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USAID/BANGLADESH NATURAL RESOURCES MANAGEMENT (NRM) SECTOR ASSESSMENT REPORT



December 4, 2019

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Source of cover photos: 1. Community Patrol Group photo – collected from USAID Climate Resilient Ecosystems and Livelihoods (CREL) Activity; 2. Photo of Sundarban Forest – taken by NRM Sector Assessment Team; 3. Village Conservation Forum (VCF) members photo – taken by NRM Sector Assessment Team; 4. Focus group discussion with Village Savings Group (VSG) members photo – taken by NRM Sector Assessment Team.

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ABBREVIATIONS

Acronym	Description
ADB	Asian Development Bank
AIGA	Alternative Income Generation Activity
BFD	Bangladesh Forest Department
BMEL	Bangladesh Monitoring, Evaluation, and Learning Activity
BSCMFP	Bangladesh Sustainable Coastal and Marine Fisheries Project
CA	Cooperative Agreement
CBM	Community-Based Co-Management
CBO	Community-Based Organization
CCF	Chief Conservator of Forests
CDCS	Country Development Cooperation Strategy
CHT	Chattogram Hill Tracts
CHTWCA	Chittagong Hill Tracts Watershed Co-Management Activity
CMC	Co-Management Committee
CMCo	Co-Management Council
CMEC	Co-Management Executive Committee
CMO	Co-Management Organization
CNRS	Center for Natural Resource Studies
COMPASS	Community Partnerships to Strengthen Sustainable Development
CPG	Community Patrol Group
CREL	Climate-Resilience Ecosystem and Livelihoods
CSG	Community Savings Group
DCC	District Co-Management Committee
DFO	Divisional Forest Officer
DOF	Department of Fisheries
DPP	Development Project Proforma
ECA	Ecologically Critical Area
ECOFISH ^{BD}	Enhanced Coastal Fisheries in Bangladesh
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
FMC	Fisheries Management Committee
FRUG	Federation of Resource User Group
FUG	Forest User Group
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GOB	Government of Bangladesh
HCG	Hilsa Conservation Group
HGCC	Hilsa <i>Ghat</i> -Based Co-Management Committee
HGG	Hilsa <i>Ghat</i> Group
IPAC	Integrated Protected Area Co-Management
IR	Intermediate Result

Acronym	Description
IUCN	International Union for Conservation of Nature
J2SR	Journey to Self-Reliance
KII	Key Informant Interview
M&E	Monitoring and Evaluation
MACH	Management of Aquatic Ecosystems through Community Husbandry
MOEFCC	Ministry of Environment, Forest, and Climate Change
MOFL	Ministry of Fisheries and Livestock
MOL	Ministry of Land
NGO	Non-Governmental Organization
NP	National Park
NRM	Natural Resources Management
NSP	Nishorgo Support Project
NTFP	Non-Timber Forest Product
PA	Protected Area
REDD	Reducing Emissions from Deforestation and Forest Degradation
RF	Results Framework
RIMS	Resource Information Management System
RMO	Resource Management Organization
RUG	Resource User Group
SMART	Spatial Monitoring and Reporting Tool
SMP	Sundarbans Mangrove Forest Project
SUFAL	Sustainable Forests and Livelihoods
SWOT	Strengths, Weaknesses, Opportunities, and Threats
UCC	Union Co-Management Committee
UNDP	United Nations Development Programme
U.S.	United States
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
UzCC	<i>Upazila</i> Co-Management Committee
VCF	Village Conservation Forum
VCF-CHT	Village Common Forest in CHT (also sometimes Village Conservation Forest)
VCG	Village Conservation Group
VSG	Village Savings Group
VRTT	Village Tiger Response Team
WS	Wildlife Sanctuary

GLOSSARY

Term	Definition
Community-Based Management (CBM)¹	<p>CBM, also known as community-based natural resources management (NRM), is the general term to describe community-focused engagement in NRM. It encompasses co-management as well as other forms of resource management, such as Arannayk Foundation’s community-based organizations (CBOs) and the United Nations Development Programme’s (UNDP’s) village common forest management committees.</p> <p>CBM is the broad term that includes co-management of natural resources. Co-management of natural resources is the sharing of power and responsibility between the government and local resource users. CBM also includes other forms of community-centered resource management that do not directly involve communities sharing power with the government, particularly relevant in Bangladesh’s Chattogram Hill Tracts (CHT). Most other CBM interventions supported by USAID/Bangladesh are co-management organizations. This report refers to co-management organizations as the primary mechanism of CBM in Bangladesh.</p>
Co-Management Organization (CMO)²	<p>Co-management is the sharing of power and responsibility between the government and local resource users. A CMO is the general term for the wide variety of community organizations supporting co-management in various ecosystems. As described below CMOs are often nested with many village-level CMOs sending representatives to intermediate-level CMOs that, in turn, send representatives to higher-level shared decision-making CMOs. The lowest level of CMO rarely includes Government of Bangladesh (GOB) representation and the highest level always does. The intermediate levels sometimes have GOB representation.</p>
Forest Protected Area CMOs	
Co-Management Committee (CMC)³	<p>CMCs were introduced by the Bangladesh Forest Department (BFD) in 2006 during the USAID-funded Nishorgo Support Project (NSP) and have been legally recognized by the GOB’s Protected Area (PA) Rules of 2017 as the apex co-management body for forest PAs in Bangladesh. The co-management committee is composed of representatives from different local government agencies, civil society, and local communities and includes <i>ex officio</i> representation of the local BFD range officer as a member secretary. The community members are elected by the People’s Forum and Community Patrolling Group, and representatives from the government agencies are selected <i>ex officio</i> for up to two two-year terms. The CMC is expected to meet every two months. Meetings are called by the member secretary. General management responsibilities of the CMC include:</p> <ul style="list-style-type: none"> • Prepare the annual work plan with proposed PA activities and budgets; • Take actions for biodiversity conservation and NRM; • Organize and oversee PA activities, including ecotourism operations, facilities maintenance, community patrol groups, buffer zone forest plantations, community livelihood activities, stakeholder dispute resolution, and convening CMC meetings.

¹ MACH, Technical Paper 2, Lessons from community-based co-management of large wetlands in Bangladesh, Dhaka, May 2006.

² *Ibid.*

³ Protected Area Management Rules 2017, Bangladesh Forest Department.

Term	Definition
Co-Management Council (CMCs)	CMCs were introduced by the BFD in 2006 during the USAID-funded NSP. The CMC has been replaced by the co-management general committee under the Integrated Protected Area Co-Management Project (IPAC). The CMC general committee is composed of representatives from government organizations, People's Forums and Community Patrol Groups for four years. Key activities include approval of budget developed by the CMC for PAs, monitoring and evaluation (M&E) of implemented activities, providing advices for biodiversity and NRM, and stakeholder dispute resolution.
Community Patrol Group (CPG)⁴	CPGs, established under NSP, are formed of local community members who work with BFD forest guards to protect a designated area of a PA from illicit felling and other illegal activities. CPGs receive a small honorarium from the CMCs.
Forest User Group (FUG)⁵	FUGs were formed under NSP to be the focal point for alternative income generation activities (AIGAs) given their heavy dependence on the natural resources. FUGs were replaced under IPAC by Village Conservation Forums.
Village Conservation Forum (VCF)	VCFs were initiated under IPAC in 2009, replacing NSP's FUGs to promote conservation and sustainable development in each village around the PAs. Membership is open to villagers that live within five kilometers of the PA boundaries. Generally, 50 percent of the members are (or should be) female. The VCFs ensure participation of resource dependent villagers, provide a focal point for AIGAs, raise awareness on the conservation of forest resources, encourage people to abide by the relevant forestry laws, and arrange community participation in social forestry and agroforestry/plantations.
People's Forum (PF)⁶	PFs are CMOs intermediary between VCFs and CMCS. PFs were established under IPAC to ensure community representation to the CMCs. Each VCF elects two representatives to the PF, and the PF elects an 11-members to sit on the CMC. The PF meets every three months. The PF is legally recognized by the PA Management Rules 2017. There is an executive committee elected for two years that meets every month. The major responsibility of the PF is to provide a forum for VCF members to raise and discuss issues and, when appropriate, present them to the CMC. The PF also is charged to raise awareness on the conservation of forest resources and wildlife, to encourage people to abide by the relevant forestry legislation, to ensure the participation of poor people dependent on forest resources in developing and implementing plans for the management of the resources, and to oversee dispute resolution and administration.
Resource User Group (RUG)⁷	RUGs are being organized under the GIZ ⁸ Support to the Management of the Sundarbans Mangrove Forest Project (SMP) to supplement the VCFs and increase forest resource user participation in VCF operations. These are similar in concept to the fisher RUGs formed under the Management of Aquatic Ecosystems through Community Husbandry (MACH) activity (see below).
Ecologically Critical Areas (ECAs)	

⁴ Protected Area Co-Management Where People and Poverty Intersect: Lessons from Nishorgo in Bangladesh, 2012.

⁵ MACH, Technical Paper 2.

⁶ *Ibid.*

⁷ GIZ Slide Presentation to USAID/Bangladesh on the Support to the Management of the SMP, undated.

⁸ Deutsche Gesellschaft für Internationale Zusammenarbeit.

Term	Definition
Village Conservation Group (VCG) ⁹	VCGs were developed during the MACH project. Key responsibilities included conservation of biodiversity and improvement of livelihoods.
Union ¹⁰ ECA Coordination Committee ¹¹	Union ECA Coordination Committees were supported by MACH. Key responsibilities of this nine-member committee included awareness-raising, providing local support in ECA management, and supervising and guiding VCG activities. They are led by the Union <i>Parishad</i> Chairman with government officials from either land administration or agriculture as the member secretaries.
Upazila ¹² ECA Coordination Committee ¹³	Upazila ECA Coordination Committees developed during MACH. They consist of 15 members, including <i>Upazila</i> officers working on land administration, agriculture, fisheries, livestock, forest, local security, and cooperatives; representatives of the local fishers' association; and other civil society representatives. The committee is responsible for <i>Upazila</i> -level coordination in ECA management, awareness-raising, supervising VCG activities, and carrying out conservation activities utilizing an endowment fund.
Forests (Other Than PAs) CMOs	
Community Based Organization (CBO) ¹⁴	In CHT, Arannayk Foundation's CBOs manage forest resources on private lands that are neither village common forest (VCF-CHT, see below) or forest reserve lands. Key objectives are to conserve natural forest resources, reduce poverty, and improve livelihoods through awareness-raising, capacity-building, and harvesting medicinal plants, non-timber forest products, and timber.
VCF-CHT Management Committee ¹⁵	<p>Village common forest (abbreviated in this report as VCF-CHT to distinguish it from VCF) is a term used to denote <i>Mauza</i>¹⁶ reserves and other forests in CHT not under the control of the BFD. Each VCF-CHT has a general committee and an executive committee. The general committee is formed by members of communities dependent on the VCF-CHT, and the executive committee is elected by the general committee from its membership.</p> <p>The VCF-CHT Management Committee is guided by an advisory committee of 3-5 members of local elites, such as the village headman. The management committee (which includes at least 30 percent women) meets monthly and includes the local village headman, youth representatives, and traditional healers. Key responsibilities of the VCF-CHT management committee include ensuring sustainable management and conservation, registering the VCF-CHT, restoring wildlife habitat, preventing and suppressing fires, preventing illicit extraction of trees and forest resources, and optimizing utilization of the naturally grown forest produce for the benefit of the VCF-CHT community.</p>

⁹ MACH, Technical Paper 2.

¹⁰ https://en.wikipedia.org/wiki/Local_government_in_Bangladesh.

¹¹ MACH, Technical Paper 2.

¹² https://en.wikipedia.org/wiki/Local_government_in_Bangladesh.

¹³ MACH, Technical Paper 2.

¹⁴ Comprehensive Profile, Hill Flower, a partner NGO of Arannayk Foundation.

¹⁵ Sustainable Forest Management In the Chittagong Hill Tracts, CHTWCA, UNDP Rangamati, CHT, March 31, 2016.

¹⁶ A *Mouza* reserve is an area outside the reserved forests that is protected by the local community under the administration of a *Mouza* Headman. <https://en.wikipedia.org/wiki/Mouza>.

Term	Definition
Village Tiger Response Team (VTRT)	VTRTs were introduced in the Sundarbans in 2007 to safeguard the critically endangered Bengal tigers by resolving human-tiger conflict. WildTeam Limited, a Bangladeshi non-governmental organization (NGO), supports VTRTs in areas surrounding the Sundarbans forest reserve and PAs. VTRTs are constituted by VCF members within the co-management jurisdiction. VTRTs assist BFD and CMCs in arranging compensation to local people who are wildlife victims.
Village Elephant Response Team (VERT) ¹⁷	VERTs consist of volunteer members who are selected from the VCF. VERTs were introduced by the World Bank's Strengthening Regional Co-Operation for Wildlife Protection Project in 2013. Key responsibilities include monitoring elephant movements (mainly at night), minimizing the human-elephant conflict by using elephant deterrent tools, controlling the crowd when elephants come close to community houses and crop fields, and encouraging people to protect elephants.
Wetlands CMOs	
Upazilla Fisheries Committee (UFC)	UFCs, developed by MACH, are a platform for coordinating management between community organizations over the larger wetland areas, and they serve as venues at which stakeholders, including Resource Management Organizations, can present their issues and find solutions to problems. UFCs have been adopted as part of a national strategy for inland capture fisheries.
Resource Management Organization (RMO) ¹⁸	RMOs are community-based bodies for wetland management developed by MACH and registered with the GOB Social Welfare Department. Responsibilities include ensuring sustainable use and management of resources, conservation and protection of wetland resources and biodiversity, establishing rights of local fishermen, and managing sanctuaries through a community-based approach.
Federation of Resource User Group (FRUG) ¹⁹	FRUGs, developed under MACH II, are an apex body of Resource User Groups (RUGs) and registered under the cooperative department that provided a legal basis for the RUGs to operate. Each FRUG consists of members of the constituent RUGs (average of 19 RUGs and 390 members). MACH provided endowment funds to the FRUGs. FRUGs work for wetland management and livelihoods of wetland dependent communities.
Resource User Group (RUG) ²⁰	RUGs were developed under MACH as the community CMOs responsible for diversifying and enhancing livelihoods. These are similar in concept but different than the RUGs formed under GIZ-SMP (see above).
Coastal Fisheries CMOs	
Fisheries Management Committee (FMC) ²¹	FMCs formed under ECOFISH ^{BD} consist of representatives of fisheries-related stakeholders within local communities, including members from Hilsa Conservation Groups (HCGs) and Community Savings Groups (CSGs) and other local people who have a role in fisheries management.

¹⁷ <https://en.wikipedia.org/wiki/Gazette>.

¹⁸ MACH, Technical Paper 2.

¹⁹ *Ibid.*

²⁰ *Ibid.*

²¹ Hilsa Co-management Guideline (Draft), Enhanced Coastal Fisheries in Bangladesh (ECOFISH^{BD}), WorldFish Bangladesh & South Asia and Department of Fisheries, Ministry of Fisheries and Livestock, GOB.

Term	Definition
Hilsa Conservation Group (HCG) ²²	HCGs are the primary ECOFISH ^{BD} platforms for direct resource users (community fishers and their household members beside the rivers/sanctuaries) to gather to conduct group discussions and training sessions using a participatory approach.
Hilsa Ghat ²³ Group (HGG)	HGGs were introduced by ECOFISH ^{BD} and are formed from fishers and buyers associated with a particular fish landing site. Their activities include conducting regular meetings, helping members understand fishing rules and regulations, building awareness about biodiversity conservation, and encouraging <i>aratdars</i> (fish wholesalers and fisher credit providers) to provide support for hilsa fishers.
Community Saving Group (CSG)	CSGs are ECOFISH ^{BD} village-level savings organizations. Key objectives are to enhance access of women and other marginalized people to technologies and resources, ensure access to easy and low-interest soft loans, and reduce dependency on high-interest loans from external credit providers.
Hilsa Ghat-Based Co-Management Committee (HGCC) ²⁴	HGCCs are the <i>ghat</i> -based fisheries CMCs. Their main function is to take part in the planning process for resource conservation and to motivate stakeholders to implement the plan. In addition, the HGCCs play an active role in recruitment of Community Fish Guards. HGCCs are currently not operational.
Union Co-Management Committee (UCC) ²⁵	UCCs are formed at the union level to prepare hilsa conservation plans and to motivate stakeholders to implement the plan.
Upazila Co-Management Committee (UzCC) ²⁶	UzCCs are formed at the <i>upazila</i> level with the objectives of conserving fish biodiversity, increasing hilsa and other fisheries production, building awareness on compliance with GOB rules and regulations, generating supplementary/alternative income, and implementing government directives.
District Co-Management Committees (DCC) ²⁷	DCCs are formed at the district level with the same objectives as UzCCs. In addition, DCCs monitor and coordinate the activities of the UzCCs. The District Commissioner is the president, and relevant district fisheries officers are the member secretaries of the committees. Local Members of Parliament and chairs of the District <i>Parishad</i> act as committee advisors.

²² <https://en.wikipedia.org/wiki/Mouza>.

²³ *Ghat* is a landing place or harbor related to the fish trade.

²⁴ Hilsa Co-management Guideline (Draft), ECOFISH^{BD}

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ *Ibid.*

EXECUTIVE SUMMARY

ASSESSMENT OBJECTIVE & METHODOLOGY

The purpose of the United States Agency for International Development (USAID) natural resource management (NRM) sector assessment is to assess conservation interventions that have engaged local communities in the management of natural resources, especially in and around protected areas (PAs) nationwide, the forests of the Chattogram Hill Tracts (CHT),²⁸ as well as inland and coastal water bodies. The assessment provides evidence documenting the current status of community-based co-management (CBM) approaches. It further assesses whether conservation interventions by USAID/Bangladesh have resulted in the institutionalization of co-management approaches, the extent that alternative income-generating activities have helped to conserve natural resources, and whether co-management models have remained functional. The study also assesses NRM initiatives by other donors, to the extent possible.

The primary audience for the assessment is USAID/Bangladesh, which will use the assessment results to provide recommendations for its current NRM projects and to inform the design and implementation of future projects in the NRM sector. Results are also important for Bangladesh's Journey to Self-Reliance in documenting capacity, commitment, and cooperation between government and citizens in NRM. USAID also may disseminate the report to stakeholders, such as implementing partners, Government of Bangladesh (GOB) agencies, other sector-specific donors, and non-governmental organizations (NGOs).

