departure (difference between the historic baseline average climate value and future average climate value), and p-value (statistical significance of change between the historic baseline average climate value and future average climate value).

Component A: Temperature-based climate metrics

- Monthly mean of daily maximum/minimum temperatures
- Maximum/minimum temperature for the month and year
- Maximum temperature exceeding the hottest 10 percent of all days per year
- Very warm/cold days (percent)
- Very warm/cold nights (percent)
- Heat wave duration index.

Component B: Precipitation-based climate metrics

- Total precipitation for the month and the year
- Largest number of consecutive dry days (precipitation less than 1 millimeter) per year
- Number of dry periods per month and year
- Percent of wet days per year
- Precipitation percent per year
- Maximum five-day precipitation total per year
- Simple daily precipitation index (mean daily precipitation on wet days).

Updated status: The MC approved the proposal in November 2012. A project concept note was prepared and circulated to the MC members on April 21, 2013. The project concept note was virtually reviewed, and responses to the comments received during the review process were filed by May 14, 2013. In June 2013, the team compiled downscaled projections for temperature and precipitation on a spatial grid of 50–100 kilometers for different future time periods using different climate models and alternative climate scenarios. A technical workshop planned for the last quarter of 2013 was postponed due to the political unrest. It is now planned for the first quarter of 2014.

REFERENCES

REFERENCES

Abatzoglou, J. T., and T. J. Brown. 2011. "A Comparison of Statistical Downscaling Methods Suited for Wildfire Applications." *International Journal of Climatology* 31 (8): 1135–42. doi: 10.1002/joc.2312.

ADB (Asian Development Bank). 2008. *Climate Change ADB Programs: Strengthening Mitigation and Adaptation in Asia and the Pacific.* Manila: Asian Development Bank.

Alam, Mozaharul. 2004. "Adverse Impacts of Climate Change on Development of Bangladesh: Integrating Adaptation into Policies and Activities." Capacity Strengthening in the Least Developed Countries for Adaptation to Climate Change Working Paper 1, International Institute for Environment and Development, London; Bangladesh Centre for Advanced Studies, Dhaka.

Alam, Mozaharul, and M. D. Golam Rabbani. 2007. "Vulnerabilities and Responses to Climate Change for Dhaka." *Environment and Urbanization* 19 (1): 81–97.

Balica, Stefania, Nigel George Wright, and Frank van der Meulen. 2012. "A Flood Vulnerability Index for Coastal Cities and Its Use in Assessing Climate Change Impacts." *Natural Hazards* 64 (1): 73–105.

GoB (Government of Bangladesh). 2009. *Bangladesh Climate Change Strategy and Action Plan 2009.* Dhaka: Ministry of Environment and Forests.

Huq, Saleemul, and Mozaharul Alam. 2003. "Flood Management and Vulnerability of Dhaka City." In *Building Safer Cities: The Future of Disaster Risk,* 121–35. Disaster Risk Management Series 3, Paper 27211. Washington, DC: World Bank.

Huraera, J., 2009. "Urban Poverty, Adaptation to Climate Change, and the Built Environment." Presentation made at the Third International Conference on Community-Based Adaptation to Climate Change, Dhaka, Bangladesh, February 18–24.

IPCC (Intergovernmental Panel on Climate Change). 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,* edited by S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miller. Cambridge, U.K.: Cambridge University Press.

———. 2013. "Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change." In *Climate Change 2013: The Physical Science Basis*. Geneva: IPCC Secretariat.

McGranahan, Gordon, Deborah Balk, and Bridget Anderson. 2007. "The Rising Tide: Assessing the Risks of Climate Change and Human Settlements in Low Elevation Coastal Zones." *Environment and Urbanization* 19 (1): 17–37.

Satterthwaite, David, Saleemul Huq, Mark Pelling, Hannah Reid, and Patricia Romero Lankao. 2007. *Adapting to Climate Change in Urban Areas: The Possibilities and Constraints in Low- and Middle-Income Nations.* Human Settlements Discussion Paper, Theme: Climate Change and Cities 1. London: International Institute for Environment and Development.

UNFCCC (United Nations Framework Convention on Climate Change). 2008. "Physical and Socio-economic Trends in Climate-Related Risks and Extreme Events, and Their Implications for Sustainable Development." Technical Paper FCCC/TP/2008/3, UNFCC, 20 November.

WMO (World Meteorological Organization). 2011. *Weather Extremes in a Changing Climate: Hindsight on Foresight.* Geneva: WMO.

Wood, Andrew W., Lai R. Leung, V. R. Sridhar, and Dennis Lettenmaier. 2004. "Hydrologic Implications of Dynamical and Statistical Approaches to Downscaling Climate Model Outputs." *Climatic Change* 62 (1-3): 189–216.

Wood, Andrew W., Edwin P. Maurer, Arun Kumar, and D. P. Lettenmaier. 2002. "Long-Range Experimental Hydrologic Forecasting for the Eastern U.S." *Journal of Geophysical Research* 107 (D20): ACL6.1–6.20.

World Bank. 2006. *Managing Climate Risk: Integrating Adaptation into World Bank Group Operations.* Global Environment Facility Program Paper 37462, World Bank, Washington, DC.

———. 2010. *Climate Risks and Adaptation in Asian Coastal Megacities: A Synthesis Report.* Prepared in collaboration between the ADB, JICA, and the World Bank. Washington, DC: World Bank.

———. 2013. *Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience.* Washington, DC: World Bank.

ANNEXES

ANNEXES

Annex 1. BCCRF Governance and Roles

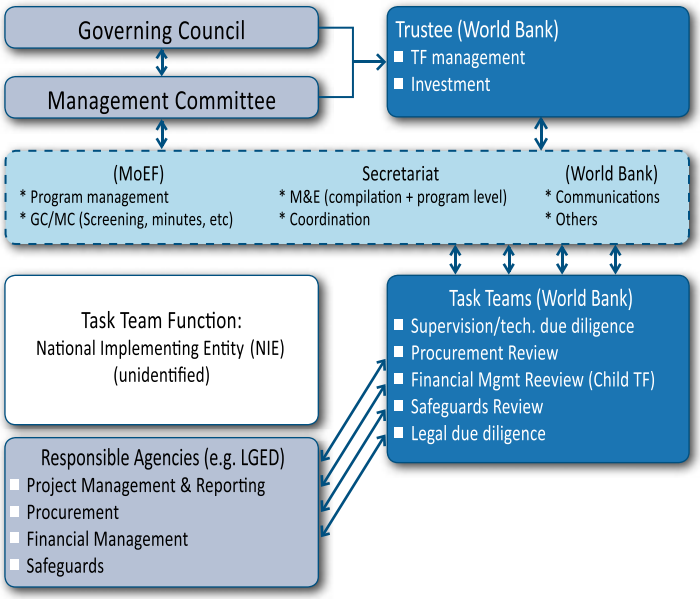
The BCCRF is an innovative partnership of the GoB, development partners, and the World Bank to address the impacts of climate change. Leadership in implementing the BCCRF rests with the GoB, in collaboration with the development partners and the World Bank. The multidonor partnership is designed to generate optimum impact with minimum transaction costs, enabling the GoB to channel grant funds to millions of Bangladeshis to strengthen their resilience to the effects of climate change.

BCCRF's governance structure consists of three tiers: (i) Governing Council (GC), (ii) Management Committee (MC), and (iii) Secretariat (figure 1).

(i) Governing Council: The GC provides overall strategic direction and guidance to the BCCRF and ensures that it is aligned with the BCCSAP. It is a high-level committee chaired by the minister of environment and forests and comprises the ministers of agriculture, finance, food and disaster management, foreign affairs, water resource, and women's and children affairs; secretaries from the Prime Minister's Office, the MoEF, the ERD of the Ministry of Finance, and the Ministry of Planning; two representatives from the contributing development partners; two representatives from civil society; and the country director of the World Bank Dhaka Office as an observer. As of December 2013, the DFID and the Swedish International Development Cooperation Agency (Sida) were chosen as development partner representatives.