A three-person assessment team and support staff conducted the NRM assessment, using a mixed-methods approach with qualitative and quantitative data gathering and analysis. The assessment took place over a ten-week period beginning with a home-based desk review in July 2019 and fieldwork in August-September. The assessment team visited a purposively selected sample of 17 co-management intervention sites in the Barishal, Chattogram, Khulna, and Sylhet divisions, including three sites in the CHT. The team conducted 51 key informant interviews (KIIs) and 37 focus group discussions (FGDs) with 444 stakeholders (171 women and 273 men) in Dhaka and four divisions of Bangladesh. Additionally, the team conducted a mini-survey with 237 FGD participants (109 women and 128 men).

BACKGROUND

The USAID's investment in CBM²⁹ of natural resources began in 1998 with a fishery co-management activity in the seasonally-flooded inland wetlands in the country's northeast. In 2003, USAID initiated a forest co-management activity, adapting the fisheries model to pilot co-management in five forest PAs partnering with the Bangladesh Forest Department (BFD). USAID's investment in PAs continued for 15 years under three successive activities until 2018. USAID also funded a tiger conservation CBM activity in the Sundarbans, a co-management activity in coastal hilsa fisheries, and a forest CBM activity in the CHT.

²⁸ Though the name of Chattogram Hill Tracts (CHT) has been changed, the name of the USAID activity remains the Chittagong Hill Tracts Watershed Co-Management Activity (CHTWCA). The names refer to the same geographic area.

²⁹ CBM is the term used in the assessment team's scope of work. In fact, more than 80 percent of the \$94 million 1998-2019 USAID NRM sector investment employed a co-management strategy. In this report, co-management is used as an equivalent to CBM except in cases where an activity's strategy did not involve co-management.

USAID/Bangladesh has invested \$94 million in eight NRM sector activities since 1998. Of this total, it spent \$62.3 million on four primarily forest-based CBM activities, of which \$56 million was for PA co-management, \$21.4 million on three fisheries activities, and \$10 million on a tiger conservation activity. USAID has also assisted a national environmental NGO, Arannayk Foundation, with \$8.5 million of local currency from a United States Department of Agriculture (USDA)-administered “debt for nature swap” that funds a wide range of small CBM grants.

The USAID NRM sector is at a turning point. USAID’s two remaining NRM activities are due to be completed in 2019. These may be renewed, and USAID has announced its intention to solicit proposals for a new flagship co-management activity. USAID also intends to award three assistance agreements to national NGOs to support NRM activities in areas affected by Rohingya refugees in the south east of Bangladesh.

FINDINGS & CONCLUSIONS

Question 1: What is the current status of CBM in the NRM sector in Bangladesh? To what extent has the co-management model been functional in the NRM sector? What are the strengths, weaknesses, opportunities, and threats facing CBM?

There are two ongoing USAID-funded CBM activities, the Chittagong Hill Tracts Watershed Co-Management Activity (CHTWCA) and Enhanced Coastal Fisheries in Bangladesh Activity (ECOFISH^{BD}), both of which are in discussions for renewal. In addition, USAID has announced its intention to release a Request for Proposals for a five-year, up to \$20 million activity called Protibesh that would renew USAID’s long-standing partnership with the BFD in support of PA co-management activities. USAID also will award up to \$6 million to up to three national NGOs to support NRM in areas of the southeast affected by the influx of Rohingya refugees.

USAID-supported co-management organizations (CMOs) visited by the assessment team were functioning at a range of levels. PA co-management committees (CMCs) were doing reasonably well; they had funds in their bank accounts, were meeting regularly, and were conducting some activities such as maintaining ecotourism facilities. On the other hand, PA Village Conservation Forums (VCFs) were struggling; they were meeting less regularly, savings groups had disbanded, and alternative income generation activities (AIGAs) had failed. One Resource Management Organization (RMO) originated by the USAID Management of Aquatic Ecosystems through Community Husbandry (MACH) activity was functioning as intended two decades after its founding. The CHT CBM groups, tribal organizations, and community-based organizations (CBOs) were functioning well under project support, but activities depended on external assistance. While the higher-level ECOFISH^{BD} CMOs were functioning with project support, the village-level CMOs were not functioning independently at all. CMOs and CBOs are a necessary mechanism to organize communities to support NRM, but they are difficult to sustain and require extensive ongoing capacity-building.

USAID’s emphasis on gender inclusion ensured women’s participation in 100 percent of CMOs visited. Improved habitat was reported by 70 percent of the CMOs. While half of the PA CMOs felt that GOB participation was a strength, more than one-third felt it was a weakness, agreeing with 40 percent of CHT CBOs and 75 percent of ECOFISH^{BD} CMOs that GOB participation was lacking. Lack of financial resources was identified as a weakness by 43 percent of CMOs and conflict with outsiders by about 40 percent of CMOs, including 75 percent of ECOFISH^{BD} CMOs. Skills development was identified as an opportunity by 40 percent of VCFs and CHT CBOs.

Strengths of PA co-management CMOs include community acceptance of the co-management strategy and CMC commitment to and capacity for PA co-management. With regard to CHT Village Common Forest CBOs, strengths include traditional management practices deeply ingrained in tribal culture and village governance. Strengths of ECOFISH^{BD} hilsa fishery CMOs include increased awareness among fishers about the rationale and requirements of hilsa fish management. Weaknesses for PA co-management CMOs relate to the BFD's lack of capacity and commitment to co-management as well as limited livelihood opportunities in remote forest areas. VCFs in CHT are not recognized by the GOB and have limited geographic coverage compared to the large degraded forest areas. For hilsa fishery CMOs, co-management has not been officially adopted, and alternative livelihoods initiatives are not well-developed.

Opportunities for PA co-management CMOs include leveraging World Bank-funded Sustainable Forests and Livelihoods (SUFAL) project for strengthening co-management policy, strategy, and finance. There is scope for increased coverage and strengthened capacity of VCF CBOs in CHT, as well as potential for an innovative BFD-tribal collaborative management of forest reserves. Potential for integration with the World Bank's Coastal and Marine Fisheries Project presents an opportunity for hilsa fishery CMOs, along with hilsa value chain and private sector engagement in sustainable fisheries. Threats for PA co-management CMOs include the BFD's traditional command-and-control mind set and failure to implement the PA Rules revenue sharing provisions. Mistrust and legal disputes between the GOB and CHT tribal people are ongoing threats. For hilsa fishery CMOs, threats include the failure of fishing ban period relief efforts to meet fishers' needs and the fact that these CMOs are not likely to be sustained without external technical assistance and financing.

Question 2: How effective have PA policies been for creating an enabling environment for CBM? What gaps or weaknesses are present in existing policies that need to be addressed to improve CBM effectiveness? What more needs to be done to increase the sustainability of progress made to date?

When implemented as designed, NRM policies have been effective in creating an enabling environment for CBM. An excellent example is the BFD 2017 PA Rules. The formal adoption of the PA Rules was a major accomplishment for USAID/Bangladesh that has been accompanied by a substantial increase in the number and area of forest PAs and a significant decrease in the rate of degradation. MACH's original wetlands leasing policy was a similar success while it lasted. Unfortunately, at the end of the ten-year community-based leases promoted by MACH, the Ministry of Land (MOL) reverted to its pre-MACH leasing policy, which favors local elite business men and relegates fishers to a sharecropper-like status. The USAID Climate-Resilience Ecosystem and Livelihoods activity (CREL) drafted a new wetland fishery leasing policy in 2017 to help restore community-based fisheries. It is still under consideration by the MOL.

The revenue sharing aspect of the PA rules are a weakness. In the CHT, there are a number of significant forest and land rights policy issues. Conflicting legal frameworks between traditional tribal administration and the GOB flow down to conflict between the BFD and tribal communities over how forests should be managed. ECOFISH^{BD} has drafted a hilsa fisheries CMO structure and hilsa fisheries action plan that need further action to be effective.

Implementation of the PA Rules is a priority. BFD field officers need operational guidance to help translate the Rules into annual plans. CREL's draft operational guidelines are with the BFD, which plans to establish a Co-Management Executive Committee (CMEC) that might help to create a

critical mass of support for PA co-management within the BFD. Building CMO capacity and finding viable means of ensuring their sustainable governance and function is the greatest need across the sector. Successful policy change takes time to obtain full departmental buy-in and approval and the broad multi-stakeholder support required to reduce the chance of policy backsliding.

Question 3: How have USAID investments (and those of other donors, to the extent possible) contributed to the development of overall environmental governance in the country? How have these investments contributed to building stakeholder and institutional capacity for effective PA co-management? In what ways have these development interventions incorporated learning to strengthen local governance structures for NRM?

Since 1998, according to data provided to the assessment team by USAID/Bangladesh, the Mission has invested more than \$94 million in NRM in Bangladesh and changed the country's environmental governance. Focusing on rural areas of high biodiversity and ecosystem value, USAID chose co-management as the strategy best suited to conserve and sustainably use those areas. At the core of this strategy was building community CMOs capable of partnering with the government agencies managing natural resources and ecosystems that households in those communities depend on for their livelihoods. USAID recognized that a strong policy framework was needed to set the rules of co-management and define rights and responsibilities of co-managers and to minimize risk of elite capture and rent seeking. AIGAs were included to offset losses to households whose resource extraction income was curtailed under sustainable management operations and community-based patrolling as more effective disincentives to resource misuse than government policing.

USAID's initial co-management activity, MACH, piloted a two-tiered CMO structure that evolved to meet emerging needs under three subsequent USAID forest co-management activities for 15 years. Co-management organizational development succeeded because USAID's implementing partners worked patiently in meaningful collaboration with the responsible GOB agencies. The USAID activities invested heavily in capacity-building at all stakeholder levels from villager to senior ministry officials. Starting with MACH, NRM activities developed metrics for measuring CMO organizational capacity and performance along with a library of resources tailored to diverse stakeholders and organizations to support their capacity-building strategies.

Learning across activities has been a significant positive element of building co-management institutions. From MACH through CREL, the activities have measured CMO capacity using scorecards and metrics useful for capacity-building planning and adaptive management. The handover from one USAID activity to another helped maintain relationships, avoid attrition of qualified staff, and maintain steady evolution of program strategy. The Nishorgo.org website maintained across three PA co-management activities is a valuable learning asset that includes the majority of important project documents and resource materials from MACH to CREL.

Question 4: Have investments in CBM led to increased direct benefits (such as increased jobs or household income) in the communities? What indirect benefits (such as improved educational opportunities) have accrued? How do community members connect the indirect benefits to the CBM investments?

AIGAs supported by USAID NRM activities have directly improved beneficiaries' livelihoods, increased household income, and improved resource conservation. Notwithstanding, AIGAs have not demonstrated broad conservation impact, nor have they fully compensated for lost income resulting from resource extraction prohibitions. In order of importance, CMO members reported the following indirect benefits from natural resources CBM: improved children's education, improved family health and nutrition, improved natural resources, improved financial literacy and adult education, reduced resource dependency, improved sanitation/hygiene, improved GOB-community relations, and improved participation in decision-making. CMO members clearly articulated the relationship between co-management activities and direct and indirect benefits, including the link between AIGAs and increased income and between increased income and improved children's education and family members' health. Similarly, ECOFISH^{BD} CMO members understood that the short-term fishing ban increased their catch and income in the long run.

Question 5: How might results from this assessment of CBM inform and support Bangladesh's Journey to Self-Reliance (J2SR) and the United States (U.S.) Indo-Pacific Vision? What implications are there via CBM for enhancing the commitment and capacity of the GOB towards improved management of natural resources? How might the CBM model serve to inform and improve the management and resilience of natural resources in the Indo-Pacific region? What role might the private sector play in CBM?

Bangladesh falls below average on USAID's J2SR policy framework in all but two of the 17 J2SR commitment and capacity indicators.³⁰ USAID's NRM activities are closely aligned with the six J2SR metrics: open government, economic gender gap, biodiversity and habitat protection, government effectiveness, civil society and media effectiveness, and poverty rate. USAID NRM activities also support USAID's Indo-Pacific Vision and are particularly compatible with the third objective to improve the management of natural resources. They also correspond well with the Indo-Pacific Vision's focus on strengthening legal frameworks for NRM, fostering private sector engagement on sustainable supply chains, and supporting legal and sustainable forestry and fishing. There is room for innovation in the NRM activities' private sector engagement and in addressing the challenge of engaging private sector resource users, who are among the country's poorest and most vulnerable citizens and who often live in remote locations. Private sector engagement will need to be carefully designed to achieve sustainable and equitable benefits.

RECOMMENDATIONS

Program Continuation

USAID should continue its investment in co-management of PAs, fisheries, and CHT CBM. The proposed Protibesh activity will continue the core PA co-management interventions and can be used strategically to leverage SUFAL to renew PA CMO capacity and find sustainable sources of financing. Renewing support to the United Nations Development Programme (UNDP)

³⁰ <https://selfreliance.usaid.gov/country/bangladesh>

CHTWCA activity should include expanded co-management activities, policy engagement, and biodiversity corridors. Renewing the ECOFISH^{BD} activity should focus on securing Department of Fisheries buy-in to the proposed hilsa fishery CMO framework as well as meaningful coordination with the World Bank coastal fisheries program. USAID should also explore a modest grant to the Arannayk Foundation to support innovative, local approaches to CBM, which also contributes to the J2SR goal.

CMO Policy and Capacity-Building

The PA Rules are currently being challenged by BFD divisional forest officers because of an interpretation of the rules as a risk to their financial liability. This is an urgent priority for USAID engagement with the BFD as it could result in CMCs' loss of control over PA co-management budgets, undermining the core balance-of-power principle of co-management developed jointly by USAID and BFD. Other priorities include BFD capacity-building in support of PA Management Rules and finalizing the PA co-management guidelines currently with the BFD. USAID's Protibesh should commission a more comprehensive assessment of all CMO operations and capacity to determine exactly how various categories of CMOs fared in the absence of external support, why they did or did not do well, and what would ensure success and sustainability in the future.

Bangladesh Forest Department

The SUFAL project provides a strategic opportunity for USAID to support PA CMOs. As part of SUFAL, the BFD plans to establish a CMEC charged with preparing an annual development plan for PA biodiversity conservation and sustainable AIGAs. The CMEC has not been established as of November 2019.³¹ USAID should help the BFD to establish the CMEC and then engage with the CMEC prior to the Protibesh award to ensure USAID-supported PA co-management experience and best practice is applied to PA co-management nationwide. Engagement with the BFD should include discussion of the PA policy with the goal of clearly establishing BFD's willingness to share control with resource users. In addition, USAID should encourage the BFD to create a Deputy Chief Conservator of Forests position to serve as a champion for PA co-management, and support renewal of the Nishorgo Network, including a secretariat in BFD offices. USAID also should use the Community Partnerships to Strengthen Sustainable Development (COMPASS) activity to support the BFD's Resource Information Management System (RIMS).

Alternative Income Generating Activities

USAID should expect Protibesh, CHTWCA, ECOFISH^{BD}, and other NRM activities it supports to conduct assessments of AIGA conditions and needs. These assessments and intervention designs should draw on best practices from livelihood diversification activities from Feed the Future and other USAID/Bangladesh program areas as well as past natural resources co-management experience. AIGA strategies should identify which resource users are the most destructive, ascertain their incentives and capacities, and define AIGA interventions that can offer them a sustainable livelihood. AIGAs for villagers that are less profitable or serve women's needs should be continued as an entry point to engagement with communities and for the inherent benefits to women and their families.

³¹ Communication with senior BFD official, November 21, 2019.

I.0 ASSESSMENT OBJECTIVE & METHODOLOGY

I.1 ASSESSMENT OBJECTIVE

The purpose of the United States Agency for International Development (USAID) natural resource management (NRM) sector assessment is to assess conservation interventions that have engaged local communities in the management of natural resources, especially in and around protected areas (PAs), the forests of the Chattogram Hill Tracts (CHT), and water bodies. The assessment provides evidence documenting the current status of community-based co-management (CBM) approaches. It further assesses whether conservation interventions by USAID/Bangladesh have resulted in the institutionalization of co-management approaches, the extent that alternative income generation activities (AIGAs) have helped to conserve natural resources, and whether co-management models have remained functional. The study also assesses NRM initiatives by other donors, to the extent possible. This assessment supports the USAID Journey to Self-Reliance's (J2SR) Plan to Supplement Roadmaps with additional data and deeper analysis and identifies points of strategic convergence among country needs, USAID's capabilities and comparative advantages, and United States (U.S.) policy imperatives.

I.1.1 Assessment Questions

The NRM sector assessment sought to answer the following five principal assessment questions and 11 sub-questions.

1. Current Status of CBM – What is the current status of CBM in the NRM sector in Bangladesh? (A) To what extent has the co-management model been functional in the NRM sector? (B) What are the strengths, weaknesses, opportunities, and threats (SWOT) facing CBM?
2. Enabling Environment Policies: Effectiveness and Sustainability – How effective have PA policies been for creating an enabling environment for CBM? (A) What gaps or weaknesses are present in existing policies that need to be addressed to improve CBM effectiveness? (B) What more needs to be done to increase the sustainability of progress made to date?
3. Environmental Governance: Capacities and Structures – How have USAID investments (and those of other donors, to the extent possible) contributed to the development of overall environmental governance in the country? (A) How have these investments contributed to building stakeholder and institutional capacity for effective PA co-management? (B) In what ways have these development interventions incorporated learning to strengthen local governance structures for NRM?
4. Direct and Indirect Benefits for Communities – (A) Have investments in CBM led to increased direct benefits (such as increased jobs or household income) in the communities? (B1) What indirect benefits (such as improved educational opportunities) have accrued? (B2) How do community members connect the indirect benefits to the CBM investments?

5. Relevance to J2SR and Indo-Pacific Vision – How might results from this assessment of CBM inform and support Bangladesh’s J2SR and the U.S. Indo-Pacific Vision? (A) What implications are there via CBM for enhancing the commitment and capacity of the Government of Bangladesh (GOB) towards improved management of natural resources? (B) How might the CBM model serve to inform and improve the management and resilience of natural resources in the Indo-Pacific region? (C) What role might the private sector play in CBM?

1.1.2 Audience and Intended Use

The primary audience for the assessment is USAID/Bangladesh, which will use the assessment results to provide recommendations for its current NRM projects and to inform the design and implementation of future projects in the NRM sector. USAID also may disseminate the report widely to stakeholders, such as implementing partners, GOB agencies, other sector-specific donors, non-governmental organizations (NGOs), and the USAID Development Experience Clearinghouse (DEC).