GC's primary responsibility is to provide guidance on the program's strategic goals, including approval of project proposals, ensuring alignment with the GoB's climate change strategy, setting grant criteria, and providing guidance on the eventual transfer of the BCCRF Secretariat function from the World Bank to the MoEF.

Figure 1. BCCRF Governance Structure and Roles



(ii) Management Committee: The MC is a small technical committee chaired by the secretary of the MoEF. Members include two other representatives from the MoEF (joint secretary for development and deputy secretary for environment); one representative from the ERD (additional secretary) and one from the

Planning Commission (General Economic Division); two representatives from the contributing development partners; one representative from the World Bank; and one representative from civil society.

The MC's primary responsibilities are to (1) carry out detailed reviews of grant requests submitted by the Secretariat; (2) ensure that grant requests submitted are in line with the agreed implementation manual; and (3) recommend projects to the GC. The MC also reviews and endorses the implementation manual, the work program, budget allocations, and reports prepared by the Secretariat for submission to the GC prior to public dissemination. If funding is required for project preparation, the MC recommends the amount to the GC.

(iii) Secretariat: On February 23, 2011, the MC approved the establishment of a BCCRF Secretariat at the MoEF so that it may eventually administer BCCRF activities. The GC approved an allocation of US$0.2 million on May 19, 2011, for establishing the Secretariat. As described in section 3.1.3 (2), all the staff members who were scheduled to come on board had been appointed by the end of 2013. In addition to the eight staff members, a joint secretary of the MoEF was appointed as BCCRF project director as of July 2012.

The BCCRF Secretariat's main functions include day-to-day support to the MC and GC, advocacy, communications, donor coordination, program-level monitoring and evaluation, and preparation and implementation of the eventual transfer of BCCRF Secretariat functions from the Bank to the MoEF. Since the recruitment of Secretariat staff was delayed, the World Bank BCCRF core team initially performed a large part of the Secretariat function, but as Secretariat staff are hired, the Bank team will build their capacities to carry out the functions of the Secretariat. Among the functions listed in Figure 1, the BCCRF Secretariat will screen proposals, coordinate pipeline projects, and coordinate GC and MC meetings as soon as their capacity is built.

(v) Roles of the World Bank: The World Bank is responsible for satisfying due diligence requirements for the BCCRF. The World Bank ensures that BCCRF resources for project implementation and other activities are used in accordance with (a) economy, keeping costs low; (b) efficiency, ensuring that the BCCRF gets the most out of the expenditures; and (c) effectiveness, ensuring that monies are used for the intended purposes and toward the targeted results. To pursue these principles, the World Bank is performing three functions, as shown in Figure 1: (1) Secretariat function, as described in the paragraph above, (2) trustee function, and (3) task team function, which is performed by task teams led by technical specialists (for example, agriculture, energy, environment) as TTLs and team members (procurement specialists, financial management specialists, safeguard specialists, and lawyers).

The World Bank was selected to perform these functions because of its extensive experience in managing trust funds. As of June 30, 2013, the World Bank Group held US$28.9 billion in trust, which is about the same level as the previous fiscal year. Among active trust funds of the International Bank for Reconstruction and Development and the IDA, multidonor trust funds such as BCCRF account for 52 percent, and their share has increased for five consecutive years. In addition, the World Bank is well positioned to share its analytical and technical advisory experience on international best practices in development. Hence, it is also providing analytical work, knowledge management, and technical assistance for implementing the BCCSAP via BCCRF.

(vi) National implementing entities: As shown in Figure 1, Bangladesh currently does not have institution(s) that can directly access financial resources such as the Adaptation Fund established under the Kyoto Protocol. In climate change finance, institutions that have the capacity to access funding directly are called national implementing entities (NIEs). As of December 2013, 15 countries had NIEs accredited under the Adaptation Fund of the Kyoto Protocol. The GoB needs to choose an NIE candidate because this approach will increase the level of ownership, oversight, and involvement in adaptation activities and create stronger accountability of the country to funds such as the BCCRF and greater flexibility in using global financial mechanisms such

as the Adaptation Fund, the Global Environment Facility (GEF), and the Green Climate Fund. However, global financial mechanisms such as the Adaptation Fund and GEF's direct access modality normally require a sufficient track record of a few decades. Thus establishing a new institution is not a viable option. However, existing government institutions and NGOs that meet NIE criteria could become potential candidates for consideration.

The functions of the BCCRF Secretariat will eventually be transferred from the World Bank BCCRF core team to the newly established the BCCRF Secretariat in the MoEF. For this transfer to succeed, capacity building is needed in a wide range of areas (fiduciary, reporting, communications, monitoring, and evaluation). This process has to be coordinated with the MoEF's capacity-building initiatives supported by other donor partners, including the process of GoB's NIE identification.

Annex 2. Results Framework (June 2013)

Objective 1: GOB demonstrates capacity to lead and manage BCCRF through a functioning secretariat within MOEF			
Outcomes	**Outcome Indicators**	**Outputs**	**Output Indicators**
Outcome 1. 1 Demonstrated capacity of Secretariat to lead governing committees	1.1 % of meetings where decisions have been formally agreed to or signed off by GOB	Output 1.1 MC and GC meetings focus on decisions and follow up	1.1 % of decisions made in MC and GC meetings followed up or completed through other means, such as agreement to endorse decision on an issue or drop them
Outcome 1. 2 Demonstrated capacity of Secretariat to manage and provide oversight on BCCRF activities	1.2.1 % investment proposals where Secretariat guides sector organizations to submit quality proposals	Output 1.2.1 Sector guides and prioritization criteria made available to sector organizations	1.2.1.1 % of investment proposals aligned with the sector guides 1.2.1.2 % of investment proposals reviewed through lens of prioritization criteria
	1.2.2 Level and quality human resources and fiduciary due diligence associated with Secretariat activities	Output 1.2.2 Human resources and fiduciary systems are in place and functional in Secretariat	1.2.2.1 Number of qualified human resources recruited 1.2.2.2 % of annual procurement transactions and financial audits completed
Outcome 1.3 Demonstrated capacity of Secretariat to measure and report on BCCRF results achieved.	1.3 % of indicators that are measured annually using verifiable means	Output 1.3.1 A program Monitoring and evaluation (M&E) system in place to track BCCRF progress	1.3.1.1 % of indicators from M&E system that are reported on to track BCCRF progress 1.3.1.2 Number of quarterly monitoring reports on BCCRF progress produced and disseminated