1.2 ASSESSMENT METHODOLOGY

A three-person assessment team and support staff conducted the NRM assessment, using a mixed-methods approach with qualitative and quantitative data gathering and analysis. The assessment was conducted over a ten-week period beginning with a home-based desk review in late July 2019, fieldwork in August-September, and a presentation of preliminary findings and conclusions to USAID on September 18, 2019.

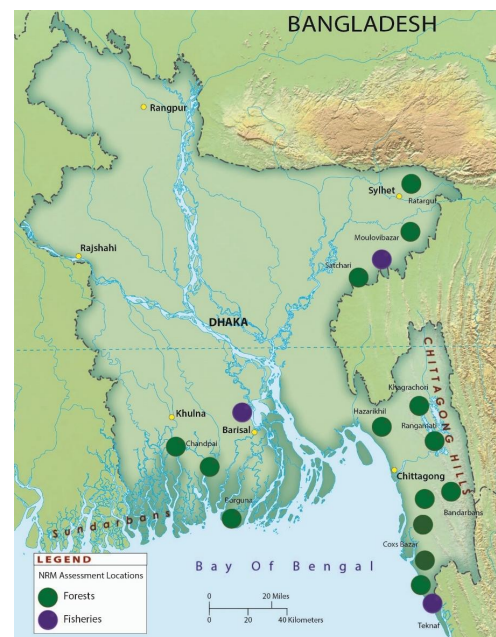
The assessment methodology is summarized in the workplan and data collection matrix in Annex 3, which links each assessment question to specific data collection approaches and data sources. The methodology included four sequential and interrelated processes designed to enable the assessment team to address each assessment question: 1) desk review; 2) consultation with USAID and a wide range of stakeholders through key informant interviews (KIs) in Dhaka and KIs, focus group discussions (FGDs), and a mini-survey in NRM sites in four divisions; 3) analysis of collected information and data; and 4) articulation of findings and recommendations.

1.2.1 Data Collection Methods

Document Review

The assessment team began its work with a desk review of existing information sources. Relevant sources included co-management activity documentation and reports, USAID program documentation, GOB documents, general technical and peer-reviewed background documents, and documents related to other donor projects in the NRM sector. A list of documents received from USAID or other sources and consulted for the assessment is included in Annex II.

Figure I: Data Collection Locations



Sampling Approach

The assessment team visited a purposively selected sample of 17 co-management intervention sites in the Barishal, Chattogram, Khulna, and Sylhet divisions, including three sites in the CHT (see Figure 1 and Annex 4). In each location, the assessment team identified the PAs or other resource area where USAID has supported NRM programming.³² The team took into consideration the following criteria to determine the sites to visit: a) ecotype (forest, wetland, or coastal fishery); b) coverage of all or most USAID-funded NRM sector activities; c) geographic accessibility within the time constraints; and d) presence of other donor-funded active NRM projects, to the extent possible.

Stakeholder Consultations

The team conducted a total of 51 KIIs and 37 FGDs (see Table 1) with 444 stakeholders, including 171 women and 273 men, in Dhaka and four divisions of Bangladesh. Additionally, the team conducted a short survey with 237 FGD participants, including 109 women and 128 men.

Table 1: Number of KIIs and FGDs by Institution

KIIs		FGDs	
Implementing Partners	16	Co-Management Committees (CMCs)	11
Forest Department	14	Village Conservation Forums (VCFs)	8
Forest Stakeholders	12	Community Savings Groups (CSGs) and Village Savings Groups (VSGs)	5
Fisheries Stakeholders	4	Fisheries Management Committees (FMCs), Hilsa Conservation Groups (HCGs), and RMOs	4
USAID	3	Community Patrol Groups (CPGs), RMOs, and Village Tiger Response Team (VTRT)	4
Department of Fisheries (DOF)	2	Village Common Forest (VCF-CHT) Management Committees and community-based organizations (CBOs)	5
Total	51	Total	37

Key Informant Interviews

The assessment team conducted 51 KIIs with 92 participants (five women and 87 men) with knowledge and experience of co-management activities and approaches, including USAID personnel; GOB officials at the national, divisional, and local levels; individuals working now or in the past with relevant USAID implementing partners; other donors and their partners; NGOs; and academic and research institutions. The team used a semi-structured questionnaire (see Annex 7), which was approved by USAID as part of the assessment work plan.

³² Some of the Climate-Resilience Ecosystem and Livelihoods Project (CREL) sites dated back to Management of Aquatic Ecosystems Through Community Husbandry Project (MACH) and Nishorgo Support Project (NSP). Their current status reflects many years of support under multiple co-management activities. The team conducted FGD and KIIs at 11 sites supported by CREL and earlier forest PA activities as they represented \$56 million (59 percent) of the \$94 million program total. The other five sites included three in the CHT for Chittagong Hill Tracts Watershed Co-Management Activity (CHTWCA) and Arannayk Foundation, two for Enhanced Coastal Fisheries in Bangladesh Project (ECOFISH^{BD}) and one for Bengal Tiger Conservation Activity (Bagh). The assessment team also visited one former CREL site that is currently supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Sundarbans Management Project II (SMP).

Focus Group Discussions

The assessment team conducted 37 FGDs with 352 participants (166 women and 186 men), including members of NRM co-management organizations (CMOs) and other beneficiary groups supported by USAID and other donors. Participants were gathered by community leaders and/or organizations working in the selected locations. The team used pre-approved FGD questionnaires (see Annex 8) and followed best-practice protocols, including assignment of a moderator and a note-taker. A local language interpreter supported the team in the CHT.

Mini-Survey

In 36 of the 37 FGDs, the Bangladeshi members of the assessment team conducted a short non-probability sampling survey of FGD participants (see Annex 9). The survey data were used to triangulate information gathered through other methods and to add texture to the analysis.

1.2.2 Data Analysis

The assessment team used qualitative data analysis to analyze desk review, KII, and FGD data and quantitative data analysis for the mini-survey data. Where relevant, key findings were compared across regions, the type of PA or ecotype, and population sub-groups.

Qualitative Data Analysis

The assessment team used content analysis to analyze qualitative data. Data were coded according to themes and sub-themes within the assessment questions and other sub-themes that were revealed through the data collection process. The data analysis flowed from this coding and the frequency of answers from all interlocutors. The assessment team documented narrative responses at a sufficient level of detail to permit a systematic content analysis of these qualitative data. The team held debriefings (in-person or remotely) at the end of each data collection week during which they identified common themes for developing an inductive coding framework.

Quantitative Data Analysis

The assessment team tabulated frequencies and percentages from the mini-survey data, disaggregating them by relevant variables. No statistical significance test or inferential analysis was performed because the sample was not selected using any probabilistic technique. However, frequencies were triangulated with qualitative data collected through KIIs and FGDs to ensure the validity of findings.

1.2.3 Methodological Strengths and Limitations

Strengths

The use of various data sources enabled the assessment team to triangulate information before identifying findings, drawing conclusions, and formulating recommendations. The selection of data analysis methods allowed triangulation among researchers, methods, and data, which further enhanced the reliability and validity of the evidence-based findings.

Limitations

The assessment team faced several important methodological limitations. First, most of the relevant USAID-funded NRM activities have been completed. Therefore, the availability of desired participants was unpredictable and selection of co-management groups and FGD participants was dependent on local partners and personal contacts. This constitutes a potentially significant

limitation of the data collected since individuals who were either not invited or chose not to participate in discussions might have quite different views.

Second, the limited time available for the assessment constrained the team's ability to reach relatively isolated communities, thereby limiting the breadth and depth of data that could be collected. The limited time available also meant that the assessment team was not able to meet in Dhaka with representatives of the Ministry of Environment, Forestry, and Climate Change (MOEFCC), Ministry of Land (MOL), Ministry of Chittagong Hill Tracts Affairs, Ministry of Fisheries and Livestock (MOFL), or the Department of Environment. However, the team reviewed relevant policies and secondary sources, including those listed in Annex 11.

Third, almost all potential participants have some kind of vested interest to minimize or maximize phenomena relevant to the study. Bias from vested interests, however, is assumed not to be systematic, thus not affecting the analysis. Fourth, social desirability bias might have encouraged respondents to answer questions to conform with what they perceived as acceptable. The use of different data collection methodologies from different sources and data triangulation is expected to have mitigated of these limitations

2.0 BACKGROUND

2.1 USAID HISTORY OF SUPPORT IN THE NRM SECTOR

A full understanding of the current status of the CBM of natural resources in Bangladesh requires a review of the history of USAID's support to the sector over the past 21 years. As shown in Table 2, USAID's co-management program began in earnest in 1998 with the Management of Aquatic Ecosystem through Community Husbandry (MACH) project, a fisheries co-management project supporting the DOF and the MOL to institute CBM of *jalmahals*, which are seasonal wetlands in the northeast of the country. Buoyed by the success of the MACH project and recognizing the importance of upland watersheds to *beel* sustainability, USAID launched the Nishorgo Support Project (NSP) in 2003 to support co-management of five forest PAs. Both MACH and NSP included AIGAs to offset benefits foregone under reductions in resource extraction under co-management interventions. AIGAs continued to be a strong component of all USAID-supported co-management activities through the present.

NSP and MACH were succeeded by the Integrated Protected Area Co-Management (IPAC) activity, applying an integrated upland/wetland landscape management strategy. IPAC worked with 55 CMOs, including 23 forest CMCs, 17 wetland RMOs, and 15 Union Co-Management Committees (UCCs) based in Ecologically Critical Areas (ECAs). Of 34 declared forest PAs in the country, IPAC supported CMCs in 17 of these areas.³³

Climate Resilient Ecosystems and Livelihoods (CREL) is the most recent, but now-completed, USAID-funded co-management activity. CREL worked with 45 forest and wetland CMOs, including CMCs, RMOs, and Village Conservation Groups (VCGs), adding one new PA and four CMCs.³⁴ As part of its extensive CMO capacity-building interventions, CREL helped CMOs to develop long-term action plans and annual development plans. CREL also assisted the Bangladesh Forest Department (BFD) to develop 13 PA management plans and wetland management plans

³³ IPAC Assessment of Co-Management Organizations (March 25, 2013).

³⁴ CREL Final Performance Report (November 2018).

for two northeastern *beels*. CREL also substantially expanded and strengthened AIGAs for resource-dependent villagers, training over 60,000 unique households.

In addition to the MACH-through-CREL projects, USAID has supported several other CBM activities. The ongoing Chittagong Hill Tracts Watershed Co-management Activity (CHTWCA), implemented by United Nations Development Programme (UNDP), is supporting registration and management of 117 traditional community-managed tribal forests known as Village Common Forests (usually abbreviated as VCFs, but in this report abbreviated as VCFs-CHT to distinguish them from Village Conservation Forums, which are abbreviated as VCFs). This activity is also supporting the BFD with co-managed assisted natural forest regeneration on forest reserve lands.

The Enhanced Coastal Fisheries in Bangladesh Project (ECOFISH^{BD}) activity, implemented by the international research center WorldFish, began in 2014 and is scheduled to be complete by December 2019, introduced ecosystem-based fisheries management to the estuary and coastal hilsa fisheries in the Ganges and Meghna river deltas in the south. Hilsa, the national fish of Bangladesh, is highly appreciated by people throughout the country. ECOFISH^{BD} is improving the scientific basis of hilsa fisheries. ECOFISH^{BD} stock surveys and biological studies resulted in tightening of the management rules, increasing the ban periods for hilsa fishing and juvenile hilsa catch below a certain size (called *jatka*) in hilsa sanctuaries. To help with fisheries management the activity has proposed and begun implementing a co-management structure with eight nested CMOs. To offset the hardship to highly vulnerable fishing households caused by the bans and other fishing restrictions ECOFISH^{BD} introduced a livelihoods diversification activity. ECOFISH^{BD} also is drafting a revision to the 2002 Hilsa Fisheries Management Action Plan.³⁵

USAID funded a national NGO, WildTeam,³⁶ to implement the Bengal Tiger Conservation Activity (Bagh, which means tiger in Bengali language). Bagh piloted the Spatial Monitoring and Reporting Tool (SMART) technology-enabled approach to patrolling and wildlife protection in the Sundarbans mangrove forest reserve. Bagh's strategy focused on research and protection. It was not a co-management activity and only in a limited way can be considered a CBM activity. Although the assessment team visited one Bagh group and conducted a KII with the Bagh team, this activity it is not fully considered in this assessment.

The Arannayk Foundation³⁷ was initiated in 2003 under a U.S. Tropical Forest Conservation Act "debt for nature swap."³⁸ The funds were overseen by the United States Department of Agriculture (USDA), and Arannayk Foundation used these funds to establish a small grants program to support local NGOs and CBOs to conduct small scale conservation and AIGAs, occasionally using PA co-management. As a nationwide small grant-making entity, Arannayk Foundation was different than other USAID NRM activities and did not have consolidated monitoring and evaluation (M&E) plans or targets to make its data comparable to that of other USAID activities. However, Arannayk Foundation did pilot some interesting approaches for the co-management sector.

³⁵ WorldFish. 2014. Enhanced Coastal Fisheries (ECOFISH^{BD}) Activity Program Description.

³⁶ <http://wild-team.org/>.

³⁷ <http://www.arannayk.org/>.

³⁸ <https://www.usaid.gov/biodiversity/TFCA>.

Table 2: Summary of USAID-Funded NRM Sector Activities³⁹

Activity Acronym	Full Activity Title	Major Activities	Funds Disbursed
MACH I	Management of Aquatic Ecosystem through Community Husbandry	Focused on fisheries co-management of beels, ⁴⁰ introduced AIGAs established VSGs.	\$6,089,681
MACH II	Management of Aquatic Ecosystem through Community Husbandry II	Solidified CMO governance and VSG and AIGA focus on sustainability, and introduced CMO networks.	\$3,099,433
NSP	Nishorgo Support Project	Established forest co-management in five protected areas, including a GOB gazetted ⁴¹ CMO structure, built BFD capacity to support PA co-management, and developed AIGAs and VSGs.	\$7,159,739
IPAC	Integrated Protected Areas Co-Management	Expanded co-management to 25 forest PAs in five geographic clusters, conducted capacity building, incorporated MACH sites, and expanded AIGAs.	\$12,614,212
CREL	Climate-Resilient Ecosystems and Livelihoods	Strengthened/expanded to include 45 fisheries and forest CMOs, promoted policy development, increased AIGAs, and expanded stakeholder capacity-building.	\$36,013,589
CHTWCA	Chattogram Hill Tracts Watershed Co-Management Activity	Supported 117 VCFs for sustainable management by involving local community and promoted sustainable land use practices for resilient ecosystems and livelihoods in the CHT.	\$6,567,310
ECOFISH ^{BD}	Enhanced Coastal Fisheries in Bangladesh Activity	Promoted science-based hilsa ⁴² fisheries co-management, improved livelihood resilience, and supported policymaking for coastal resource management.	\$12,479,933
Bagh	Bengal Tiger Conservation Activity	Improved tiger survey, introduced SMART patrolling, raised tiger conservation awareness, reduced tiger/human conflict, and supported village tiger response teams.	\$10,009,634
Total USAID Funds			\$94,033,531
AF	Bangladesh Tropical Forests Conservation Foundation (USDA local currency funds)	Provided small grants to national NGOs and CBOs, conducted CBM on private lands in CHT, and supported CMOs.	\$8,500,000
Total United States Government (USG) Funds			\$102,533,531

³⁹ For the full table, including start and end dates for each activity, please see Annex 2.

⁴⁰ A beel is a “large surface waterbody that accumulates surface runoff water through internal drainage channels; these depressions are mostly topographic lows produced by erosions and are seen all over Bangladesh.” <http://en.banglapedia.org/index.php?title=Beel>.

⁴¹ Announced or published. <https://en.wikipedia.org/wiki/Gazette>.

⁴² Hilsa is fish species *tenualosa ilisha*. <https://en.wikipedia.org/wiki/Ilish>.

2.2 EVOLUTION OF THE USAID NRM SECTOR THEORY OF CHANGE

Table 3 shows a summary of the results frameworks (RFs) of the core seven USAID NRM activities from MACH through CHTWCA (see Annex 10 for additional RF details). The summary table attempts to capture the essence of the activities' RFs. Salient points include the following:

- There is a distinct progression of objectives from improved NRM in the early activities to improved NRM plus biodiversity conservation in later activities to climate and ecosystem resilience in the most recent activities. Notably, with the exception of ECOFISH^{BD}, none of the activities' objectives directly mention human welfare, focusing instead on environmental goals, but human well-being is a common intended result.
- There is a marked commonality among the intermediate results (IRs) with variants of improved NRM IRs found in all activities. IRs for improved stakeholder capacity, improved policy/governance, and alternate income generation/improved livelihoods all occur in four of seven (57 percent) of the activities.
- Variants of improved livelihoods/AIGAs and improved CBM are explicit in three of seven activities (42 percent). The same percentage identifies a climate adaptation/ resilience IR and another includes resilience as a modifier of the IR (e.g., climate resilient NRM). Resilience is identified as both an objective and an IR in three of the latter activities.
- The RFs' commonalities across two decades and \$94 million of activities lend themselves to a theory of change for the USAID Bangladesh NRM sector, presented in Text Box 1.
- There are several trends with regards to the IRs: 1) development of CBM mechanisms are only explicit in the early activities for a given ecotype (MACH II, NSP, ECOFISH^{BD}), 2) climate resilience IRs became prevalent in the latter half of the activities, while 3) awareness-raising was explicit only in two early activities.
- The absence of an explicit IR in an activity does not imply that there were no interventions related to that result. For example, all USAID NRM sector activities since MACH have included substantial AIGAs even though some activities do not include AIGAs in an IR.

Text Box 1: Summarized NRM Theory of Change

If sustainable NRM practices are identified and adopted, and
 If stakeholders have capacity to organize and effectively manage their institutions/organizations, and
 If national and local policies supportive of sustainable NRM are developed and implemented,
 If meaningful income generation alternatives are available to replace income from unsustainable natural resource extraction, and
 If sustainable sources of conservation financing are secured,
 Then there will be more sustainable and resilient ecosystems and communities.