Objective 1: GOB demonstrates capacity to lead and manage BCCRF through a functioning secretariat within MOEF (continuation)			
Outcomes	**Outcome Indicators**	**Outputs**	**Output Indicators**
Outcome 1.4 Demonstrated capacity of Secretariat to contribute to wider communication, coordination and knowledge sharing with multiple stakeholders, including donors and NGOs	1.4 % of stakeholders groups who report satisfaction with level of communication, coordination and knowledge sharing offered through/by BCCRF	Output 1.4.1 Communication plan includes activities on communications outreach and dissemination of knowledge	1.4.1 % of annual activities endorsed in communication plan that are implemented on time
		Output 1.4.2 LCG and other platforms are capitalized upon to enhance coordination and share lessons among the stakeholders	1.4.2 Number of LCG related meetings or workshops in which best practices and lessons from BCCRF initiatives are discussed and acted upon
Objective 2: BCCRF Investments contribute to climate resiliency of targeted vulnerable population			
Outcome 2.1 BCCRF incentivizes investments that are innovative in a climate change program.	2.1 % of proposals approved that are innovative	Output 2.1 Innovative proposals submitted	2.1 % of proposals submitted that are innovative
Outcome 2.2 Improved resilience to climate change effects in targeted population	2.2 Demonstrated climate change resiliency measures adopted with BCCRF financing	Output 2.2.1 Households in climate vulnerable areas with increased access to food	2.2.1 No. of households in climate vulnerable areas with increased access to food
		Output 2.2.2 Farmers adopting climate adaptive agriculture	2.2.2 No. of farmers adopting climate adaptive agriculture
		Output 2.2.3 Climate resilient infrastructure assets created	2.2.3 No. of climate resilient infrastructure assets created
		Output 2.2.4 Farmers with access to clean energy services	2.2.4 No. of farmers with access to clean energy services
		Output 2.2.5 Area covered under afforestation and reforestation program in climate vulnerable areas	2.2.5 Area restored or re/ afforested (in hectares)
		Output 2.2.6 More Community jobs in forestry sector in climate vulnerable areas	2.2.6 Community jobs (million days) created through afforestation/ reforestation program
		Output 2.2.7 Community based sub-grants awarded	2.2.7 No. of community based sub-grants awarded
		Output 2.2.8 Community mechanisms established and functioning to respond effectively to specific climate risk	2.2.8 % of communities where mechanisms are established and functioning in selected communities to respond effectively to specific climate risk

Objective 3: GOB demonstrates strategic leadership on national climate change policy and global climate financing		
Outcomes	**Outcome Indicators**	**Outputs**
Outcome 3.1 Increased capacity of entity within and outside government to submit proposal for NIE accreditation	3.1 No. of entities who submit draft NIE packages using UNFCCC* guidelines to GOB for review	Output 3.1 Proposals submitted from potential candidates in line with UNFCCC guidelines
Outcome 3.2 Increased knowledge and lessons learnt to inform climate change policy	3.2 No of policy recommendations from BCCRF activities	Output 3.2 Mechanisms for knowledge management and policy dialogue are in place
Outcome 3.3 Bangladesh is considered an international model for implementing sound climate change adaptation solutions	3.3 No. of requests by other countries to GoB to provide lessons learned on climate change adaptation	Output 3.3 Lessons offered through written or other means

* UNFCCC- United Nations Framework Convention on Climate Change

Annex 3. BCCRF Reporting Framework (December 31, 2013)

Output indicator	Unit of Measure	Base-line	Target Values: Status as of Dec. 31, 2013 (Yr 1)	Target Values: Target value Yr 5, 2016-17	Freq.	Data Source/ Methodology	Responsibility for Data Collection
Objective 1: GOB demonstrates capacity to lead and manage BCCRF through a functioning secretariat within MOEF **Output 1.1 MC and GC meetings focus on decisions and follow up**							
Output Indicator 1.1 Percentage of outstanding issues followed up or completed i.e. such as agreement to endorse issues or drop them	Percentage of outstanding issues followed up	25%	Target value: 40% Since the MOEF secretariat was still leanly staffed when the GC meeting took place in June 2013, the minutes were prepared by the Bank team, and is unable to show the capacity of MOEF secretariat such as following up decisions or to endorse decision on issues.	90%	Annual	Minutes of MC and GC meetings Follow up documents (e.g. letters written etc)	WB team (Yr 1), Secretariat with the support of WB Team (Yr 2) and secretariat (Yr 3 onwards)
Output 1.2.1 Prioritization criteria made available to sector organizations							
Output Indicator 1.2.1 Percentage of investment proposals reviewed that meet prioritization criteria	No. of investment proposals reviewed that meet prioritization criteria	0	(This indicator is planned to be monitored in year 3 and beyond)	100%	Annual	MC meeting minutes, Project evaluation documents	Secretariat
Output 1.2.2 Human resources and fiduciary systems are in place and functional in Secretariat							
Output Indicator 1.2.2 Number of qualified human resources recruited	No of staff recruited	0	Target value: 3 As of December 31, 2013, the five staff members below are on board: 1. Climate Change Technical Advisor (since May 2013) 2. Climate Change Managerial Advisor (since October 2012) 3. Financial Management consultant (since October 2012, and another staff since December 2013) 4. Procurement consultant (since December 2013) 5. Junior consultant (since May 2013) In addition to the five members above, a Joint Secretary of MoEF leads the team as the Director. Three other people are employed as assistant, driver, and messenger.	10	Annual	Secretariat / Capacity Building project progress report, aide memoires, procurement plans	Secretariat and WB team

Output indicator	Unit of Measure	Base-line	Target Values		Freq.	Data Source/ Methodology	Responsibility for Data Collection
			Status as of Dec. 31, 2013 (Yr 1)	Target value Yr 5, 2016-17			
Output 1.3 A program Monitoring and Evaluation (M&E) system in place to track BCCRF progress							
Output Indictor 1.3 Number of quarterly monitoring reports on BCCRF progress produced and disseminated	No of quarterly reports prepared and disseminated	0	Target value: 2 Three quarterly reports were issued in CY2013. Reporting period — Circulation Jan-July 2013 — Jul 12, 2013 July -Nov 8, 2013 — Nov. 9, 2013 Nov9-Dec 31, 2013 — Jan.27, 2014	4	Quarterly	Quarterly Monitoring Report	WB team (Yr 1), Secretariat with the support of WB Team (Yr 2) and secretariat (Yr 3 onwards)
Output 1.4 LCG and other platforms are capitalized upon to enhance coordination and share lessons among the stakeholders							
Output Indicator 1.4 Number of LCG related meetings or workshops in which best practices and lessons from BCCRF initiatives are discussed and acted upon	No of meetings relating to best practices and lessons learned	0	Target value: 1 During the LCG meeting held on May 20, 2013, in which the necessity of a common platform for climate change capacity building was discussed, there was a suggestion to conduct an assessment of pre-BCCRF / post-BCCRF capacity gaps regarding internal coordination among GoB Ministries.	4	Annual	LCG meeting agenda and minutes	Secretariat
Objective 2: BCCRF Investments contribute to climate resiliency of targeted vulnerable population **Output 2.1 Innovative proposals submitted**							
Output Indicator 2.1 % of proposals submitted that are innovative (as a% of all projects submitted)	% of proposals which clearly articulates the innovation	0	(This indicator is planned to be monitored in year 3 and beyond)	50%	Annual	Evaluation of Proposals submitted	Secretariat with the support of WB (Yr 2) Secretariat (Yr 3 onwards)
Output 2.2.1 Households in climate vulnerable areas with increased access to food							
Output Indicator 2.2.1 Incremental public storage capacity for food grain (This indicator measures the aggregate storage capacity of a total of eight public silos)	Thousand tons	0	(This indicator is planned to be monitored in year 3 and beyond)	300	Annual	Progress Reports of the Silos project and Aide Memoires	Silos Project PMU, Third party verification

Output indicator	Unit of Measure	Base-line	Target Values		Freq.	Data Source/ Methodology	Responsibility for Data Collection
			Status as of Dec. 31, 2013 (Yr 1)	Target value Yr 5, 2016-17			
Output 2.2.2 Farmers adopting climate adaptive agriculture							
Output Indicator 2.2.2 (Preparation for the agriculture project is underway, and indicators are not agreed yet)							
Output 2.2.3 Climate resilient infrastructure assets created							
Output Indicator 2.2.3 No. of climate resilient infrastructure assets created (cyclone shelters)	No. of climate resilient assets	0	Target value: 4 As of Dec. 31, 2013, 4 cyclone shelters completed construction under BCCRF.		Annual	ECRRP Project Progress Report and Aide Memoires	LGED PMU for cyclone shelter project
Output 2.2.4 Farmers with access to clean energy services							
Output Indicator 2.2.4 No. of solar irrigation pumps installed	No. of solar irrigation pumps installed	0	(This indicator is planned to be monitored in year 2 and beyond)	810	Annual	Solar Project Progress Report and Aide Memoires	IDCOL
Output 2.2.5 Areas covered under afforestation and reforestation program in climate vulnerable areas							
Output Indicator 2.2.5 Cumulative area restored or re/ afforested (in Hectare)	Hectare (Ha) re/ afforested	0	(This indicator is planned to be monitored in year 2 and beyond)	17,000	Annual	Progress report of Forestry Project , 3rd party monitoring, Remote sensing and GIS mapping	BFD, Independent Monitoring Firm
Output 2.2.6 More community jobs in forestry sector in climate vulnerable areas							
Output Indicator 2.2.6 Increased household income of beneficiaries participating in alternative income-generating activities	percentage	0%	(This indicator is planned to be monitored in year 2 and beyond)	70%	Annual	Progress report of Forestry Project and 3rd party verification	BFD, Independent Monitoring Firm

Output indicator	Unit of Measure	Base-line	Target Values		Freq.	Data Source/ Methodology	Responsibility for Data Collection
			Status as of Dec. 31, 2013 (Yr 1)	Target value Yr 5, 2016-17			
Output 2.2.7 Community based sub-grants awarded							
Output Indicator 2.2.7 Total numbers of community based sub-grants awarded	No. sub-grants	0	Target value: 11 The first 11 CBOs under CCCP signed contracts in late October, 2013.		Annual	Progress report of CCCP and Aide Memoires	PKSF
Output 2.2.8 Community mechanisms established and functioning to respond effectively to specific climate risk							
Output Indicator 2.2.8 Percentage of communities for which mechanisms are established and functioning to respond effectively to specific climate risk (as a % of total CBOs)	% of community based organizations	5%	(This indicator is planned to be monitored in year 2 and beyond)	70%	Annual	Progress report of CCCP and Aide Memoires	PKSF
Objective 3: GOB demonstrates strategic leadership on national climate change policy and global climate financing **Output 3.1 Mechanisms for knowledge management and policy dialogue are in place**							
Output Indicator 3.1 No. of knowledge management activities (including Bank executed AAAs or other important policy workshops/ papers) undertaken on sector analyses and or lessons learnt from Bangladesh	No. of knowledge activities	0	Target value: 3 During CY2013, three blog articles were uploaded on the website Saving Lives from Cyclone Mahasen in Bangladesh (June 16, 2013) Becoming a "Forest Savior": Community Participation for Conservation (Nov. 4, 2013) Bangladesh: The Most Climate Vulnerable Country (Nov. 21, 2013)	10	Annual	Annual reports	Bank and Secretariat

Output indicator	Unit of Measure	Base-line	Target Values		Freq.	Data Source/ Methodology	Responsibility for Data Collection
			Status as of Dec. 31, 2013 (Yr 1)	Target value Yr 5, 2016-17			
Output 3.2 Lessons offered through written or other means							
Output Indicator 3.2.1 No. of events and papers through which GOB provides lessons from BCCRF	Number of learning events/ documents	0	(This indicator is planned to be monitored in year 3 and beyond)	4	Annual	Media articles Documentary evidence of lessons provided Proceedings of workshops and conferences Annual Report	Secretariat
Output Indicator 3.2.2 No. of articles in international and national media on BCCRF activities and results	Number of media articles	0	Target value: 5 By Dec 31, 2013 the following five articles related to BCCRF were featured in national newspapers. (1) News Today: Mainstreaming Climate Change (Dec.13) (2) Dhaka Tribune: Rely on own funds, GOB set up BCCRF in 2010 (Dec 1) (3) Financial Express:11 NGOs sign contract under CCCP (Oct 29) (4) Financial Express: Signing ceremony for Solar Irrigation (Oct1) (5) The Independent: Progress of BCCRF afforestation (Aug 29)	12	Annual	Media articles	Secretariat

Annex 4. Communications

BANGLADESH – THE MOST CLIMATE VULNERABLE COUNTRY

Submitted by Arastoo Khan On Thu, 11/21/2013

On a Path Towards Climate Resilience

Two recent key reports – The Intergovernmental Panel on Climate Change's 'Fifth Assessment Report [1]' and World Bank's 'Turn Down the Heat' [2] – reveal long-term implications for Bangladesh [3]and its people from probable catastrophic impacts of climate change. Both paint a very dismal scenario of the future as climate change continues to take its toll. The earth faces a temperature rise of at least 2 degrees Celsius above pre-industrial levels requiring firm and coordinated action to benefit all countries.

This was not the only bad news. The recently released sixth annual Climate Change Vulnerability Index [4], (Maplecroft) revealed that Bangladesh would feel the economic impacts of climate change most intensely and that our capital Dhaka would be one of the five most climate vulnerable cities in the world.

Having seen the impacts of climate change in our lifetime across agro-climactic zones in Bangladesh, our Government had prudently initiated a series of policies and actions for a climate resilient economy. The strategy is simple – to make livelihoods of the poorest/vulnerable populations climate resilient, so that the national economy is insulated from climate change and becomes a foundation to vigorously pursue sustainable development.

Our national guiding policy included deliberations and consultations between communities across agro-climactic zones; academic experts and climate practitioners; multi- and bi-lateral development partners; small community-based organizations, national/international NGOs; and local governments and national entities. The outcome of these deliberations – 'Bangladesh Climate Change Strategy and Action Plan (BCCSAP), 2009' – includes a ten-year program to build country capacity and resilience to meet climate change challenges over the next few decades. It also provides an action plan for integrating climate change issues into sustainable development. Like the Sendai Dialogue, which attempts to mainstream disaster risk management in the planning process, the Planning Ministry of Bangladesh has integrated poverty-environment-climatic linkages in the national planning process, documents and guidelines. This underscores the seriousness of the Government in taking a comprehensive approach in tackling the climate change as it affects the poor in Bangladesh. Bangladesh is the first country to have developed such a detailed climate resilience program.

However, putting BCCSAP into practice necessitated two key factors – strengthened institutions with adequate human resources, and adequate funds. For this, a Bangladesh Climate Change Resilience Fund (BCCRF) was established in May 2010, with a total pledge of US$ 190 million grant (as of today) and financial support from the European Union and the governments of Australia, Denmark, Sweden, Switzerland, the UK and USA. Administered through the World Bank, the BCCRF has a robust two-tier governance system – Governing Council for overall strategic direction and guidance to the BCCRF, and Management Committee for its working. A BCCRF Secretariat is now being established with World Bank support in the Ministry of Environment and Forests to strengthen the institution with adequate human resources. It will be tasked to select projects, mobilize resources from development partners and work as a front office of the Government in handling the evolving climate change issues.

Climate resilience may apparently appear imprecise and confusing. We are changing that through outreach

and a people-centric approach. BCCRF is expected to reach several million beneficiaries and its impact is already being felt in several key sectors. This is made possible by its innovative and transparent climate finance mechanism, as well as unique engagement of civil society receiving an agreed ratio of the total grant/financing through a dedicated funding window. BCCRF's approach encompasses poor and remote communities and diversified implementation through several government agencies and civil society organizations across multiple climate vulnerable sectors. The funds are used to support projects using solar energy for irrigation, constructing multi-purpose cyclone shelters in disaster-prone areas serving as primary schools round the year and as shelters in times of disaster. Projects linked to allaying climate change have been financed to enhancing green forest cover, promoting climate-resilient agriculture, expanding food security via public silos, and through socio-economic empowerment of climate vulnerable communities. It aims to support over 30 NGOs to develop innovative community-based adaptation solutions for making the lives of the poor more climate resilient.