Table 3: Summary of USAID NRM Sector Results Framework

Project	Objective	Intermediate Results						
MACH I	Improved NRM	NRM	.	AIGAs	.	.	.	Public awareness
MACH II	Improved NRM	NRM	Improved policy	.	Institutional capacity	Enhanced CBM	.	Public awareness

Project	Objective	Intermediate Results						
NSP	Improved NRM	NRM	Improved policy	AIGAs	Institutional capacity	Enhanced CBM	.	Infrastructure development
IPAC	Improved NRM and biodiversity conservation	NRM	Improved policy	.	Stakeholder capacity	.	Climate change adaptation	.
CREL	Climate resilience and biodiversity conservation	NRM	Improved governance	AIGAs	Stakeholder capacity	.	Climate change adaptation	.
CHTWCA	Climate and ecosystem resilience	NRM	.	Improved livelihoods
ECOFISH ^{BD}	Ecosystem and community resilience	NRM	Improved policy	Diversified livelihoods	.	.	Socio-ecological resilience	Improved science

3.0 FINDINGS & CONCLUSIONS

Findings and conclusions are presented according to each of the five assessment questions and 11 sub-questions: 1) Status of CBM: Functionality and SWOT; 2) Enabling Environment Policies: Effectiveness and Sustainability; 3) Environmental Governance: Capacities and Structures; 4) Direct and Indirect Benefits for Communities; and 5) Relevance to J2SR and Indo-Pacific Vision.

3.1 WHAT IS THE CURRENT STATUS OF CBM IN THE NRM SECTOR IN BANGLADESH?

Currently there are two ongoing USAID-funded co-management activities, namely CHTWCA and ECOFISH^{BD}, both of which will end in the fall of 2019, although both are in discussions for cost extensions as of September 2019. The flagship USAID-funded co-management activity, CREL, ended on September 1, 2018. The Arannayk Foundation interventions are funded by USDA and other donors, although USAID does sit on Arannayk Foundation’s board of directors. Arannayk Foundation activities will continue without USAID funding, although they might be considered for USAID support. In addition, USAID has announced its intention to release a Request for Proposals for a five-year, up to \$20 million activity called Protibesh that would renew support for co-management activities in the northeast and the Sundarbans as well as national policy and institutional capacity-building. Under the Local Works Activity, USAID has also begun the process of awarding up to \$6 million to up to three national NGOs to support NRM in areas of the southeast affected by the influx of Rohingya refugees. These activities, and potentially others in the USAID pipeline, will likely cover several former CREL sites.

3.1.1 To what extent has the co-management model been functional in the NRM sector?

FGD respondents were asked questions about the functioning of their CMOs. Some of the key results are presented in Table 4.

Table 4: CMO Functionality

Type of CMO	Regular Meetings	Bank Account	Revenue Source
CMCs (11)	91%	100%	100%
VCFs (8)	63%	38%	0%
CHT CMOs (5)	80%	40%	40%
ECOFISH ^{BD} CMOs (4)	50%	25%	25%

Further analysis of the results in Table 4 yields the following findings:

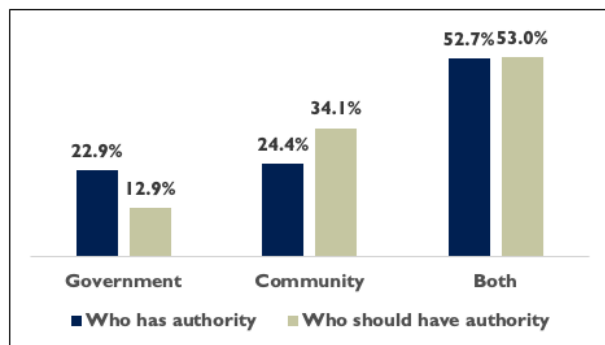
- All but one of the 11 CMCs visited are meeting regularly 15 months after completion of CREL support. They had all set up bank accounts under CREL, funded with a CREL subgrant, and were all conducting ongoing funding replenishment derived from interest on their bank accounts and other revenue sources, such as small shops and restaurants, revolving loan interest, rental of auto rickshaws, etc. Two of the older CMCs the assessment team met were on track to receive Fiscal Year 2020 ecotourism revenue sharing funds (despite the reported BFD pause in revenue sharing discussed below). CMCs reported that they are using their funds to support meeting expenses, including travel and food subsidies, maintain ecotourism facilities, and, in some PAs, to make payments for community patrol guards.
- Although the CMCs are continuing to meet and support some functions, the assessment team frequently heard from CMC members and other key informants that the level of CMC operations was lower than it had been with CREL support. This was confirmed by the VCF informants who indicated that they were not receiving support to their livelihoods and other activities. Also, some CMCs indicated that the CPGs were no longer being paid their honoraria. There is little interest among BFD officers to support the VCFs or to encourage the CMCs, especially with their limited resources, as was the intent of the IPAC-instituted VCF-Peoples Forum-CMC structure.
- Forest PA VCFs are less active than CMCs, but the majority (63 percent) report they are still meeting. None of the VCFs have sustainable revenue sources, and without this they are supporting few activities. One primary VCF function is to serve as a focal point for livelihood support; however, without CREL or another external source of livelihood technical and financial resources, this VCF function is waning.
- According to Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) representatives, Sundarbans Mangrove Forest Project (SMP) staff conducted an extensive situation analysis and found several substantial weaknesses in VCF governance and operations among 37 VCFs in the Sundarbans' Chandpai range that had been supported by CREL. Findings included top-down decision-making, weak participatory processes, exclusion of large segments of the forest resource user population, lack of formal BFD recognition of VCFs, and a perception of the VCFs as primarily focal points for livelihoods inventions.
- A major role of the VCFs is to provide community representatives and input to the CMCs and annual CMC development plans via the Peoples Forums, bring complaints and disputes forward, and otherwise participate in the CMC functions. The CMCs and VCFs interviewed reported that the Peoples Forums had not been meeting.

- Not surprisingly, given the ongoing external support, the CHT CMOs (both CHTWCA and Arannayk Foundation groups) are meeting, with the exception of one VCF-CHT Management Committee that has been inactive since CHTWCA support ended. The CHTWCA does not provide grants to VCF-CHT Management Committees, but Arannayk Foundation does.
- Of the four ECOFISH^{BD} CMOs visited, the two FMCs were continuing to meet with ECOFISH^{BD} support, but the VCGs were not meeting regularly and had a weak understanding of why they existed or what they were supposed to do. One FMC had a bank account in the name of its VSG funded in part by ECOFISH^{BD} matching funds once the group’s own savings had reached a minimum level. The CMOs do not have other revenue sources similar to PA CMCs.

The mini-surveys asked whether respondents thought that co-management of the PA or other type of site was functioning successfully. All respondents felt that co-management was working very successfully (54.5 percent) or somewhat successfully (44.7 percent).

Notwithstanding this common perception of success, mini-survey respondents said they needed additional knowledge and skills in order to make a better contribution to the co-management of natural resources. Respondents cited the need for additional training in forest or fisheries management (25.6 percent), and group management or co-management skills (22 percent). Those seeking more assistance in forest or fisheries management mentioned in particular the need for more knowledge about climate change or biodiversity, while those seeking more assistance in management skills mentioned in particular accounting, conflict resolution, and committee management skills.

Figure 2: Who Has Authority Over PAs vs. Who Should Have Authority?



In addition, half of mini-survey respondents (52.7 percent) said that both government and communities currently have joint authority over PAs and other natural resources in their local area, and the same proportion of respondents (53.0 percent) said that this joint authority is appropriate. One-tenth of mini-survey respondents indicated that government should have less authority, and communities should have more (see Figure 2).

3.1.2 What are the strengths, weaknesses, opportunities, and threats (SWOT) facing CBM?

During FGDs with PA and ECOFISH^{BD} CMOs, the assessment team asked members several questions related to the SWOT of the CMOs’ work and sustainability (see Table 5). They were not prompted with SWOT suggestions, and the groups developed their own lists of SWOTs. Summary findings include the following:

Strengths

- Without exception, the CMOs and CBOs stated that women participated at high levels. The team observed several examples of female community patrol and savings group members as well as female CMC leadership.
- Habitat improvement ranked high as an outcome of the CMOs' work. They could see or at least perceive qualitative improvement in their local environment.
- Government participation was ranked high by about half of the PA CMOs; a somewhat smaller number of PA CMOs rated lack of government participation as a weakness.

Weaknesses

- Lack of government participation was identified by Arannayk Foundation, PA, and CHT CMOs as a problem. This finding does not apply to CHTWCA CMOs, as they are integrated into traditional tribal governance, and GOB participation is not sought. Three of four ECOFISH^{BD} CMOs also identified the lack of government support as a weakness.
- Lack of revenue sources to support CMOs' activities was commonly identified as a weakness, especially by PA VCFs and ECOFISH^{BD} groups.
- ECOFISH^{BD} VCGs identified the lack of market access as a weakness, reflecting their low level on the fish value chain.
- VCG members participating in the FGDs did not understand the purpose of their group. They met because an ECOFISH^{BD} extension agent called the meeting. Not surprisingly, attendance was weak.
- In an FGD with one ECOFISH^{BD} CSG, members indicated they were planning to withdraw their funds from the bank account because the project was ending.

Opportunities

- PA VCFs that benefited from CREL saw renewal of CREL-type support as a priority opportunity (although this desire may also suggest a lack of sustainability of VCFs).
- Two of three CHTWCA CMOs identified registration of their VCFs-CHT as an opportunity.
- Livelihood/AIGA skills development was a frequently mentioned opportunity by VCFs and CHT groups. It is not clear why the two ECOFISH^{BD} HCGs who do receive AIGA support did not identify that as an opportunity. CMCs do not receive this type of training.

Threats

- Resource conflicts with non-group members were the most common threat identified, particularly for ECOFISH^{BD} groups, reflecting the open resource nature of the fishery.
- Two VCFs located near Rohingya refugee camps reported political unrest and these two and a third elsewhere also reported ongoing illicit resource extraction.

Table 5: CMO SWOT Responses

SWOT	CMCs (11)	VCFs (8)	CHT CMOs (5)	ECOFISH ^{BD} CMOs (4)
Strengths				
Gender inclusion	100%	100%	100%	100%
Awareness building	73%	0%	40%	0%
Habitat improvement	64%	63 %	40%	100%

SWOT	CMCs (11)	VCFs (8)	CHT CMOs (5)	ECOFISH ^{BD} CMOs (4)
GOB participation	55%	50%	0%	0%
Weaknesses				
Lack of GOB participation	36%	38%	40%	75%
Revenue sources	27%	50%	20%	75%
Poor member attendance	27 %	0%	0%	0%
Lack of market access	0%	0%	0%	50%
Opportunities				
Tourism revenue	18%	0%	0%	0%
Skill development	0%	38%	40%	0%
Renew project support	0%	60%	0%	0%
VCF registration	0%	0%	40%	0%
Infrastructure development	0%	0%	0%	25%
Threats				
Conflict with outsiders	45%	13%	20%	75%
Illicit resource extraction	0%	38%	0%	0%
Political unrest	0%	25%	0%	0%

Table 6 provides the assessment team’s summary of CMO/CBO SWOT for PA co-management, CHTWCA, and ECOFISH^{BD} activities.

Table 6: Assessment Team View of CMO/CBO SWOT

Strengths	Weaknesses	Opportunities	Threats
PA Co-Management CMOs			
<ul style="list-style-type: none"> PA Management Rules 2017 Strong community acceptance of co-management strategy and appreciation of interventions Strong CMC commitment to and capacity for PA co-management Active CPGs for forest protection Awareness of forest degradation issues 	<ul style="list-style-type: none"> Weak commitment to and institutionalization of co-management at BFD Dhaka Absence of PA Rules operations guidelines Weak understanding of and capacity to support co-management among BFD staff at all levels Weak links among BFD, CMCs, and VCFs Limited livelihood opportunities in remote forest areas 	<ul style="list-style-type: none"> Scope for revenue sharing with co-management for strengthening forest protection and management Leveraging World Bank funding for strengthening co-management policy, strategy, and finance CMC enthusiasm for collaboration with BFD, including national CMO coordinating body 	<ul style="list-style-type: none"> BFD’s traditional forest management approach Failure to implement PA Rules revenue sharing Co-management still mostly depends on development projects Use of political and co-management power for deforestation and forest degradation Lack of commitment from high levels of BFD
VCF-CHT CBOs			
<ul style="list-style-type: none"> Traditional management practice deeply ingrained in tribal culture and village governance Effective at protecting forest and biodiversity resources and providing ecosystem services 	<ul style="list-style-type: none"> VCFs are not recognized by GOB Absence of documented and widely accepted best practices to manage VCFs Project-based initiative with minimal connection with BFD Limited area covered by VCFs-CHT compared to 	<ul style="list-style-type: none"> Scope for increased number, expanded coverage area, and strengthened capacity of VCF CBOs Scope for improved forest management and biodiversity conservation Potential for collaborative management of forest 	<ul style="list-style-type: none"> Mistrust between GOB and CHT tribal people Legal disputes between GOB and Tribal Council

Strengths	Weaknesses	Opportunities	Threats
	large areas of degraded forest	reserves by BDF and tribal communities • Legal basis for VCF-CHT and tribal governance of resources exists	
ECOFISH^{BD} Hilsa Fishery CMOs			
<ul style="list-style-type: none"> • Increased hilsa catch in 2017/2018 • Increased awareness among fishermen about hilsa fish management rationale and requirements • Draft guidelines for various hilsa fishery CMOs based on field experience 	<ul style="list-style-type: none"> • Livelihoods program not well developed • Hilsa fisheries co-management not adopted by DOF and may not be consistent with DOF plans • Weak community-level implementation, poor community buy-in, and weak field monitoring by ECOFISH^{BD} staff • Limited DOF participation in field activities • Lack of knowledge and capacity of ECOFISH^{BD} staff to implement co-management activities • Delay in updating Hilsa Fisheries Management Action Plan 	<ul style="list-style-type: none"> • Integration and coordination with the World Bank's Bangladesh Sustainable Coastal and Marine Fisheries Project (BSCMFP) with need to cover more areas under fisheries co-management • Hilsa value chain is strong and could be an avenue for private sector engagement in sustainable fishery co-management 	<ul style="list-style-type: none"> • ECOFISH^{BD} CMOs will not be sustained without external technical assistance and financing • Failure of fishing ban relief may result in widespread household hardship and/or illicit fishing

3.1.3 Conclusions: CBM Functionality and SWOT Analysis

CBM of natural resources is widely accepted as an appropriate model for management of forest PAs, non-reserve forests in the CHT, and fisheries resources in both *jalmahals* in the northeast and the estuarine hilsa fisheries in the south. CMCs continue to meet and conduct certain functions reasonably well more than a year after the completion of field work under CREL. CMC functions most often cited as continuing include income generating activities that profit the CMC directly and community patrolling. However, the level of other CMC duties—such as supporting VCF AIGAs and representative inclusion of forest-dependent households in PA management—are not functioning well, if at all.

While the majority of VCFs reported that they are continuing to meet, they are not performing many of their standard functions, including participation in co-management planning and support to PA forest management activities. These gaps can be attributed to the lack of funding support to VCFs; BFD's assumption of control of CPGs and attitude that VCFs are mostly about livelihood activities, and the absence of PA Management Guidelines that would help instruct BFD PA officers and provide a basis to hold them accountable for VCF functioning.

In the CHT, VCF-CHT Management Committees are functioning well with CHTWCA support in preparing and implementing VCF-CHT forest management plans and livelihood activities. However, the management committees lack independent sources of funds that will be needed to sustain them in the absence of external assistance. The ECOFISH^{BD} CMOs are relatively new and

have not had sufficient time and external support to become securely established. The CMO structure, which includes eight different types of fisheries CMOs, is still in draft form and has not been used by the DOF beyond ECOFISH^{BD} supported sites. Given the DOF's severe field staff shortage, the complex ECOFISH^{BD} CMO structure proposal seems like too much too soon.

Highlights of the SWOT analysis for PA co-management CMOs include strengths of community acceptance of co-management strategy and appreciation of interventions, as well as CMC commitment to and capacity for PA co-management. Weaknesses relate to BFD's capacity for, commitment to and institutionalization of co-management as well as limited livelihoods opportunities in remote forest areas. Opportunities include the potential for leveraging the Sustainable Forests and Livelihoods (SUFAL) project for strengthening co-management policy, strategy and finance, as well as capitalizing on CMC enthusiasm for collaboration with BFD. Threats include the BFD's traditional command-and-control mind set and failure to implement the PA Rules revenue sharing provisions.

With regard to CHT Village Common Forest CBOs, strengths include traditional management practices deeply ingrained in tribal culture and village governance, and effectiveness in protecting forests and biodiversity. However, VCFs are not recognized by the GOB and have limited geographic coverage compared to the large degraded forest area in CHT. Opportunities include the scope for increased coverage and strengthened capacity of VCF CBOs, as well as potential for an innovative BFD-tribal collaborative management of forest reserves. This positive potential is counterbalanced by mistrust between the GOB and CHT tribal people as well as continuing legal disputes between the GOB and Tribal Councils.

Strengths of ECOFISH^{BD} hilsa fishery CMOs include increased awareness among fishers about the rationale and requirements of hilsa fish management, and the increased hilsa catch in 2017/2018. Weaknesses include the fact that hilsa fisheries co-management has not been adopted by the DOF and may not be consistent with DOF plans, as well as alternative livelihoods initiatives that are not well-developed. Potential integration with the World Bank's Coastal and Marine Fisheries Project presents an opportunity, along with hilsa value chain and private sector engagement in sustainable fisheries. Threats include the failure of fishing ban period relief efforts to meet fishers' needs and the fact that these CMOs are not likely to be sustained without external technical assistance and financing.

3.2 HOW EFFECTIVE HAVE PA POLICIES BEEN FOR CREATING AN ENABLING ENVIRONMENT FOR CBM?⁴³

In a unitary state like Bangladesh, an appropriate policy framework is a *sine qua non* of desired government administrative behavior. A well-designed policy framework may not guarantee that results are accomplished, but in the absence of official policy statements, it will be difficult to obtain, and even more difficult to sustain, desired results. An excellent example of this are the BFD Protected Area Rules. In 2017, the Minister of Environment, Forest, and Climate Change approved the PA Rules, originally gazetted in 2006 as a pilot with support under NSP. The formal adoption of the PA Rules is certainly a major accomplishment for USAID/Bangladesh, representing substantial investments by NSP, IPAC, and CREL. However, less than two years

⁴³ In this report section, the assessment team takes a broad interpretation of the term PA policies to include policies affecting ECAs, *jalmahals*, and coastal fisheries. While USAID's support for NRM work in the CHT has not included a similar level of NRM policy work as in the plains, there are substantial policy constraints to effective NRM in the CHT, and the report touches on them in the discussion of policy gaps and weaknesses.

after their adoption, the BFD suspended the key revenue sharing provision of the rules and has formed a PA Management Rules 2017 review committee. One of the committee recommendations is to channel revenue sharing to the Divisional Forest Officer (DFO) instead of the CMC. This approach further erodes the collaborative partnership of co-management and will increase BFD control over the CMC.⁴⁴ As discussed further in Section 3.2.1, the reason is that several DFOs have expressed concern to the Chief Conservator of Forests (CCF) that, under the current PA Rules, DFOs could be subject to penalties resulting from negative government audits of CMC financial accounts. Other notable NRM policy accomplishments are shown in Table 7.