Our Government has been allocating, year on year, huge resources to build an endowment fund to support small climate change adaptation initiatives in research of saline-resistant crop, seeds involving shorter harvest cycle and adaptation of livelihoods, including migration of people displaced due to climate change. Bangladesh Climate Change Trust Fund, as it is called, received in three successive years' allocations of US$100 million each year from its exchequer through its national budget. Despite the initiatives, the three studies point out, Bangladesh remains vulnerable and its people will face severe economic hardships from climate change impacts in the coming years.

Bangladesh will need additional funds as grants and soft loans, to further strengthen a climate resilient and low-carbon economy. We have a national policy framework BCCSAP and a National Adaptation Plan of Action (NAPA) that prioritize adaptation and we are continuously improving our institutional mechanisms. What we lack is adequate and sustainable flow of resources to meet the demands of our climate vulnerable communities.

Are there any committed and interested long-term partners out there willing to join us in our efforts?

http://blogs.worldbank.org/endpovertyinsouthasia/

BECOMING A "FOREST SAVIOR": COMMUNITY PARTICIPATION FOR CONSERVATION

Submitted by Faria Selim On Mon, 11/04/2013

"The forest is an integral part of my life and only source of income. We exploited it until we saw people killed in landslides in the neighboring areas. Gradually we became aware of the consequences of unplanned felling of trees. Now we protect our forest alongside the Forest Department. I own two hectares of forest land and they pay for its maintenance. I have earned a good amount after the first felling," says a proud Sabbir, participant from a social forestry initiative of the Government of Bangladesh, Ukhiarghat, Cox's Bazar.

The Government of Bangladesh initiated the Social Forestry programs with a view to meet the forest product requirements of the local population, reverse the process of ecological and climatic degradation through proper soil and water conservation, and also to improve the socioeconomic condition of the rural people.

Forests are the primary buffer against cyclones, storms and surges for over 16 million people living in the vulnerable coastal zone of Bangladesh. Over the last three decades, forests in Bangladesh have declined by 2.1% annually, accumulating to almost half of all forest cover,

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due to deforestation, illegal logging and harvesting, slash-and-burn agriculture, conversion into non-forestland for settlement, farming, recreation and industries. With the likely increased incidence and intensity of extreme cyclonic events, efforts must focus on reversing the decline in forests in order to adequately safeguard people against threats induced by climate change.

The Government of Bangladesh has mobilized multiple donors through an innovative institutional arrangement called the Bangladesh Climate Change Resilience Fund (BCCRF) [1]. Under BCCRF, the Climate Resilient Participatory Afforestation and Reforestation Project [2] is a timely initiative to complement Bangladesh's commitment towards forest conservation.

The project aims to expand climate resilient afforestation and reforestation; build livelihood resilience among the vulnerable communities; and enhance the capacity of the Forest Department. The Bangladesh Forest Department and Arannayk Foundation will jointly work for the afforestation and reforestation of 16,000 hectares of land and 1,672 km of strip plantings.

Realizing that community engagement, for forest conservation in the coastal and hilly areas, is critical to the sustainability of any afforestation project, following a transparent selection process, local communities will adopt locally tried and tested nursery and plantation techniques with improved forest management practices. This will increase household income of beneficiaries participating in alternative income-generating activities, while conserving the forests and reducing forest dependency. The project will reach 46,000 beneficiaries of which at least 30% will be women. These resilience approaches are cost effective, will provide multiple socio-economic and environmental co-benefits, and enhance carbon stock.

The direct benefits to one of the communities involved in Forest Department's social forestry initiative are impressive. An investment of $4,800 on 100 hectares, allocated to 50 members returned $16,900. After the final harvest, the participants will receive 45%t of the revenue, the government 45%, and 10% will go to the Tree Farming Fund for future plantations.

"I'm a widow with two children. I had to depend on the forest for a meager living. Then I received training on homestead gardening and am now a regular worker at the forest department's nursery with a substantial income, both of my children now go to school", shares a content Rekha, from an alternative livelihood project in Pinijerkul, Cox's Bazar.

Most of the inhabitants of Pinijerkul have similar stories of change in their lives. They are now self-dependent, aware of the issues of soil erosion, biodiversity and climate change. They are our "forest saviors".

http://blogs.worldbank.org/endpovertyinsouthasia/

SAVING LIVES FROM CYCLONE MAHASEN IN BANGLADESH

Submitted by Masood Ahmad On Sun, 06/16/2013

co-authors: Shahpar Selim, K.M. Maqsoodul Mannan

While Bangladesh played host to yet another deadly cyclone on May 17th, 2013, cyclone shelters provided a critical first line of defense to thousands of poor communities living along the remote coastline of the country. A million poor people fled from their homes to seek refuge before cyclone Mahasen struck the coast. The cyclone impacted 8 coastal districts with flooding and water logging, caused 17 fatalities and damaged about half a million households.

Tropical cyclones and accompanying storm surges emerging in the Bay of Bengal can be deadly and cause massive damage. The cyclones in the 70s and 90s were the worst in terms of storm surge height and lives lost. 300,000 died in the 1970 cyclone and 138,882 in 1991, leaving entire communities scarred for life. The more recent cyclones in 2007 (SIDR) and 2009 (AILA) were responsible for 3,363 and 190 deaths, respectively.

However, over the years, the government of Bangladesh has made significant strides to minimize the loss of lives and assets in the cyclone-prone coastal districts. In addition to improving disaster preparedness, the construction of cyclone shelters is a high priority for Bangladesh, which the World Bank has been supporting through the Emergency Cyclone Recovery and Restoration Project (ECCRP). The project was designed to assist in the recovery from SIDR damage to livelihoods and infrastructure; support the construction of cyclone shelters and build long term disaster preparedness in climate vulnerable areas.

The project focuses on providing greater protection to vulnerable populations and livestock in the cyclone prone areas by constructing new multipurpose shelters; improving existing shelters and making roads to enable communities to access safe shelters during cyclones. Since the start of the project, the Local Government Engineering Department has upgraded 240 existing shelters and constructed 12 new shelters using funds from IDA, Global Facility for Disaster Risk Reduction (GFDRR), Kreditanstalt für Wiederaufbau (KfW), and the Bangladesh Climate Change Resilience Fund (BCCRF).

While cyclone Mahasen was approaching Bangladesh, the government activated cyclone preparedness measures at the local and central levels. According to post cyclone reports, 1,668 cyclone shelters were used to give shelter to 483,300 people. All the cyclones shelters built and improved through the ECCRP were ready to offer refugee to people and 40,219 people in the most vulnerable areas were saved, along with their livestock.

Mahasen also served to test the structural durability and functional design of the ECRRP shelters. Design features such as separate floors for livestock, separate rooms for pregnant women, gender marked toilets, store rooms, enhanced toilet facilities with soak pits and septic tanks, emergency water supply (tube wells), first aid facilities, solar lights, rain water harvesting and tree plantation are features unique to the ECRRP shelters. Inputs from the stakeholders were taken on how the shelters will be designed and operated during normal times and when cyclones hit; and shelters were built in compliance with land use planning, environmental and social safeguards requirements.

In particular, the ECRRP shelters are unique because of their structural durability. They are designed to withstand wind speeds of 260km/hr; are made of reinforced frame structure; and have 60 grade deformed bars and stone aggregates in the casting of the shelter foundation, footings, columns, beams, making these

structures sustainable during severe cyclones. Also, the ECRRP shelters are built as 3 storied structures with provisions for vertical extension in the future. All of these factors made a great difference in the shelters' performance during Mahasen.

People working on the ground believe that due to the increase in the number of useable shelters this year, thanks to ECRRP, the loss of lives has been a lot less than what it could have been in one of the most cyclone vulnerable places in Bangladesh. Says LGED Executive Engineer in Bhola, Mr. SM Akbar Hossain "Not only did the shelters house people; they were also the safe point for relief activities, such as precautionary stocking of dry food. These shelters provide a safe haven during killer cyclones and during non-cyclone times are used as Primary Schools targeting the ultra-poor, thus providing hope and mobility to the communities."

Mahasen has tested the utility of the ECRRP cyclone shelters and points to the continued importance of the World Bank's collaboration with the Government of Bangladesh on saving lives and securing livelihoods. These shelters have now become beacons of hope when the darkness of an approaching cyclone looms over coastal communities.

RELY ON OWN CLIMATE FUNDS, SUGGEST ACTIVISTS

Abu Bakar Siddique

Dhaka Tribune

Bangladesh should design its own national climate plan for the future in line with the national five-year plan, opine experts

The government should formulate future climate action plan with its own resources and capacity as developed countries undermined the interest of climate vulnerable countries like Bangladesh at the last climate talks in Warsaw, conservationists and civil society members say.

They made the call at a press conference titled "COP19 Outcomes: Interest of Climate Victim Countries are Really Vulnerable" held at the National Press Club, jointly organised by eight civil society networks working on climate change.

The Climate Vulnerable Countries (CVCs) have gained very little at the 19th Conference of Parties (COP19) as the developed countries which are the largest greenhouse gas emitters and responsible for global warming did not cooperate, said Syed Aminul Haque of Equity and Justice Working Group Bangladesh (EquityBD) in his keynote speech.

Bangladesh should not wait for some million dollars of aid where the country has more than Tk15bn in remittance. It should design its own national climate plan for the future in line with the national five-year plan, he added.

Bangladesh and the other least developed countries (LDCs) have faced strong opposition from developed countries along with the recently formed like-minded developing countries (LMDC) that includes India, China and Australia at the climate negotiations, said Dr Ahsan Uddin Ahmed, executive director of Centre for Global Change.

"They just obstructed the climate talks at every step and pushed down the international loss and damage mechanism issue, which is a long expected demand of the LDCs and vulnerable countries, towards an uncertainty," he said.

Dr Ahsan is also a panel scientist of the Inter-governmental Panel on Climate Change (IPCC).

He said the developed countries were offering just $100m against the promised $100b as compensation for global warming in the adaptation fund.

Other members of the networks are Campaign for Sustainable Rural Livelihood (CSRL), Centre for Global Change (CGC), Bangladesh Poribesh Andolon (Bapa),

Bangladesh Indigenous People's Network for Climate Change and Bio-Diversity (BIPNetCCBD), Climate Change Development Forum (CCDF), Climate Finance Governance Network (CFGN), and Coastal Development Partnership (CDP).

Among others, Dr Abdul Matin, Bapa general secretary, and Md Golam Mortuza, editor of the weekly Shaptahik, also spoke at the programme.

The government established Bangladesh Climate Change Trust Fund in 2009-10 fiscal with its own fund. Currently the fund has $340m. The government has already allocated $190.78m for 139 government and 63 non-government projects.

According to Bangladesh Climate Change Strategy and Action Plan 2009, the country needs $1b to carry out adaptation measures each year. The government set up Bangladesh Climate Change Resilience Fund with the contribution of the developed nations. Out of its $170m fund, $146.19m has been allocated for 11 projects while the country received commitments of only $594m.

PKSF FUNDS 11 NGOS TO COMBAT CLIMATE CHANGE INDUCED VULNERABILITY

Tuesday, 29 October 2013 - FE Report

Palli Karma-Sahayak Foundation (PKSF) has funded eleven NGO projects a total amount of US$ 3.99 million through the Community Climate Change Project (CCCP) under the Bangladesh Climate Change Resilience Fund (BCCRF), a multi-donor trust fund of the government.

The project is moving ahead to increase the resilience and adaptation capacity of local communities to combat the climate change induced vulnerability, said a project update of the World Bank (WB) issued on Monday.

The fund recipient NGOs are: RDRS Bangladesh, Satkhira Unnayan Sangstha (SUS), Wave Foundation, SKS Foundation, Gana Unnayan Kendra (GUK), Nazrul Smriti Sangsad (NSS), Ashrai, National Development Programme (NDP), Dak Diye Jai, Jhanjira Samaj Kallyan Sangstha (JSKS) and Jagrata Juba Shangha (JJS).

The NGOs will implement these sub-projects in selected unions of Kurigram, Nilphamari, Satkhira, Chuadanga, Barguna, Rajshahi, Naogaon, Natore, Bagerhat and Khulna districts.

Some of the major activities that will be undertaken by these sub-projects are: homestead plinth raising, repairing of road and embankment with tree plantation, promotion of renewable energy such as installation of solar panels, establishment of community grain banks for food availability during lean periods, installation of tube-wells for safe drinking water, installation of sanitary latrines for safe hygiene practice, promotion of environment-friendly cooking stoves, slatted housing for goat keeping, promotion of saline and flood tolerant crops, introduction of improved local variety of Black Bengal goat and support to hen rearing support to drought-resilient fodder cultivation.

The WB release said PKSF had maintained clarity and transparency in communicating with NGOs whose proposals did not receive grants. Official letters with clear indications as to which selection criteria they had not fulfilled had been sent to these NGOs. The project has also developed its own website (www.pksf-cccp-bd.org) with the aim to share relevant information about the activities under the project.

The Government of Bangladesh has set up the BCCRF, which acts as a mechanism for large-scale climate change financing in Bangladesh. One of the two windows of BCCRF, the Community Climate Change Project (CCCP) is allocating funds on a competitive basis to non-governmental organisations (NGOs) to implement community-driven interventions that build resilience to climate change impacts. The Palli Karma-Sahayak Foundation (PKSF) is the designated umbrella agency responsible for oversight.

CLIMATE CHANGE ADAPTATION IN DEVELOPMENT PLANS STRESSED

Friday, 13 December 2013

The News Today

Climate experts at a programme in the city on Friday stressed mainstreaming the climate change adaptation in the development planning of the country to cope with the adverse impacts of global warming, reports UNB. They said mainstreaming climate change into planning needs to be done at every level, not just in national plans while the relevant ministries such as water management, agriculture, health and others need to mainstream climate change into their respective plans. Oxfam in Bangladesh with the assistance of a Dhaka based climate change study group conducted a study, titled 'Review of BCCSAP-2009' that was released at a discussion at Sonargaon Hotel on Friday evening.

The study findings include a policy direction towards enhancement of implementation of BCCSAP with prioritisation of the action programmes and developing a country framework for mainstreaming adaptation with indicators for monitoring and evaluation. Highlighting the study outcome, Dr M Asaduzzaman of the Bangladesh Institute of Development Studies (BIDS), principal investigator of the study, said it is also important to mainstream the climate change adaptation into local level planning. He said the NGOs have a very strong role to play especially in mainstreaming adaptation as many NGOs are already working at local level for enhancing the community-level adaptive capacity.

"Climate change adaptation is mainly local, and NGOs have access to remote and marginalised areas in Bangladesh."

Asaduzzaman said while adaptation projects are a useful place to start, the long-term nature of climate impacts will require an altogether greater effort to develop a climate resilient economy. Thus, instead of developing separate, stand-alone National Adaptation Plan (NAP) as many countries are doing, it will be better for Bangladesh to mainstream climate change into regular national plans, he said.

Chaired by PKSF chairman and coordinator of Bangladesh Climate Change Negotiation Team Dr Qazi Kholiquzzaman Ahmad, the meeting was addressed, among others, by former ESCAP official and member of the National Climate Change Negotiation Team Dr Rezaul Karim, president of Forum of Environmental Journalists of Bangladesh (FEJB) Quamrul Islam Chowdhury, Prof Dr Mizan R Khan of North South University, and deputy director of Department of Environment M Ziaul Haque.