When implemented as intended, the policies have been effective in creating an enabling environment for CBM. Of course, the most compelling, although far from the only, evidence is the change in resource status. The original MACH Public Water Leasing Policy by giving fishing communities rights to manage and patrol their leaseholds is reported to have led to 140 percent greater catch between 1999 and 2005.⁴⁵ NSP reported a 75 percent decline in illegal tree felling at Lawachara National Park three years after initiating CPGs.⁴⁶ ECOFISH^{BD} reported a 33 percent increase in hilsa landings three years after initiating its field interventions, despite the increased hilsa fishing ban period from 11 to 22 days.⁴⁷

Table 7: USAID NRM Policy Development Accomplishments

Ecotype, Policy Title	Activity Supporting	Stage
Forest		
Co-Management Model, 2006	NSP	Replaced
Wildlife (Sanctuary and Conservation) Act, 2012	IPAC, NSP	Implemented
Protected Area Rules, 2017	NSP, IPAC, CREL	Implementing
Guidelines for PA Rules implementation, 2017	CREL	Drafted
Wetlands		
Public Water Body Leasing, 2002	MACH	Replaced
Fish Sanctuaries Policy, 2002	MACH	Implementing
Revision of Government Wetlands Leasing Policy, 2012	IPAC	Implementing
Wetlands Leasing Policy, 2017	CREL	Officially Proposed
Wetlands Co-Management Policy, 2017	CREL	Officially Proposed
Guidelines for Permanent Wetland Sanctuaries, 2017	CREL	Officially Proposed
Guidelines for Wetlands Co-Management, 2017	CREL	Officially Proposed
Ecologically Critical Area		
ECA Rules, 2016	IPAC, CREL	Implementing
Coastal Fisheries		
Increased Hilsha Fishing Ban from 17 to 22 days, 2017	ECOFISH ^{BD}	Implementing
Hilsha Fisheries Management Action Plan, 2020-2030	ECOFISH ^{BD}	Being Drafted
Hilsha Co-Management Guideline, 2019	ECOFISH ^{BD}	Drafted

While such anecdotal evidence is promising, the larger question is whether USAID's NRM policy engagement has helped create the conditions for CBM of natural resources. The answer is a qualified yes. Where co-management policies have been implemented as intended, they have established the enabling conditions for effective CBM. The outstanding examples of this progress

⁴⁴ Personal communication, November 20, 2019.

⁴⁵ Weidemann Associates. 2006. Evaluation of USAID/Bangladesh Environment Program.

⁴⁶ International Resources Group, Nishorgo Support Project Completion Report, April 2009.

⁴⁷ USAID/ECOFISH–Bangladesh Activity: A Story of Revival of Declining Hilsa Fishery. PowerPoint presentation, August 2019.

are the PA Rules and the success in creating functioning CMCs (see Section 3.1), which speak to the effectiveness of the PA policy and the CMC institutional capacity-building activities.

However, although the CMCs visited by the assessment team had bank accounts with sufficient funds to support current levels of operations for several months, the CMCs had reduced operations in key areas (e.g., support to VCFs and CPGs) given limited resources, and it is likely that, without resolution of their cash flow problems, their work will slowly wind down to a level below any reasonable definition of effective. The assessment team found that much of the reason for the funding limitations could be explained by two factors: 1) the completion of the CREL activity, which ended USAID support to the CMCs before CREL's efforts could establish sufficient CMC revenue sources to maintain full operations in the absence of external funding; and 2) the inability, or unwillingness, of the BFD to offset the loss of USAID support. The BFD CCF told the assessment team that there were no BFD funds available to support the CMCs, although at the time one of his deputies said that the BFD budget has a line item (with a small amount of funds) for CMCs for the first time since 2019/2020. The CMC funding issues were further exacerbated by BFD's decision to pause revenue sharing. It is promising that the SUFAL project includes a \$6.3 million endowment fund for PA conservation and management.⁴⁸

3.2.1 What gaps or weaknesses are present in existing policies that need to be addressed to improve CBM effectiveness?

Text Box 2 identifies some of the more pressing NRM policy gaps and weaknesses currently confronting the sector. The CREL final report identified eight national-level policies worked on by CREL and GOB staff.⁴⁹ According to the report, only one of these, the ECA Rules, was judged to be in the implementation phase as of June 2018.

Protected Areas

The revenue sharing provisions of the PA Rules prescribed that 50 percent of ecotourism fees and concessions and 100 percent of fees received for non-timber forest product (NTFP) extraction will flow to the CMCs. In practice, the revenue sharing for ecotourism and concessions has not been implemented beyond the original six NSP PAs.⁵⁰ According to BFD KII informants, DFOs have raised a concern that under Ministry of Finance rules they will be held responsible for CMC spending and could potentially have their pensions reduced as a penalty for CMC audit findings. As a result, the BFD has paused revenue sharing in all but two PAs⁵¹ and prepared a proposal to revise the 2017 PA Management Rules to redirect the 50 percent revenue share to the DFO instead of the CMC. This change will shift the balance of power of the PA co-management in favor of the BFD, contrary to the agreement reached during the NSP and IPAC activities.

PA operational guidelines were drafted by CREL but have not been issued by the BFD. One DFO said he had recently been transferred to a position with responsibility for a PA and CMC, but he did not have any preparation in co-management and did not know what to do with the CMC. He explained that he had written to BFD headquarters and asked for guidance but had yet to receive

⁴⁸ BFD. 2018. SUFAL DPP/Proposal.

⁴⁹ Winrock International. 2018. CREL Final Performance Report, p. 14.

⁵⁰ Chunati Wildlife Sanctuary (WS) in Chattogram district, Teknaf WS in Cox's Bazar district, Rema-Kalenga WS in Habigonj district, Lawachara National Park (NP) in Moulvibazar district, Satchari NP in Sylhet district and Madhupur NP in Tangail district.

⁵¹ Lawachara and Satchari NPs.

a response. It may be that the operational guidelines could resolve some of the implementation difficulties with the PA Rules, including revenue sharing accounting and the collection and use of NTFP fees.

As noted, the VCFs are performing well below their intended level. As the foundation of the PA co-management structure, their proper functioning is critical to the successful implementation of the PA co-management strategy. Without the democratic election of forest resource user representatives to and their meaningful participation on the CMCs, negotiated solutions to resource use conflicts and development of alternative incomes for forest users will be overwhelmed by top-down decision-making from the CMCs, which will be increasingly controlled by elites and the BFD.

Chattogram Hill Tracts

The CHT is rivaled only by the Sundarbans as Bangladesh’s most important forest resource. The forest and land rights policy challenges facing the CHT have been ably documented by Raja Devasish Roy in his unpublished book length report, “*Sustainable Forest Management in the CHT*,” prepared with USAID funding under the CHTWCA activity, but not publicly available. This report details policy issues of land and forest tenure, conflict between GOB interests and traditional tribal government, and the inability of the BFD to conduct forest management in the face of an openly hostile populace. The fundamental issue is the unwillingness of the GOB to allow the degree of autonomy and self-governance desired by the majority tribal population. While addressing this political issue goes well beyond forest and land rights policy reform, addressing these policies is highly appropriate as the tribal populations are forest-dependent. It is possible that such discussions could support the process of addressing the broader CHT political issues. CHTWCA has recently begun forest co-management activities with the BFD on forest reserves, an important breakthrough. This could be a foot in the door of trust building between tribal populations and the BFD, leading to discussion on other forest policy issues.

Text Box 2: Policy Gaps and Weakness	
PAs	PA Rules revenue sharing PA operational guidelines CMC-Peoples Forum-VCF linkage
CHT	Land and forest tenure Reserve forest boundaries Conflicting legal frameworks VCF recognition and protection from gazetting by BFD Rationalizing forest transit rules
Wetlands	<i>Jalmahal</i> leasing policy approval Wetlands sanctuaries and co-management guidelines
Coastal Fisheries	Co-management framework Update to Hilsa Fishery Management Action Plan Fisher household relief for ban period hardship

Wetlands

MACH initiated successful co-management of inland fisheries. Key to this success was vesting control of wetland leases with community fisher CMOs. MACH and the DOF promoted a wetland (*jalmahal*) leasing government order that set aside ten-year leases for community groups. Unfortunately, at the end of the first lease period, the MOL, which controls all public land leases including wetlands, reverted to three-year open leasing procedures without public input, reportedly under pressure from local elite *aratadurs* (fish wholesalers and lenders). This effectively ended the fishery co-management in the northeastern *beels* with the exception of one RMO, which sued the MOL and still maintains control of its leasehold as the suit is adjudicated by the

Bangladesh Supreme Court. CREL had some success in re-establishing long-term (five-year) leases for a few of the MACH RMOs but it was on a case by case basis, not a long-term solution.

With CREL support, the DOF and the MOL drafted in 2017 a new *Jalmahal* Leasing Policy that would reinstate lease set-asides for RMOs, extend lease duration to five years, and provide a legal foundation for fishery co-management to be renewed in the northeast. CREL and the DOF also prepared wetlands management guidance to support the wetlands CMOs to ensure their success in fisheries management. The new leasing policy and the wetland sanctuaries and co-management guidelines are still under consideration by the GOB.

Coastal Fisheries

ECOFISH^{BD} has launched an ambitious program and framework for co-management of hilsa fishery resources by identifying and scoping eight CMOs (being reduced to seven⁵²). Three months before activity completion, this CMO structure was still in draft form.⁵³ ECOFISH^{BD} also has prepared a draft of an updated Hilsa Fishery Management Action Plan that, when approved by the DOF, will provide authority for coastal fisheries co-management. The draft plan would replace the current 2002 version and—considering the intervening years of market development, management practices, fishing gear, and improved scientific base—it will be very useful.

Finally, the assessment team notes with concern several complaints among the hilsa fisheries CMOs that the extended seasonal hilsa fishing bans are creating hardship for fishing households. The ECOFISH^{BD} diversified livelihoods program is intended to help to offset hardship caused by the fishing ban, but villagers complained that the livelihoods activities and the GOB's rice subsidy program (donation of rice to fisher families) are insufficient to replace lost fishing income. For example, one women's livelihood group reported that they had to sell their ECOFISH^{BD}-donated goats during the first hilsa ban period to make up for lost fishing income.

3.2.2 What more needs to be done to increase the sustainability of progress made to date?

This section deals with the effect of environment policies on the sustainability of the communities and ecosystems targeted by those policies. It presents broad areas of need for further policy development to increase sustainability, leaving specific recommendations for Section 4 of the report. Policy implementation, a critical need for the sustainability of progress, is discussed in Section 3.3 on governance and institutional capacity.

Protected Areas

With the long-awaited approval and gazetting of the BFD PA Rules, the work now needed is implementation of the Rules, as discussed in section 3.3. The one need for more policy work is the BFD decision to pause PA fee revenue sharing due to accountability and audit concerns of its DFOs. The assessment team was told by several BFD officers that the BFD is actively engaging in a revision of the PA Rules, which raises an urgent need to engage the BFD and ensure that the original principle of revenue sharing is protected. That principle is fundamental to PA co-management in that the CMCs have the authority to plan and manage PAs jointly with the BFD, and one source of funds to do this is the fees from certain uses of the PAs, such as ecotourism. One DFO suggested that the BFD DFOs should control the expenditure of the revenue sharing

⁵² Communication with Dr. Abdul Wahab, September 30, 2019.

⁵³ ECOFISH^{BD}, undated. Hilsa Co-Management Guidelines (Draft).

funds if those DFOs were to be held accountable for them. While this is not unreasonable, it would undermine the co-management strategy by putting too much power in DFOs' hands. The better solution would be to ensure that DFOs are not under unreasonable audit risk.

Under the World Bank SUFAL project the BFD plans to establish a Co-Management Executive Committee (CMEC), charged with preparing the annual development plan to support PA biodiversity conservation and sustainable AIGAs. According to the SUFAL Development Project Proforma (DPP), the BFD has established a PA conservation fund of \$6.3 million. The endowment fund interest will be available to the DFOs for PA co-management.⁵⁴

Chattogram Hill Tracts

The CHT contains about 38.2 percent of the total forest cover of Bangladesh.⁵⁵ Due to violent conflict between the GOB and the predominant tribal inhabitants of the CHT, there have been relatively few forest management activities undertaken in the past several decades. USAID is currently supporting three distinct cases of forest management in the CHT:

1. Fledgling co-management with the BFD on watershed uplands on forest reserve lands;
2. Support to VCF-CHT Management Committees; and
3. Support to private landowners through CBOs for agroforestry and forest restoration.

Since 2013, with USAID funding, implemented by the UNDP, the CHTWCA, has made meaningful progress toward building experience in forest management and bringing the BFD and tribal villagers together to work on restoring a relatively small area of upland watershed lands in the forest reserve. At the same time, the CHTWCA has helped tribal villages to improve management of village common forests, small patches of natural forest managed by local communities for watershed and NTFPs. While the CHTWCA has not undertaken significant land or forest management policy development interventions, it has begun to build relationships and trust between tribal administration and the BFD, which should prove useful to begin addressing selected elements of the many complex forest and land policy issues in the CHT.

Also in the CHT, the Arannayk Foundation has been supporting CBM through grants to local NGOs who in turn support CBOs to conduct rehabilitation and sustainable use of forest lands, both on private lands and with VCF-CHT. These CBOs now have a foundation of CHT CBM experience. Their input and experience complement the work of CHTWCA.

Wetlands

CREL made substantial progress working with the DOF and the MOL to restore some fishing co-management leaseholds lost after 2009 when the MOL abandoned the ten-year, community-centered *jalmahal* fishing leases established under MACH. In 2017, CREL supported the drafting of three new wetlands management policies that were approved by the DOF and are awaiting final gazetting. Removing further barriers to officially enacting these policies is a priority need.

Text Box 3: ECOFISH^{BD} Opportunity

The new \$240 million World Bank BSCMFP Project Appraisal Document recognizes co-management as an important element of sustainable fisheries management, but only mentions the ECOFISH^{BD} CMO model in passing. The GOB is preparing a DPP. ECOFISH^{BD} staff were unsure if the project will use the ECOFISH^{BD} CMO model.

⁵⁴ Bangladesh Forest Department. 2018. Sustainable Forests and Livelihoods (SUFAL) Project DPP.

⁵⁵ Laskar Muqsudur Rahman. Undated. Bangladesh National Conservation Strategy: Forest Resources.

Coastal Fisheries

ECOFISH^{BD} is drafting two policy documents that will be key to sustainable hilsa fisheries management: an update of the 2002 Hilsa Management Action Plan and Hilsa Co-Management Guidelines. Any effort to finalize these should be done in the context of the World Bank's fisheries program, the BSCMFP. Tying the policy development to a well-funded project led by the DOF will help ensure that the ECOFISH^{BD} approach is sustainable (see Text Box 3).

3.2.3 Conclusions: Effectiveness and Sustainability of Enabling Environment Policies

Protected Areas

PA Rules have been quite effective in creating an enabling environment for co-management. CMCs are still functioning well over 15 months after last receiving USAID support. Their relationship with the BFD is good. However, they are operating at a reduced level to make the grant funds CREL left them last as long as possible. The 50 percent share of ecotourism revenue first agreed to under NSP by the BFD and the MOEFCC is still not flowing properly. The new concern about DFOs' fiduciary responsibility for revenue sharing funds spent by CMC is just the latest barrier. CREL wisely helped the CMCs to set up a number of small enterprises to generate income independent of the BFD resources, and that is a help. However, these are not sufficient for full CMC operations nor do all CREL PAs benefit from these enterprises. In addition, there is more to the revenue sharing than just the revenue. CMCs charged with ecotourism operations have a pride of place, they are valuable for public awareness-raising, and their sense of ownership of the PA is a deterrent to illegal PA use.

If CMCs do not receive their lawful revenue share, it is not clear if they will still support the ecotourism facilities. If the facilities decline, tourism revenues will fall, and CMC members may lose their enthusiasm for caring for the CMC. If the DFO in charge of the PA controls all ecotourism revenue, then community members will be employees and the pride of ownership will be lost. Even if a DFO is supportive of PA co-management, given frequent BFD staff rotations, the next DFO might not be supportive. Community leaders may not be as well-educated as professional foresters, but they are permanent residents, they have been trained, and they have demonstrated that they have the skills needed to manage PA budgets and development activities, as evidenced by the CREL end-of-project CMO capacity assessment.⁵⁶

VCFs are a key component of co-management process. Their members include the resource users who were, and might still be, the most forest-dependent. USAID PA co-management activities have included insufficient governance capacity-building for VCFs. They were primarily focal points for AIGAs. This needs to change. The CMCs are susceptible to elite capture,⁵⁷ but as VCFs provide a large block of community representatives to the CMC, their effective functioning will reduce the potential for elite capture.

⁵⁶ Capacity and Sustainability of Co-Management Organizations. CREL Knowledge and Impact Series – Report 4, 2018.

⁵⁷ "In many cases, local elites are to blame for capturing the benefits from the process of democratizing decision-making processes." Challenges to the elite exclusion–inclusion dichotomy—reconsidering elite capture in community-based natural resource management, Sam Wong, *South African Journal of International Affairs*, 2013, 20:3, 379-391. See also "Elite capture is a form of corruption whereby public resources are biased for the benefit of a few individuals of superior social status in detriment to the welfare of the larger population. Elites are groups of individuals who, because of self-ratifying factors such as social class, asset ownership, religious affiliations, political power, historic discrimination among social groups, political party affiliation, or economic position, have decision-making power in processes of public concern." https://en.wikipedia.org/wiki/Elite_capture

The main function of the Peoples Forums is to provide a periodic venue for VCF representatives to elect members to the CMC. Hundreds of VCF members elect a few dozen Peoples Forum members who in turn elect 11 VCF representatives to the CMC. The Peoples Forums also function to create community consensus around issues raised by community members. Peoples Forums have not been meeting as scheduled since CREL ended. It seems the VCFs are not sufficiently motivated to maintain the Peoples Forum function. This issue needs to be addressed.

The BFD plans to establish a CMEC under SUFAL to formulate PA plans and review policies that will have an impact on the PAs. The assessment team is concerned that the CMEC may not fully benefit from 15 years of USAID-supported PA co-management experience. Unless the CMEC includes a knowledgeable champion of PA co-management, there is a risk that the BFD will tend to revert to a centralized, command-and-control, and top-down orientation.

Chattogram Hill Tracts

The recent opening between the BFD and tribal communities should be advanced under a renewed agreement with UNDP. This could be a foot in the door of trust building between tribal populations and the BFD leading to discussion on other forest policy issues.

The priority forest policy issues are:

- Trust building between the BFD and tribal people and institutions;
- Finding appropriate co-management models for the CHT context;
- Registration of village common forest;
- BFD acknowledgement of village common forests as outside of the forest estate; and
- Reform and rationalization of CHT forest transit rules.

Although CHTWCA's RF does not have an explicit biodiversity conservation objective, its efforts to manage VCFs-CHT certainly have positive impacts on biodiversity. As the CHT is one of the most biodiverse areas in the country, USAID should modify the CHTWCA RF to include a specific biodiversity objective and otherwise meet the USAID Biodiversity Code requirements.⁵⁸

Wetlands

Wetland fisheries co-management in northeastern *beels* were supported by five consecutive USAID-funded NRM activities. In the end, most of these CMOs were not sustained because of elite capture and weak policy formulation. This situation could be addressed under Protibesh, working with the MOL and the DOF on policy reform to re-establish long-term community groups' *jalmahal* leases that will withstand elite political pressure. With a solid co-management policy framework and protected user rights, fishers have shown they can manage resources effectively. Securing technical or financial assistance from other sources should not be a hurdle.

Coastal Fisheries

Science-based hilsa fishery management including seasonal bans, which have had success in overall increased catch, have also disrupted fishing household livelihoods; and the government commitment to offset lost income with rice donations has only satisfied a fraction of the need. This is a failure to address a resource management challenge holistically, integrating both ecological and social concerns.

⁵⁸ <https://www.usaid.gov/biodiversity/impact/requirements>

Hilsa fisheries CMOs are not yet well-established, and the complex CMO framework will be very challenging to implement. The nascent World Bank BSCMFP recognizes the value of co-management, but indicates it is adapting the Ministry of Finance Social Development Foundation's Community Driven Development model, only mentioning it will draw on ECOFISH^{BD} experience among others. The assessment team saw no indication that the DOF is preparing to adopt the ECOFISH^{BD} model under BSCMFP.

3.3 HOW HAVE USAID INVESTMENTS (AND THOSE OF OTHER DONORS, TO THE EXTENT POSSIBLE) CONTRIBUTED TO THE DEVELOPMENT OF OVERALL ENVIRONMENTAL GOVERNANCE IN THE COUNTRY?

Since 1998, according to data provided by USAID, the Mission has implemented a \$94 million portfolio of NRM investments grounded in the vision that the best approach to sustainable NRM is to harness the power of local resource users' self-interest and the government's authority and technical expertise to work together to reduce unsustainable resource extraction and introduce restoration and productive resource uses. This investment supported the development of CMOs tailored to three types of resource management opportunities: forest PAs, inland fisheries, and coastal fisheries. It also supported community forest management CBOs in the CHT.

The CMO structure is similar across the three ecotypes. At the foundation are resource-dependent community organizations, above them are participatory federations of community organizations empowered to be a voice of the people and, jointly with various local government representatives, to set and implement resource management objectives and plans. The theory of change rests on the principle that when resource users are empowered to participate in and benefit from resource management, they will become allies to sustainable resource use leading to improved ecosystems and more resilient communities.

Co-management has become the law of the land, and the majority of CMOs have officially recognized status and, in many cases, legal personality and codified organizational structures. Bangladesh's unitary state model of government has the benefit that government agencies take official legal decisions quite seriously, enhancing support for their implementation. That said, the system for natural resource co-management is far from perfect.

- The forest PA co-management structure has been backsliding since the end of CREL in 2018. Issues include the pause in revenue sharing, a move to revise the PA Rules, and ongoing lack of PA management operational guidelines, which reflect incomplete BFD buy-in to the participatory and collaborative culture of co-management.
- Elite capture and rent seeking, common throughout Bangladesh, are especially pervasive with government-owned and weakly-managed natural resources. For example, the MACH wetlands leasing policy was terminated because local elites, who were excluded from accessing wetlands lease set-asides for fishing communities, successfully convinced the MOL to restore lease procedures that favored elites.
- Science-based hilsa fishery management, including bans during the peak spawning period, which have had success in overall increased catch, have also disrupted fishing household livelihoods. The government commitment to offset lost income with rice donations reportedly has been politically biased and only satisfied a fraction of the need. This failure

to address the resource management challenge holistically reflects a top-down, government-controlled approach.

- In the special case of the CHT, a long-standing conflict grounded in resource rights and political self-determination has led to a near paralysis of any GOB intervention to improve the sustainability of the rich hill land resources and unique biodiversity.

In short, while admirable progress has been made, long-term sustainable environmental governance remains elusive.

Asian Development Bank (ADB) Experience in Community Forestry

The BFD has long been familiar with the theory of community participation in forestry activities known as community forestry and defined as any situation that intimately involves local people in forestry activities.⁵⁹ Co-management is one form of community forestry. Globally, community forestry first came to prominence in the mid-1970s,⁶⁰ and by 1981 the ADB had signed a loan to fund the pilot \$11 million Community Forestry Project, led by the BFD, which promoted roadside, woodlot, and restoration plantations. The ADB followed this in 1990-1996 with a \$50.4 million Upazila Afforestation and Nursery Development project designed to scale up community forestry nationally using a “social forestry” management approach where community participation in forest plantation establishment, maintenance, and protection was exchanged for a share of the proceeds from forest extraction. A 2001 ADB audit of the project, however, found that the project was “*a tree planting exercise without yielding significant benefit*” and that the community participants were in a “*generally weak position...with terms that substantially favor the BFD.*”⁶¹ The audit concluded that “*participatory initiatives have been impeded by rigid, top-down, and hierarchical practices within [BFD]. Decision making within [BFD] remains highly centralized.*”

The ADB funded a third community forestry project, the Coastal Greenbelt project (1995-2005), in the Sundarbans. In this case, an ADB audit concluded that the BFD was intransigent and “*must undergo a process of institutional and attitudinal change.*”⁶² A fourth ADB community forestry project, Sundarbans Biodiversity Conservation Project (1999-2007), was suspended in 2004 and eventually cancelled by the ADB because of accounting irregularities and slow implementation.⁶³ The ADB has not renewed its support to the BFD.

Currently, the World Bank has approved a loan to the GOB for the SUFAL project that has many similarities to the ADB effort, e.g., massive forest plantations under the management prescriptions of the BFD’s Social Forestry Rules.⁶⁴ It is an open question whether the BFD has made the institutional and attitudinal changes needed to avoid the issues encountered under the ADB’s 25-year support to the BFD community.

3.3.1 How have these investments contributed to building stakeholder and institutional capacity for effective PA co-management?⁶⁵

⁵⁹ FAO. 1978. Forestry for Local Community Development. Forestry Paper 7.

⁶⁰ Arnold, J.E.M. 2001. 25 Years of Community Forestry. FAO.

⁶¹ ADB. 2001 Project Performance Audit Report on the Upazila Afforestation and Nursery Development Project.

⁶² *Ibid.*

⁶³ ADB. 2005. Coastal Greenbelt Project in the People’s Republic of Bangladesh: Completion Report.

⁶⁴ BFD. 2004. Social Forestry Rules.

⁶⁵ The response to this question includes wetland fisheries in addition to PAs.

Nishorgo Support Project

In 2003, USAID launched NSP based in part on the MACH co-management approach. NSP—the first USAID program focused on PA co-management—set the pattern for follow-on capacity-building interventions under IPAC and CREL. NSP began amid the troublesome final stages of the ADB community forestry program. Given USAID’s different model of development assistance that more closely controlled interventions and recognition by some BFD officers that a different approach to community forestry was needed, NSP was given pilot project status to initiate co-management in five PAs. These PAs were under severe pressure, but unlike the forest reserves used for social forestry plantations or wetlands that produce fish, extractive uses are not permitted in PAs. Instead, the primary uses of PAs are biodiversity conservation, ecotourism, and watershed protection.

PA co-management must provide forest users with non-extractive alternatives to illicit felling and harvesting NTFPs. The challenge facing NSP was to identify activities that would provide sufficient incentive to pull resource users away from illicit and destructive activities and engage them instead in sustainable practices. The solution NSP developed had three main pillars: 1) offer alternate sources of income for forest-dependent households; 2) employ local people, particularly forest users, to patrol the forest to dissuade illicit extraction; and 3) raise local awareness of the value of the forest as a national and local resource.

The question NSP also had to address was how to deliver this package of services in a way that would not depend on ongoing USAID funding and that dovetailed with the needs of PA forest management. Co-management promised to do that. Co-management dates back to at least the mid-1980s for wildlife management in North America.⁶⁶ It gives resource users a stake in PA benefits and the BFD the ability to enlist forest-dependent households in PA management and take them off of the rolls of illicit users. However, PA co-management requires a paradigm shift in the relationship between the BFD and forest-dependent communities. Both would need new knowledge, attitudes, and behaviors and the ability to put them to use. CMOs were the proven approach to providing a venue for government and community collaborative management.⁶⁷

The NSP final report quotes a BFD official who said, “*Plantations is what we do,*” but NSP then adds a rhetorical rejoinder, “*Not anymore. This view needs to evolve rapidly.*”⁶⁸ It was clear to USAID⁶⁹ and NSP staff⁷⁰ that BFD would need a multifaceted effort to change attitudes and build capacity to support the radical change from “command and control of” to “collaboration with” forest users. As NSP noted, “*Concepts of inclusivity, transparency, and sharing power did not appeal to more than a small group of visionary [BFD] staff.*”⁷¹

The NSP strategy for building BFD support and capacity to engage in co-management included:

- Recognizing the BFD’s hierarchical and centralized structure and the importance of official orders, rules, and policies.

⁶⁶ Berkes, Fikret, Peter George and Richard Preston. 1991. Co-Management: The Evolution of the Theory and Practice of Joint Administration of Living Resources.

⁶⁷ Carlsson, Lars and Fikret Berkes. 2004. Co-management: concepts and methodological implications. *Journal of Environmental Management* 75 (2005), pp. 65-76.

⁶⁸ International Resources Group, 2009, NSP Completion Report, p. 18.

⁶⁹ Communication with Azahrul Mazumder, USAID Contracting Officer Representative for NSP, August 12, 2019.

⁷⁰ Communication with Philip DeCosse, former NSP Chief of Party, August 17, 2019.

⁷¹ USAID. 2012. Protected Area Co-Management Where People and Poverty Intersect: Lessons from Nishorgo in Bangladesh.

- Engaging the BFD CCF and his deputies and MOEFCC officials in developing the co-management structure. This three-year, time-consuming process involved substantive discussions and negotiations, including details such as who would sit on the CMCs.
- Funding and hosting international study tours for senior BFD officials to develop institutional support for co-management precepts.
- Conducting training on PA management for 405 BFD staff and officers.⁷²
- Adjusting PA management activities to support AIGAs for resource users.
- Promoting awareness raising of forest values and supporting the national PA network.

Building CMOs: MACH piloted a two-tiered CMO structure that continues, with modifications, in the current co-management program of both the DOF and the BFD. CMOs have been codified through GOB acts, rules, and orders and are in many cases now being implemented without donor support. MACH constituted a lower tier CMO, the RMOs, comprised of fishers (resource users) who were represented along with government staff and other stakeholders in higher level *Upazilla* Fisheries Committees to provide a venue to hear and resolve management problems and eventually to implement fisheries management plans.

The two-tier structure was adopted by NSP and continued under IPAC and CREL. In constituting PA CMOs, NSP recognized that there is a fundamental difference between co-management of wetland fisheries and forest PAs. According to the Bangladesh Forest Act, the BFD controls designated forest lands. In BFD's view, it "owns" forests. On the other hand, the DOF does not own *jalmahals*; they only provide technical and management services to fishers. The MOL controls wetlands, but only to allocate use rights and collect rent. It is not a technical agency and does not take an active role in wetland management. Thus, the stakes for the BFD in forest co-management are much higher than for either DOF or MOL. In sharing control with communities, the BFD fears it will lose its ownership position and responsibilities as required by law. Finding a balance between effective co-management and BFD's perceived and actual status is a balancing act still being worked out today.

In PAs, conflicts between stakeholders are often more complex than on wetlands. BFD ownership means there is more conflict between government and communities, whereas on wetlands most conflict is between users. A further difficulty facing the constitution of PA CMOs is the fact that, unlike wetlands, PAs are multiple-use areas and require sophisticated technical expertise to balance management activities to meet the needs of ecotourism, watershed protection, and biodiversity uses. The risks in forests are also greater than in wetlands; a severely overfished *jalmahal* can recover in a few years, while a severely degraded forest might take generations to recover. In short, NSP had a more difficult job in constituting effective CMOs than MACH.

In this context, NSP set out to build a two-tier CMO structure for forest PAs. It settled on co-management councils (CMCOs),⁷³ which meet twice a year providing a venue for issue resolution and high-level approval of the action plans and budgets prepared by the lower-level CMCs. What NSP did not initially resolve was a mechanism to give voice and power to the resource users. Late in the activity, NSP formed Forest User Groups (FUGs) similar to the Resource User Groups (RUGs) under MACH. These groups were formed mainly as focal points for the AIGAs, but they also initiated village-level organization and the beginning of community empowerment in co-

⁷² International Resources Group. 2009. NSP Completion Report, pp. 12 and 24.

⁷³ CMCOs have subsequently been replaced by CMC general meetings and the former role of the CMC has been assumed by a co-management executive council.

management. NSP intended that RUG membership would favor households that were most heavily involved in forest resource extraction and for whom AIGAs would have the most impact in reduced resource extraction. NSP worked to build the capacity of CMCs with training events ranging from climate change and biodiversity to running meetings and keeping accounts. NSP adopted the MACH tool for systematically scoring CMC capacity to measure progress on a series of desirable organizational capacity indicators (see section 3.3.2).

Integrated Protected Area Co-Management Project

USAID decided that NSP was sufficiently promising that it should be scaled up. IPAC was designed to do that and to continue to refine the PA co-management model. The activity was initiated in 2008 with a well-considered overlap with NSP allowing for a smooth transfer of relationships, staff, and lessons learned. Based on those lessons learned, captured in a book prepared by NSP principals,⁷⁴ IPAC restructured the NSP CMO model as follows:

- RUGs were reformed as VCFs adding elected community representation to the CMC and support to CMC-developed PA management activities to their AIGA focal role. VCFs also had broader membership than RUGs. Anyone living within five kilometers of a PA was could become a member if they wanted.
- Peoples Forums were introduced as a new CMO to manage the increased VCF membership and newly expanded community representation on the CMC. Peoples Forums were formed by two members from each VCF. The primary role of the Peoples Forum was to democratically select 11 VCF members to sit on the CMC. It also provided a venue to air VCF members' issues, decide on which should go forward, and charge the peoples' representatives to take them to the CMC.

Capacity-building of key stakeholders was one of IPAC's three core components and the largest item of project expenditure. The IPAC final performance evaluation reported that IPAC trained 33,757 participants:⁷⁵ 206 GOB staff were trained domestically, including 49 BFD staff; 95 GOB (61 BFD) staff attended study tours up to a three-month residential training; 6,065 community members were trained in subjects including AIGAs, CMC management, financial management, grant writing, etc.; and 26,548 community members attended one of 870 one-day trainings on climate change vulnerability and adaptation.

IPAC further developed the CMO capacity-building scorecard with 60 indicators grouped into seven categories reflecting the main functions and operating principles of the organizations: resource management, pro-poor approach, women's role, organization, governance and leadership, finance, and government support for co-management⁷⁶ (see section 3.3.2).

⁷⁴ USAID. 2012. Protected Area Co-Management Where People and Poverty Intersect: Lessons from Nishorgo in Bangladesh.

⁷⁵ Makenzie, Catherine, Luca Etter, AJM Ifjalul Haque Chowdhury, and Saiful Islam. 2013. Performance Evaluation of the IPAC Project: Democracy and Governance Components.

⁷⁶ *Ibid.*

Climate-Resilient Ecosystems and Livelihoods Activity

CREL overlapped with IPAC, which allowed for a handover period. By that time, several CREL national staff had been serving the USAID PA co-management activities for ten years.

CREL undertook a substantial increase in CMO capacity-building activities (see Text Box 4) recognizing that “*capacity of people and organizations was a cornerstone of CREL and supported all aspects of project implementation.*”⁷⁷ According to the CREL mid-term performance evaluation, however, the CREL training and capacity-building interventions, like those of IPAC,⁷⁸ focused on monitoring outputs over outcomes: “*...CREL has not effectively monitored the impact of its training for livelihoods beneficiaries or GoB staff, two major training target groups. CREL has also not prepared a meaningful training needs assessment or a training strategy.*”⁷⁹

This conclusion is not entirely accurate since MACH, NSP, IPAC, and CREL all used some form of a CMO capacity assessment tool. However, their assessment tools were not used to directly assess the quality of the capacity-building activities except in the aggregate. CREL, like IPAC and NSP, used a CMO capacity scorecard to measure CMOs’ organizational capacity (see section 3.3.2).

Text Box 4: CREL Training and Capacity Building Accomplishments

- Developed 42 training modules
- Trained 79,751 people (including 54,118 women)
- Conducted 7,586 training courses
- Facilitated 40 study tours
- Improved the capacity of 79 institutions to address climate change
- Improved the performance of 36 CMOs (82 percent)
- Developed five curricula on co-management and climate resilience, adopted in part by six universities

3.3.2 In what ways have these development interventions incorporated learning to strengthen local governance structures for NRM?

The 15-year continuous and overlapping nature of USAID support to PA co-management provided a unique opportunity for inter-activity learning. While USAID-supported NRM activities evolved over time, they did not undergo major changes between the end of one activity and the beginning of the next. The activities’ strategies and theories of change remained remarkably consistent, as shown in Table 3 and Annex 10. Similarly, while the number of PAs included in the activities grew with time, all but one of the original six NSP sites remained at the completion of CREL. The sites added under IPAC also carried over to CREL. The best staff from one activity often continued with the next. While it is hard to quantify the learning that this continuity imparted and how that may have influenced CMO strengthening, it is reasonable to posit this theory of change: “*If strategy, results hypotheses, sites supported, and staff carry over from one activity to another, then learning will accrue, leading to enhance activity effectiveness, including strengthening CMO capacity.*”

CMO capacity assessment clearly demonstrates the learning between projects. From MACH through CREL they all used a form of an assessment scorecard that originated from a model developed by MACH based on work done by the International Union for Conservation of Nature (IUCN) and World Wildlife Fund. From NSP through CREL, this was supported by USAID indicators for CMO capacity strengthening as follows:

⁷⁷ Winrock International. 2018. CREL Final Performance Report 2012-2018.