To operationalise the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) established in 2009, the government constituted the National Climate Change Fund with an allocation of about US$ 45 million in the budget for fiscal 2008-09, which has been replenished several times since then. Furthermore, the Bangladesh Climate Change Resilience Fund (BCCRF), a multi-donor trust fund, was established to pool funds from development partners to implement a long-term strategy for conducting adaptation programmes to address the impacts of climate change in Bangladesh.

AFFORESTATION IN 9 DISTRICTS FOR ENHANCING CLIMATE RESILIENCE

Friday, 30 Ausgust 2013

theindependent

Dhaka, August 29, 2013: The Climate Resilient Participatory Afforestation and Reforestation project, implemented by the Government of Bangladesh, is working towards sustainable forest conservation and enhancement of climate resilience, according to a World Bank (WB) statement issued on Thursday. The project aims to reduce forest denudation and to improve forest coverage through participatory planning and monitoring in nine coastal and hilly districts: Cox's Bazar, Chittagong, Noakhali, Lakshmipur, Barisal, Patuakhali, Barguna, Bhola and Feni. The project will be jointly implemented by the Bangladesh Forest Department (BFD) under the ministry of environment and forest (MoEF) and Arranayk Foundation (AF).

The WB said that tropical cyclones, storms and surges are major features of Bangladesh's coastal zone with significant negative impact on the area and its population. At the same time, the share of land under forest cover in Bangladesh is the second lowest in the region, with natural forest cover accounting for only half of that in the 1960s. Denuded forests and ecologically sensitive hilly and coastal areas are especially vulnerable to climate change. For this reason, a comprehensive approach to development planning and disaster management is essential, the statement said.

The project aims to establish new afforested and reforested areas of total 17,000-hectares of land and 1,672-km roadside plantation in nine districts. The project will support and build climate resilience of 200 forest communities through the diversification of livelihood opportunities and practices. The capacity and technical knowledge base of the forest sector will also be enhanced.

The project became effective on July 2, 2013 and progress has been made by establishing a fully functional project implementation unit (PIU) in BFD. The divisional forest officers (DFOs) had conducted extensive survey and mapping work to identify degraded forest areas which would be treated under this project.

Land preparation and nursery seedling production are in a state of readiness to commence planting immediately in coastal areas. In hilly areas, nursery production of seedlings will commence as mature seeds become available to allow planting from April-May of the 2014 monsoon season. The selection criteria for 200 forest communities and training programs for participants from community-based organisations have also been fixed.

The WB recently reviewed the project progress and agreed on an action plan for successful implementation of the project. The existing forest sector master plan (FMP) was reviewed and a detailed strategy developed to upgrade and address the emerging environmental concerns. A road map for strengthening the BFD forest resource monitoring and assessment capacity was also agreed upon.

The Bangladesh Climate Change Resilient Fund (BCCRF) has allocated $33.8 million for the project and currently there are seven development partners contributing to BCCRF: the Australian Agency for International Development (AusAID), the Embassy of Denmark in Dhaka, the Department of International Development (DFID), the European Union, represented by the European Commission (EC), Sweden represented by the Swedish International Development Cooperation (Sida), the Swiss Agency for Development and Cooperation (SDC), and USAID.

WORLD BANK GROUP

PROJECT SIGNING: $33.8 MILLION FOR AFFORESTATION TO PROTECT COMMUNITIES IN COASTAL AND HILLY AREAS FROM NATURAL DISASTERS

February 27, 2013

PRESS RELEASE

DHAKA, February 27, 2013 — The government of Bangladesh signed a $33.8 million grant agreement today with the World Bank to increase forest cover in the coastal and hilly areas of Bangladesh to reduce the impact of cyclones and tidal surges. Through community participatory and co-management approaches, the Climate Resilient Participatory Afforestation and Reforestation Project will provide forest and plantation cover in 17,000 hectares of land and 1,672 km of roadside in areas where communities bear the brunt of climate change. The project will be financed by the Bangladesh Climate Change Resilience Fund (BCCRF), an innovative multi-donor financing mechanism.

The project will increase climate resilience of people and infrastructure by significantly reducing the loss of life and livelihoods and property damage caused by extreme weather events. In addition, the project will create jobs in social forestry and provide alternate income opportunities to poor people in the climate vulnerable areas, reducing their dependence on forest resources for livelihoods. The project will create around 3.18 million work days of additional jobs, benefiting around 6,000 poor households, many of them headed by women. The project will also train around 15,000 forest-dependent people on participatory forest management, climate change management, and basic entrepreneurial and business management skills.

"*Coastal afforestation has been effective in dampening storm surge velocity during Cyclone Sidr in 2007 and Cyclone Aila in 2009, saving millions of lives and significantly reducing devastation compared with the cyclone in 1991*" **said Salman Zaheer, Acting Country Director of Bangladesh, World Bank.** "*This project, under the BCCRF, is a timely initiative to build the country's resilience to climate change while also expanding sustainable livelihood and income opportunities for vulnerable communities.*"

The Bangladesh Forest Department and Arannayk Foundation will implement the afforestation and reforestation activities in the nine coastal districts: Cox's Bazar, Chittagong, Noakhali, Laxmipur, Feni, Barisal, Patuakhali, Barguna and Bhola; and in the hilly areas of the reserved forest land of Chittagong and Cox's Bazar. Following a transparent selection process, local communities will combine locally tested forestation techniques with improved forest management practices to alleviate the adverse effects of cyclones and tidal surges.

The project will strengthen the capacities of the Government of Bangladesh's Department of Forests to plan and manage forest resources through activities such as updating the Forestry Sector Master Plan, mainstreaming Geographic Information System (GIS) and Remote Sensing (RS) based monitoring, and integrating climate change into the planning process.

"*The project directly contributes to government of Bangladesh's climate change adaptation vision*" **said Mr. Arastoo Khan, Additional Secretary, Economic Relations Division, Government of Bangladesh.** "*The project will play a pivotal role in implementing cost-effective climate resilience approaches and in parallel providing socio-economic and environmental co-benefits.*"

Mr. Arastoo Khan, Additional Secretary, Economic Relations Division and Mr. Salman Zaheer, Acting Country Director, World Bank Bangladesh signed on behalf of the Government of Bangladesh and the World Bank respectively, at the Economic Relations Division.

The government of Bangladesh has successfully aligned its development partners to address the country's climate change challenges by having them establish a multi-donor fund – the Bangladesh Climate Change Resilience Fund. So far, the BCCRF has channeled $189 million in grant funds from seven development partners, namely Australia, Denmark, the European Union, Sweden, Switzerland, the UK and the USA to strengthen resilience to climate change. The government of Bangladesh is in the driver's seat and has the authority to decide which projects to fund and how they are to be implemented. On an interim basis, the implementation and administration of the fund is augmented by the World Bank, especially in the areas of ensuring fiduciary transparency and accountability due diligence.

WORLD BANK GROUP

PROJECT SIGNING: $10 MILLION GRANT FOR SOLAR IRRIGATION IN BANGLADESH

September 30, 2013

PRESS RELEASE

DHAKA, September 30, 2013 — The Government of Bangladesh signed a $10 million grant agreement today with the World Bank to introduce solar irrigation pumps for farmers. The **Solar Irrigation Project** will enable installation of more than 1,300 solar powered irrigation pumps covering more than 65,000 bighas of land for rice cultivation. The project will be financed by the Bangladesh Climate Change Resilience Fund (BCCRF), an innovative multi-donor financing mechanism.