⁷⁸ Makenzie, Catherine, et al. 2013. Performance Evaluation of the IPAC Project: Democracy and Governance Components.

⁷⁹ CREL Project Mid-Term Performance Evaluation-Final Report. December 15, 2015, p. 6.

- NSP Indicator 6e: Management performance scores improve at pilot PA sites
- IPAC Indicator 21: Number of PA management units with improved performance and capacity for co-management
- CREL Indicator C5: Number of co-management units with improved performance

The CMO assessment systems are summarized below:

- During MACH II a system of regular assessments was developed, every six months Federations of Resource User Groups (FRUGs) were assessed against a set of over 100 indicators clustered into seven themes that relate to the functioning and objectives of the FRUGs, their membership and governance.⁸⁰ MACH II introduced the concept that a CMO reaching 70 percent of maximum possible score was judged to be eligible to receive a MACH II revolving grant, at least one of which continues today. MACH II assessments were conducted by project staff and it was training DOF staff to apply the assessment system, although the MACH/NSP evaluation expressed concern that it was too complicated to be sustainable. At the beginning of MACH II, in 2004, no CMO reached the 70 percent mark and in the last assessment 50 percent had met or exceeded the 70 percent mark.
- By NSP's second year (2004-2005) it had developed and administered a PA management performance scorecard to track progress with metrics for PA management plans, infrastructure, staff capacity, secure and sustained budget, site design, legal recognition, and dispute levels. The PAs were rated on a scale of 1 to 5, with 5 being high. The maximum score was 130. Average performance measurements for the five PAs increased steadily from 36 cumulatively in year two, to 45 in year three, and 100 in year four. NSP decided in the fourth year to overhaul the scorecard, giving it greater objectivity and resolution. This scorecard, based on models used by the World Wildlife Fund and The Nature Conservancy, monitored change in 38 PA management indicators organized under nine themes in two broad categories.⁸¹ The scorecard was intended to be administered annually by BFD officers working with the five NSP PAs. The BFD applied the scorecard to 19 PAs across the country. For the five NSP PAs, the average score was 55.4; the other 14 PAs' average score was 25.⁸²
- IPAC continued the concept and further developed a systematic CMO capacity-building scorecard with 60 indicators in seven categories reflecting the main functions and operating principles of the organizations: resource management, pro-poor approach, women's role, organization, governance and leadership, finance, and GOB support for co-management. IPAC's 2013 self-scored assessment revealed that, of 45 CMOs, 36 scored at the optimum level (≥ 70 percent). These data show significant progress, particularly in the scores for forest CMCs when compared to an April-May 2011 assessment by IPAC. This progress was due mainly to intensive efforts from the activity and revision of the framework, which adequately captured achievements made by the CMCs over the years. On the other hand, a decline in the scores for Hail Haor RMOs resulted from the fact

⁸⁰ Winrock International. 2007. MACH-II Completion Report Volume-I.

⁸¹ Aziz, Nasim. 2007. Protected Area Management Performance Scorecard: Part One – Purpose & Protocol.

⁸² Aziz, Nasim. 2008. Comprehensive Listing of all PMP Indicators for Tracking Impacts of the Nishorgo Support Project.

that some *beels*, previously under RMOs' management since MACH, were leased out to the highest bidders by the GOB and are no longer under co-management.⁸³

- CREL's CMC capacity scorecard used 11 themes under four headings (service delivery, inclusiveness, organizational management, and governance of co-management) with 102 indicators. By the end of CREL, the scorecard results showed that 25 of 26 CMCs (96 percent) had graduated from the need for ongoing CREL assistance (i.e., received a score of at least 70 on a scale of 100). Wetlands CMOs fared less well, with six of eight RMOs (75 percent) and five of 11 VCGs (45 percent) reaching the graduated mark. VCFs did not have substantial organizational capacity-building support and were not monitored.⁸⁴

3.3.3 Conclusions: Capacities and Structures for Environmental Governance

Co-Management Approach

USAID's consistent support for co-management and CBM across 21 years and \$94 million in investment has paid off with a critical mass of legal, policy, institutional, and local community support for co-management that will facilitate these and similar activities for years to come. Co-management works, it is the law of the land, and it is being implemented without donor support. Although co-management implementation is not without problems, the current situation is considerably better than it was in 1998.

CMO Structure: USAID's MACH activity piloted a two-tiered CMO structure continued under three USAID forest co-management activities, with modifications, for 15 years and which is now supported by a variety of government laws and regulations. CMO development succeeded because USAID's implementing partners worked patiently in meaningful collaboration with the responsible GOB agencies. To ensure that these efforts will endure, the co-management policies must be rooted in a legal authority that cannot be overturned by fiat, as was the case with the Wetlands Leasing Policy established under MACH. Government orders are a starting point, but they have to move as quickly as possible to rules or another official policy statement with strong legal status that cannot be overturned without due process.

NSP determined early on that it would not be politically feasible to develop a CMO structure that was tailored to the socio-ecological variations of different PAs. The PA Rules reflect this and present a single model for CMO structure across all PAs. However, sites do vary, and there is a need for CMOs to adapt to that variation. CREL drafted PA co-management guidelines, which have not been issued. The guidelines offer an opportunity to give PA CMOs the flexibility they need to tailor co-management plans and address the particular case of their PAs. They are an essential element of BFD institutional capacity.

People dependent on natural resources are among the poorest and most vulnerable citizens of Bangladesh. USAID should ensure that the co-management activities they support meet and do not undermine basic human needs. NSP and IPAC evaluators found that livelihoods activities had serious problems. It was not until CREL that livelihoods became fully developed. In ECOFISH^{BD}, livelihoods are far from sufficient to meet the needs of the households.

Learning: Inter-activity learning has been a significant positive element of building co-management institutions. The handover from one USAID-funded activity to another has significant benefits in

⁸³ IPAC. 2013 Assessment of Co-Management Organizations.

⁸⁴ CREL. 2018. Capacity and Sustainability of Co-Management Organizations: CREL Knowledge and Impact Series – Report 4.

terms of maintaining relationships, avoiding attrition of qualified staff, and demonstrating the constancy of U.S policy and commitment to goals of productive and resilience ecosystems and resource dependent communities. The Nishorgo Network and the Nishorgo.org website maintained across the three USAID PA co-management activities are important learning assets. The website has had more than 220,000 visits and has been a valuable resource to this assessment. It is not clear why the BFD is not actively supporting these two learning nodes. This is further evidence that the BFD lacks a champion for co-management.

The Nishorgo.org website is the most impressive learning tool developed by the PA co-management activities and has been admirably adopted by a former IPAC/CREL staff member. He should be recognized for his remarkable contribution to co-management in Bangladesh. However, this is not likely to be a sustainable solution. As the BFD did not take the lead with the website as agreed at the end of CREL, it is not clear that BFD will do so in the future.

Text Box 5: Nishorgo.org

NSP created a website that supported learning among stakeholders and particularly among members of the Nishorgo Network. Development of the website continued under IPAC and CREL and includes MACH documents. The website is the largest single repository of technical and project documents related to co-management in Bangladesh. It is a singular symbol of the value of USAID co-management investment. The CREL Final Report states that the BFD will provide leadership for the Nishorgo Network, including hosting the website. In fact, the website is being maintained by a private citizen, the former IPAC and CREL M&E Manager, who also organized the 2019 Bangladesh Co-Management Congress.

Capacity-Building

CMOs: According to both the IPAC and CREL mid-term performance evaluations, training and capacity-building interventions focused on monitoring outputs over outcomes. VCFs, initiated under IPAC and continued under CREL, did not receive substantial organizational capacity-building support and were not adequately monitored for effectiveness. The activities focused capacity-building on CMCs and used VCFs as focal points for AIGAs without ensuring they had the governance and external sources of income needed to continue to perform their duties in the absence of external support.

While the CMO capacity scorecards are useful, they present summaries and do not allow the assessment of discrete elements of the capacity-building program needed for tailored adaptive management of a training event or other capacity-building intervention. Capacity-building commanded the largest slice of PA co-management activity budgets, but it was not appropriately monitored. Monitoring measured the numbers of people trained and the number of training days rather than outcomes, perhaps because of the structure of USAID's standard indicators.

BFD: While BFD has voiced and, in many ways, demonstrated support for co-management, the attitude among BFD staff at all levels remains rooted in the command-and-control mode, dating back to the colonial period, with strong policing and punitive elements despite the obvious failure of this approach. BFD foresters are well aware of the loss of forest lands and the more insidious and widespread forest degradation. They blame illegal forest users and encroachment. The default attitude is: "if we only had the funds and manpower to combat these illegal forest users all would be well." As long as this remains the prevailing BFD narrative, PA co-management will fail to reach its full promise. It does not seem that the BFD has made the institutional and attitudinal changes needed to avoid the issues encountered under the ADB's 25-year support to the BFD community forestry program. There is a significant risk, however, that under the new World Bank SUFAL

project, the BFD will revert to a centralized, command-and-control, and top-down plantation orientation that repeats the problems encountered by the ADB.

BFD’s relationship with tribal people in the CHT is one of the most dysfunctional GOB/community interactions in the country, based on years of conflict. Consequently, there is scarcely any BFD forest management going on in the CHT. USAID’s CHTWCA activity had a subproject directly funding the CHT Tribal Hill Council, but the Ministry of CHT Affairs issued a stop work order for political reasons. Recently, CHTWCA has begun to make some inroads in engaging the BFD and local people in upland watershed restoration. This is a very positive development.

3.4 DIRECT AND INDIRECT BENEFITS FOR COMMUNITIES

Direct and indirect benefits for communities are closely related to AIGAs (also referred to as alternate livelihoods and livelihood diversification), one of the largest components of the USAID NRM activities. As discussed in Section 2.2, the USAID/Bangladesh co-management theory of change identifies the need for alternate sources of income for resource users as a necessary precondition for sustainable and resilient ecosystems and communities. The assessment team asked beneficiaries in FGDs and through a mini-survey about their perceptions of benefits arising from their participation in CBM-related activities.

3.4.1 Have investments in CBM led to increased direct benefits (such as increased jobs or household income) in the communities?

During FGDs with CMOs, participants responded to open-ended questions about how they had benefited from NRM-related activities. In 78 percent of CMO FGDs, at least one participant said s/he had benefited from increased income (see Table 8). Cattle rearing was mentioned by at least one participant as a source of increased income in half of FGDs (49 percent), gardening in 42 percent of FGDs, poultry farming in 38 percent, handicrafts in 31 percent, auto rickshaw driving in 21 percent, and shop keeping in 5 percent.

Table 8: Increased Income and AIGA Sources (% of FGDs)

Increased Income and AIGAs Source	CMCs (11)	VCFs (8)	CHT CMOs (5)	ECOFISH ^{BD} CMOs (4)	Average
Increased income	64	88	60	100	78%
Cattle rearing	36	50	60	50	49%
Gardening	45	63	60	0	42%
Poultry	64	50	40	0	38%
Handicrafts	36	38	0	50	31%
Auto rickshaw	45	38	0	0	21%
Shop keeping	18	0	0	0	5%

CMC participants’ responses to engagement in AIGAs refer to personal involvement in the activities (e.g., gardening, poultry, handicrafts) by CMC members, which is comparable to other CMOs. In addition, CREL’s strategy was to set up small enterprises to support the CMCs as an entity because of the problems CMCs have receiving funds from the BFD. CMCs used CREL grant funds for small CMC-operated enterprises and for lending to members. Small enterprises included shops and restaurants often related to eco-tourism, but also typical village convenience stores. CMCs employed staff to manage and operate the shops or leased the shops to members. In the case of auto rickshaws and cattle rearing (also called “cattle fattening”), the CMCs used

CREL grant funds for the initial purchase. CMCs then leased the auto rickshaws on a monthly basis to CMC or VCF members. For cattle rearing, CMCs would purchase calves and give them as in-kind loans to members, who would fatten the calves and repay the CMC with interest when the calves were sold (often at peak market period before *Eid-al-Adha*).

Among the types of AIGAs mentioned by FGD participants, a few noteworthy points emerged:

- AIGAs that were CMC enterprises or lending operations also often benefited the lower-tier VCFs. For example, CMCs bought auto rickshaws and VCF members leased them, thus resulting in benefits for participants in both tiers.
- Gardening AIGAs were not very good in generating income. Obstacles included lack of market access and problems selling the vegetables given the seasonal glut on the local market. Still, women appreciated the gardening activities for their contribution to family nutrition.
- In the two CMOs with handicraft AIGAs that the assessment team interviewed, both initiatives had failed. In one ECOFISH^{BD} CMO, the women were trained and given material by a local NGO to weave mats used for various commercial uses, including transporting fish. In one CREL CMO, women were trained by a Bangladeshi NGO, Hathay Banano, to knit small children’s toys. Both CMOs said they were abandoned by the NGOs and left with completed products but no buyers.

In addition, among mini-survey respondents who identified their specific needs in order to make a better contribution to the co-management of natural resources, two-thirds mentioned the need for more AIGAs. Examples included the need for additional training and/or resources in sewing/tailoring (19.5 percent), tourism (9.8 percent), and livestock rearing (7.3 percent).

Figure 3: Individual Perceptions of Benefits from NRM Involvement

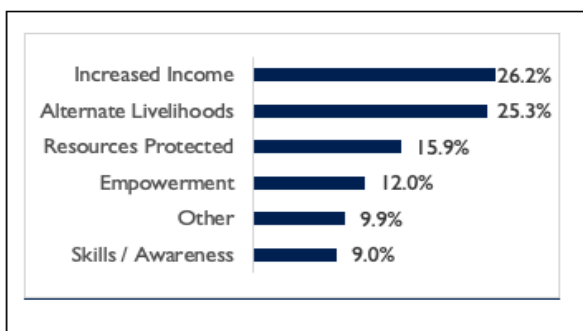
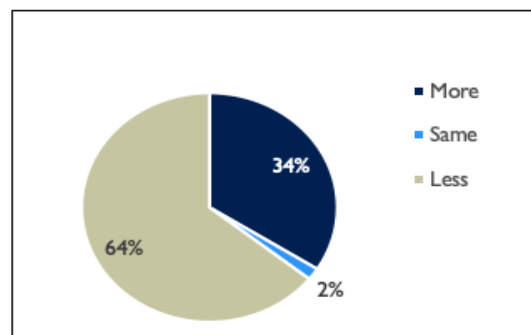


Figure 4: Use of Natural Resources Five Years Ago Compared to Today



Mini-survey respondents also were asked open-ended questions about benefits for their family or community from their involvement in co-management, and their responses confirmed the FGD data about increased income. Figure 3 also shows the other top responses from the mini-survey. It is notable that 12 percent of respondents mentioned empowerment, an abstract but important co-management objective, since they were not prompted with answer choices. Improved skills, mentioned by 9 percent, were a source of pride and are in high demand. Almost one-sixth of mini-survey respondents (15.6 percent) identified protection of natural resources as a benefit of their participation in CBM activities. However, as shown in Figure 4, two-thirds of

mini-survey respondents (64 percent) said their family or community uses more natural resources in their local area now compared to five years ago. Only one-third of respondents (34 percent) said their family or community now use fewer local natural resources.

The available literature on this topic is consistent with this finding. For example, to determine the impact of alternative livelihood strategies on conservation objectives, the United Kingdom's Department for International Development (DFID) and USAID supported a 2014 systematic review of 106 projects, including five in Bangladesh.⁸⁵ The review concluded that only nine of the interventions had sufficient data to show that the alternate livelihood activities were effective in either improving local attitudes to conservation, reducing environmentally-damaging behavior, or improving the conservation status of a biodiversity target. The review cited a study of MACH, which concluded, "...that the introduction of multiple alternative occupations to wetland resource users had the desired effect of increasing income and decreasing fishing effort, but...restrictions on fishing...that were unrelated to the alternative livelihood interventions had likely contributed significantly to this change in behaviour."⁸⁶

A 2017 peer-reviewed controlled study of an AIGAs including 1,559 household living in or near the Chunati Wildlife Sanctuary concluded that "...income from livelihood support activities had increased and that the supported peoples' lifestyle had improved during the intervention period. In contrast, the participants' income from forest resources declined considerably."⁸⁷ While the assessment team FGDs found that AIGA participants' income increased, they also showed that household use of natural resources had increased. This finding is not necessarily inconsistent with the Chunati study, which focused on income generation from resource extraction, not overall household use of natural resources. Nor does it contradict this assessment's conclusion that there is weak evidence to support the AIGA/resource conservation hypothesis since the Chunati study focused at the household level, not the conservation status of the PA.

3.4.2 What indirect benefits (such as improved educational opportunities) have accrued?

As shown in Table 9, in about two-thirds of FGDs, at least one participant mentioned improved education for their children (67 percent) and improved family health and/or nutrition (61 percent) as indirect benefits of their participation in CBM of natural resources. In more than one-third of FGDs (38 percent), at least one participant mentioned improved forest resources. Other indirect benefits mentioned included improved financial literacy and adult education (19 percent of FGDs), reduced forest dependency (16 percent), improved sanitation/hygiene (13 percent), improved GOB-community relations (11 percent), and taking part in decision-making (9 percent).

CMC FGD participants were most likely to cite improved children's education and reduced forest livelihood dependency as indirect benefits, while VCF participants were most likely to mention improved children's education, family health or nutrition, and sanitation/hygiene as indirect benefits. CHT CMO participants cited only three indirect benefits of improved education, health

⁸⁵ Roe, Dilys, et al. 2015. Are alternative livelihood projects effective at reducing local threats to specified elements of biodiversity and/or improving or maintaining the conservation status of those elements? *Environmental Evidence*. <https://environmentalevidencejournal.biomedcentral.com/track/pdf/10.1186/s13750-015-0048-1>.

⁸⁶ Roe, et al. 2015, p. 15, citing Mijani-Rahman Md, Begum A. Implication of livelihood diversification on wetland resources conservation: a case from Bangladesh. *J Wetlands Ecol.* 2011; 5:59-65.