The solar irrigations pumps will provide farmers access to clean energy in a comparatively lower cost. Traditionally, Bangladeshi farmers rely on more expensive diesel based irrigation pumps for rice cultivation. By replacing diesel pumps with solar irrigation pumps in areas where grid electricity has not reached, the project will reduce dependence of farmers on diesel supply, which is often erratic and costly particularly in remote rural areas. Reliance on costly diesel imports for irrigation puts a pressure on country's foreign exchange. 1300 solar irrigation pumps will save $3.2 million in foreign currency every year from displacement of diesel.

"*Wider use of solar powered irrigation pumps will help Bangladesh to save foreign exchange in diesel imports. Due to clean and renewable energy used, the project will reduce carbon emission by 10,000 tons every year,*" **said Christine Kimes, Acting Head, World Bank Bangladesh.** "*The project will contribute to improve farmers' livelihoods, increase climate change resilience of the agriculture sector and strengthen food security.*"

Private sponsors will be responsible for installing, operating and maintaining the solar irrigation pumps. BCCRF will provide up to 50% of the pump costs in grant, while International Development Association (IDA) of the World Bank will provide 30% in concessional credit. Private sponsors are expected to provide 20% of the pump costs as equity.

"*The project directly contributes to Government of Bangladesh's climate change adaptation vision,*" **said Arastoo Khan, Additional Secretary, Economic Relations Division, Government of Bangladesh.** "*Wider use of solar irrigation pumps will help the agriculture sector to reduce dependence on diesel imports. Smooth supply of water for irrigation will help to increase agricultural productivity. The solar irrigation pumps will enable us save foreign exchange substantially. However, to popularize the solar irrigation pumps, investment in research and innovation is needed to bring down the* upfront cost of the pumps."

BCCRF has provided $10 million grant in first phase for the solar irrigation project and the total commitment amount for project is $24.5 million in grant financing. The Infrastructure Development Company Limited (IDCOL) will implement the solar irrigation project through private sponsors as part of the Rural Electrification and Renewable Energy Development II (RERED II) Project.

Mr. Arastoo Khan, Additional Secretary, Economic Relations Division and Ms. Christine Kimes, Acting Head, World Bank Bangladesh signed on behalf of the Government of Bangladesh and the World Bank respectively, at the Economic Relations Division in presence of the development partners.

ABOUT BCCRF

The Government of Bangladesh has successfully aligned its development partners to address the country's climate change challenges by having them establish a multi-donor fund – the Bangladesh Climate Change Resilience Fund. So far, the BCCRF has channeled $189 million in grant funds from seven development partners, namely Australia, Denmark, EU, Sweden, Switzerland, UK and the USA to strengthen resilience to climate change. The Government of Bangladesh is in the driver's seat and has the authority to decide which projects to fund and how they are to be implemented. On an interim basis, the implementation and administration of the fund is augmented by the World Bank, especially in the areas of ensuring fiduciary transparency and accountability due diligence.

FUTURE ACTIVITIES IN 2014

FUTURE ACTIVITIES IN 2014

Building on the progress achieved in 2013, the World Bank/BCCRF work program will focus on the following activities in 2014.

1. Program management

- Complete the MTR
- Monitor the results framework
- Finalize the communications strategy.

2. Pipeline development

- Appraise the Secretariat for BCCRF Phase II (Capacity Building Project Phase II).[1]

3. Project supervision

The World Bank will provide supervisory support for the following projects, which are recipient executed:

- Emergency 2007 Cyclone Recovery and Restoration Project (Multipurpose Cyclone Shelter Project)
- Secretariat for BCCRF (Capacity Building Project Phase I)
- Community Climate Change Project
- Climate-Resilient Participatory Afforestation and Reforestation Project
- Rural Electrification and Renewable Energy Development Project II (Solar Irrigation Project)
- Modern Food Storage Facilities Project.[2]

4. AAA preparatory activities

The World Bank will manage the following analytical and advisory tasks, which are Bank executed:

- Impacts of Climate Change on Climate-Sensitive Diseases and Implications for the Health Sector
- Waterlogging of Urban Areas in a Changing Climate: Potential Damage and Adaptation
- Detailed Design of Environmental Studies for Construction of Urir Char–Noakhali Cross Dam
- Innovations in Flood Risk Mitigation in Dhaka
- Scaling up Innovation in Disaster Risk Management in Bangladesh: A Proposal to Support Human and Financial Resilience to Natural Hazards
- Making Climate Data Relevant to Decision Making in Bangladesh: Spatial and Temporal Downscaling.

Table 12 presents details of the proposed work plan.

[1] After reviewing other planned donor support in early 2014, preparation was discontinued due to duplication of activities.
[2] Subject to discussion.

Table 12. Proposed Annual Work Plan (2014)

Activity	Q1	Q2	Q3	Q4
I. Program management				
Mid-term review	Complete MTR process	Follow up	Follow up	Follow up
Results framework	Ongoing monitoring	Ongoing monitoring	Ongoing monitoring	Ongoing monitoring
Communications strategy	Finalize communications strategy			
Quarterly reports	Report in January for 2013 Q4	Report in April for 2014 Q1		
Annual report			*Annual Report 2013* printed and disseminated	
Trusteeship	Fund management (such as issuance of call of funds, receipt of payments, investment, revision of fees)[3]			
II. Pipeline development				
Capacity Building Project Phase II	Preparation and appraisal[4]			
Supporting Agriculture Adaptation to Climate Change	Bank's concept review[5]			
III. Project supervision	**(Task teams conduct two site visits per year for projects in this category)**			
Emergency 2007 Cyclone Recovery and Restoration Project (Multipurpose Cyclone Shelter Construction Project)	Project operational	Project operational	Project operational	Project operational[6]
Secretariat for BCCRF Phase I (Capacity Building Project Phase I)	Project operational	Project operational	Project operational	Project operational
Community Climate Change Project	Project operational	Project operational	Project operational	Project operational
Climate-Resilient Participatory Afforestation and Reforestation Project	Project operational	Project operational	Project operational	Project operational
Rural Electrification and Renewable Energy Development Project II (Solar Irrigation Project)	Project operational	Project operational	Project operational	Project operational
Modern Food Storage Facilities Project[7]	Grant agreement signed	Project operational	Project operational	Project operational
III. AAA				
Climate Change and Its Impact on Vector-borne Diseases in Bangladesh	Complete AAA and disseminate report			
Urichar Cross Dam Study/ Detailed Design of Environmental Studies for Construction of Urir Char–Noakhali Cross Dam[8]	Ongoing AAA work	Ongoing AAA work	Ongoing AAA work	Ongoing AAA work
Innovations in Urban Resilience[9]	Ongoing AAA work	Ongoing AAA work	Ongoing AAA work	Ongoing AAA work
Making Climate Data Relevant to Decision Making in Bangladesh: Spatial and Temporal Downscaling[10]	Ongoing AAA work	Ongoing AAA work	Ongoing AAA work	Complete AAA and disseminate
Urban Flooding of Dhaka in a Changing Climate/Waterlogging of Urban Areas in a Changing Climate: Potential Damage and Adaptation[11]	Ongoing AAA work	Ongoing AAA work	Ongoing AAA work	Complete AAA and disseminate

[3] Call of funds on hold in view of imminent MDTF closing date.
[4] Discontinued due to overlap with approved bilateral project funding for the MOEF.
[5] Ministry of Agriculture declined updated project proposal.
[6] Extension of closing date by one year required due to 2013 electoral disruptions.
[7] Subject to discussion.
[8] End date is March 2015.
[9] End date is June 2015.
[10] End date is December 2014.
[11] End date is December 2014.


BCCRF

BCCRF benefits from the financial support of the governments of Australia, Denmark, Sweden, Switzerland, the United Kingdom, the United States, and the European Union and from the technical support of the World Bank.

Cover photo Flood proof water pump in Bangladesh / *Practical Action/Mehrab ul Goni*