⁸⁷ Rahman, Mohammad Mahfuzur, Md. Abdullah Al Mahmud, and Farid Uddin Ahmed. 2017. Developing alternative income generation activities reduces forest dependency of the poor and enhances their livelihoods: the case of the Chunati Wildlife Sanctuary, Bangladesh. <https://www.tandfonline.com/doi/full/10.1080/14728028.2017.1320590>.

or nutrition, and improved forest resources or environment. ECOFISH^{BD} FGD participants noted only improved children’s education and health or nutrition as indirect benefits.

Table 9: FGD Participants’ Perceptions of CBM Indirect Benefits

Type of Indirect Benefit	CMCs (11)	VCFs (8)	CHT CMOs (5)	ECOFISH ^{BD} CMOs (4)	Average
Improved children’s education	64%	75%	80%	50%	67%
Improved family health or nutrition	45%	63%	60%	75%	61%
Improved forest/environment	36%	38%	80%	0%	38%
Financial literacy/adult education	38%	38%	0%	0%	19%
Reduced forest dependency	64%	0%	0%	0%	16%
Improvement in sanitation/hygiene	0%	50%	0%	0%	13%
Improved GOB/community relations	45%	0%	0%	0%	11%
Can take part in decision-making	0%	38%	0%	0%	9%
Increase in social capital	18%	0%	0%	0%	5%

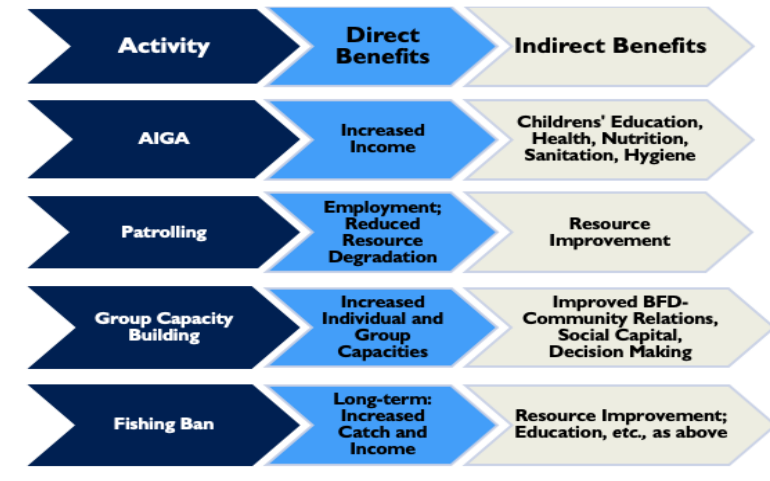
Among FGD participants, only CMC members cited indirect benefits related to reduced forest dependency, improved GOB-community relations, and increased social capital. These findings might reflect the element of environmental awareness and social responsibility in the PA co-management activities since NSP and the active participation of the BFD in the CMCs. VCF members were the only FGD participants who reported improvements in sanitation and hygiene. The improvement in financial literacy and adult education reported by CMC and VCF FGD participants reflects the highly appreciated financial literacy training for women that CREL conducted as part of its AIGA and community savings and loan interventions. The greater diversity of indirect benefits cited by CMC and VCF members reflects the diversity of AIGAs and the capacity-building supported by CREL. In addition, since NSP there has been a strong element of awareness raising about the various benefits for communities from healthy ecosystems.

3.4.3 How do community members connect the indirect benefits to the CBM investments?

Figure 5 depicts how beneficiaries understood the links between CBM involvement and direct and indirect benefits, as explained by participants in assessment FGDs with CMO members.

In FGDs, CMO members expressed a clear understanding of the relationship between co-management activities and direct and indirect benefits. They saw AIGAs as a direct pathway to increasing their income, which indirectly can improve their children’s education and family members’ health, nutrition, literacy, sanitation and hygiene, etc. They also widely understood patrolling to provide employment, reduce illicit resource extraction, and improve resource quality. They further viewed training that led to improved individual and group capacity as indirectly contributing to improved relations with the BFD, strengthened social capital, and increased participation in decision-making that affects communities’ lives. ECOFISH^{BD} CMO members understood the linkages between the short-term fishing ban and its effect on increasing their catch and income in the long run, with the same indirect benefits as above.

Figure 5: Beneficiaries' Understanding of the Links Between CBM and Its Direct and Indirect Benefits



3.4.5 Conclusions: Direct and Indirect Benefits

The consensus of KII and FGD participants was that the AIGAs supported by USAID NRM activities have directly improved beneficiaries' livelihoods, increased household income, and generated other positive indirect benefits related to their children's education and family members' health and literacy. The theory of change that AIGAs also support improved conservation of natural resources is not supported by assessment data and the literature. The assessment team could find no evidence that AIGAs resulted in PA conservation, nor have they been able to compensate for lost income as a result of well-enforced prohibitions against resource extraction.

The assessment team concludes that there is insufficient evidence to support the AIGA-conservation theory of change, but that AIGAs are nonetheless an appropriate element of a co-management program to engage communities in the intervention and to serve the needs of women and other vulnerable groups. Several considerations should have a bearing on future AIGA programming:

- AIGAs are appreciated, especially because most AIGA beneficiaries are women and the income they generate is a meaningful contribution to the household budget, which contributes to increased family investment in nutrition, health, and education. However, men are responsible for the most damaging illegal resource uses, including tree felling, poaching, and overfishing. To have a significant impact on resources conservation, AIGAs need to reach men and generate sufficient and sustainable income to compensate for the loss of natural resource-dependent revenue.
- AIGAs provide an excellent entry point for engaging a community in broader co-management activities. Because they are appreciated and generate direct benefits, even if they are not enough to dissuade all illicit extraction, they provide a foundation for involving communities in conservation awareness-raising, community patrolling, and other co-management activities.
- Many AIGAs promoted by USAID's NRM portfolio are not well conceived. They often lack sufficiently developed value chains and dependable market links. There are few AIGAs

supported by the program that rise to a sufficient level of income generation to qualify as an alternate livelihood. Alternate livelihoods are needed to pull men, in particular, away from their current illegal and unsustainable resource extraction livelihoods.

3.5 HOW MIGHT RESULTS FROM THIS ASSESSMENT OF CBM INFORM AND SUPPORT BANGLADESH'S JOURNEY TO SELF-RELIANCE AND THE U.S. INDO PACIFIC VISION?

USAID's J2SR policy framework focuses on “a country's capacity to plan, finance, and implement solutions to local development changes and a commitment to see these through effectively, inclusively, and with accountability.”⁸⁸ Bangladesh falls below average in all but two of the 17 J2SR commitment and capacity indicators.⁸⁹ For commitment metrics, Bangladesh ranks 14th from the bottom of 137 low- and middle-income countries on USAID's Fiscal Year 2020 J2SR Country Roadmaps. It does better on the capacity metrics but is still well below the average score. The J2SR metric for the country's “Biodiversity and Habitat Protections” is also below average at 0.47 on a scale of 0 to 1. Given the low economic status of natural resource dependent communities, it is not surprising that Bangladesh's metric for “Poverty Rate” is the second lowest among the 17 indicators; only the score for “Liberal Democracy” is lower. For “Open Government,” another J2SR metric important to USAID's NRM sector investment, the country is just about average among the 137 countries with a score of 0.3 on a scale of 0 to 1.

One of the three objectives of USAID's Indo-Pacific Vision is “Improve the Management of Natural Resources.”⁹⁰ Of greatest relevance to the NRM sector is the Indo-Pacific Vision's focus on a) strengthening legal frameworks for NRM, b) fostering private sector engagement on sustainable supply chains, and c) supporting legal and sustainable forestry and fishing. The sections below discuss how USAID/Bangladesh's CBM-related activities support improvement in the J2SR metric and meeting the Indo-Pacific Vision's NRM objective.

3.5.1 What implications are there via CBM for enhancing the commitment and capacity of the GOB towards improved management of natural resources?

The USAID NRM sector is closely aligned with the following six J2SR metrics.

Commitment

Open Government: The co-management approach supports sharing decision-making between GOB resource management agencies (BFD, DOF, MOL, and others). For example, the 2017 PA Rules prescribe CMC membership consisting of nine GOB members (including technical agencies and administrative authorities) and 12 public members (including resource users, local elite, trade representatives, and others). Fisheries' CMOs both in the wetlands and coastal regions follow a similar pattern of government and public membership. USAID PA co-management programming has, over the years, developed constitutions, by-laws, capacity-building, and monitoring programs to ensure effective CMO management that supports government accountability, community participation, forest management decision-making, and complaint mechanisms.

Economic Gender Gap: All CMOs interviewed responded affirmatively to questions about women's participation in co-management activities. All USAID NRM sector activity reports described

⁸⁸ USAID. 2019. The Journey to Self-Reliance <https://www.usaid.gov/selfreliance>.

⁸⁹ USAID. 2019. Bangladesh J2SR: Fiscal Year 2020 Country Roadmap. <https://selfreliance.usaid.gov/country/bangladesh>.

⁹⁰ USAID. 2019. USAID's Strategic Approach to Advancing America's Vision for a Free and Open Indo-Pacific. <https://www.usaid.gov/indo-pacific-vision/usaid-strategic-approach>.

extensive women-oriented economic activities. AIGAs in particular were focused on women, in some cases women-only groups (e.g., handicrafts). CREL supported training for nearly 700 women in financial literacy and dozens of women's savings groups to ensure the sustainability of AIGAs. In the aggregate, these activities supported economic equality as well as their primary purpose of reducing unsustainable resource extraction.

Biodiversity and Habitat Protection: The USAID NRM sector has consistently had the objective to improve NRM and ecosystem resilience. For example, with USAID assistance the percent of PA in Bangladesh has increased from 1.8 percent (2013-14) to 4.2 percent in 2017 with the aim to reach 5 percent by 2020.⁹¹ With assistance from ECOFISH^{BD} the MOFL declared a 3,188 square kilometer Nijhum Dwip Marine Reserve in June 2019.

Capacity

Government Effectiveness: USAID NRM sector activities have all worked to improve the quality of public services. The activities have developed and conducted multiple capacity-building programs at all levels of government service with an emphasis on mid-and lower-level officers. These efforts included a three-month resident training, international study tours and conferences, and in-service short courses. Activities have developed training modules and training of trainers. CREL worked with universities to develop co-management curricula for undergraduate and graduate education.

Civil Society and Media Effectiveness: USAID NRM sector activities all build community organizations and, as the essence of co-management, work to empower their voice with government for resource management and dispute resolution. They also engaged media of various types in public awareness raising about local and global environmental concerns.

Poverty Rate: Bangladesh scores particularly low on the poverty metric. Resource-dependent households that are the primary target beneficiaries of USAID NRM activities are among the poorest people in the country. In forest areas, the BFD command-and-control approach means that forest-dependent households are, by definition, law breakers, even in the case of tribal communities who predated the declaration of their homelands as part of the forest estate. Bringing these people into the realm of accepted partners is part of the CM model. This includes employment in forest management in various capacities, such as community patrol guards (in both forest and fisheries areas) or alternate income generation.

3.5.2 How might the CBM model serve to inform and improve the management and resilience of natural resources in the Indo-Pacific region?

Strengthening Legal Frameworks for NRM

The USAID fisheries and PA co-management activities have both involved substantial work in developing the NRM legal framework. Table 7 lists 16 national legal and policy accomplishments. In addition, USAID NRM activities worked to support policy implementation, including:

- Promoting subnational legal actions such as gazetting a PA or a fisheries sanctuary, registering a VCF-CHT with local government, or certification of a CMO with the Ministry of Social Welfare so it can receive grants from USAID or sources.

⁹¹ The submission of Bangladesh's Forest Reference Level for Reducing Emissions from Deforestation and Forest Degradation (REDD+) under the United Nations Framework Convention for Climate Change, MOEFCC, GOB. December 2018.

- Developing PA management plans, local resource management ordinances, and dispute resolution forums.
- Empowering stakeholders with increased knowledge about the legal framework and their rights and responsibilities as well as skills to act and advocate on their own behalf.

Fostering Private Sector Engagement on Sustainable Supply Chains

USAID fisheries and PA activities have engaged private sector supply chains. Fisheries activities inherently engage with supply chains, while USAID support is focused on ensuring optimum catch and conservation interventions, such as patrolling, sanctuaries, gear regulation, and fishing bans during peak spawning periods. USAID fisheries activities also support value added interventions, such as cold chains and fish processing. As resource extraction is not permitted in protected areas, enterprise opportunities are limited to non-extractive primarily ecotourism. The NRM activities have also supported AIGAs for forest-dependent households, many of which are linked to value chains. CMCs supported by USAID funds often have small enterprises, such as small stores, restaurants, and leasing auto rickshaws that engage supply chains. USAID's activities supported these with financial management training, livelihood technical assistance, and guidance in establishing and operating village savings and loan groups.

Supporting Legal and Sustainable Forestry and Fishing

As described above, the USAID Bangladesh NRM sector is thoroughly engaged in supported legal and sustainable forestry and fishing. USAID's support has, on the one hand, helped define what is legal and sustainable and, on the other hand, helped custodians and resource users to engage in productive and sustainable resource management.

3.5.3 What role might the private sector play in CBM?

USAID NRM activities have already defined a multifaceted role for the private sector in CBM. The private sector engagement activities are fairly standard for the AIGA and fisheries value chains. Nonetheless, the assessment team noticed issues with several of the interventions. For example, in two cases it learned that activity-supported linkages between handicraft organizers had failed, leaving local women with processed goods and no market for them. While CREL did detailed market analysis before selecting types of AIGAs and livelihoods activities, some of these failed to generate income. In one case, women vegetable growers only had linkages with local markets and were not able to sell their product profitably. CREL also set up demonstration plots for growing dragon fruit, which did grow and produce fruit. However, the concrete posts and wire needed to support the dragon fruit vines were too steep, and weak market linkages meant that the only buyers were nearby hotels, which offered unsustainable low prices for the fruit.

The assessment team found that there is room for innovation in the NRM activities' private sector engagement. It is important to recall that NRM activities target populations are some of the country's most poor and vulnerable and are often in remote locations. Private sector engagement will need to be carefully designed to achieve sustainable, equitable, and profitable benefits for the target population. USAID Bangladesh is supporting a variety of market-based agriculture and small enterprise activities. Experience and expertise from these activities could well prove useful to inform innovations in the NRM sector.

3.5.4 Conclusions

The discussion above provides ample evidence that the USAID Bangladesh NRM sector is compatible with USAID's J2SR and consistent with the Indo-Pacific Vision. As important, most of USAID'S NRM activities in the sector have performed well, and the institutionalization of sustainable and just CBM of natural resources has progressed markedly over the past 21 years. However, there is still substantial work to do to fully establish effective co-management, as discussed in the following recommendations section.

4.0 RECOMMENDATIONS

4.1 CONTINUED INVESTMENT

USAID should continue its investment in co-management of PAs, fisheries, and the CHT forests until a critical mass of CMOs in each sector demonstrate their ability to sustain a full set of operations and the BFD, the DOF, the Department of Environment, and other GOB agencies have clearly demonstrated the commitment and capacity to operate co-management programs. Specific recommendations include:

Protected Areas

Support for PAs should continue under Protibesh, CHTWCA, Community Partnerships to Strengthen Sustainable Development (COMPASS), and LocalWork activities if the BFD agrees that USAID can participate as a full partner and technical advisor to the BFD CMEC. These discussions should not wait for the Protibesh IP to be selected.

Wetlands Fisheries

Provide policy support, perhaps under Protibesh, to establish a permanent leasing policy for wetlands co-management and related implementation guidelines. If resources are scarce, USAID may consider not renewing direct support for wetlands fishery CMO field implementation. USAID has a comparative advantage in wetlands policy, but field activities in forest PAs and CHT should be higher priorities. Another factor USAID should consider is that, as compared to PA CMOs, fishing groups that have secured long-term leaseholds of their fisheries have demonstrated their ability to sustainably manage their resource by controlling access and limiting overfishing. Nevertheless, if USAID does decide to renew its support for *jalmahal* wetlands field activities, it should determine what other donors are doing in these areas.

CHT

Renew the USDA CHTWCA agreement with a strong policy development component focusing on the area recommended below. Alternatively, USAID may consider supporting Protibesh to lead a CHT policy development intervention if UNDP is not in a position to undertake the politically sensitive policy development. In terms of field activities, CHTWCA is ideally placed to support CBM biodiversity activities. For example, biodiversity corridors linking selected common forests should have outsized conservation impact because the investment would be to expand the activity's geographic target area rather than to change the strategy. CHTCWA should push for registration of village common forests, which would stimulate increased community and tribal interest in establishment of these VCFs-CHT.

Coastal Hilsa Fisheries

Before renewing the ECOFISH^{BD} agreement, USAID should require that WorldFish demonstrate DOF buy-in to both the proposed hilsa fisheries CMO structure and the draft hilsa Fisheries Management Action Plan. WorldFish also should provide evidence of meaningful coordination plans with the BSCMFP.

Arannayk Foundation

Consider funding the Arannayk Foundation to make subgrants in important geographic areas and for niche interventions not covered by other activities in the USAID NRM portfolio. CBM, rather than co-management, is an Arannayk Foundation specialty. Support to Arannayk Foundation contributes to J2SR goals, since it is a Bangladeshi organization, and should include a well-developed knowledge management activity to help learn lessons over time.

4.2 PA CO-MANAGEMENT

The SUFAL project provides an opportunity for USAID to strategically support PA co-management, leveraging World Bank resources. SUFAL has a strong component of PA co-management, including plans to form a BFD CMEC charged with preparing an annual development plan for PA biodiversity conservation and for sustainable AIGAs. USAID should engage with the CMEC to ensure that USAID's PA co-management experience, best practices, and learning are fully considered by the CMEC. This should not wait until Protibesh is active because the CMEC is expected to begin activities soon, and engagement would be most effective at this early stage. Active pre-Protibesh CMEC engagement by a highly-qualified Bangla-speaking USAID staff member would be best. S/he could also be tasked with taking preparatory steps with the BFD for Protibesh. Priorities for continued engagement under Protibesh include:

- Apply the CREL CMO capacity scorecard to all PAs for CMCs and VCFs. Use this assessment to set capacity-building plans, including strong components of self-governance, revenue generation, and budget management.
- Revitalize the VCFs and PFs, renew their full set of activities, and build their capacity to ensure they fulfill their function of providing effective citizens' representation to the CMC. VCFs should remain a focal point for AIGAs and PA forest management activities.
- Build BFD capacity to oversee CMO capacity-building, data collection, and analysis and to apply the information in adaptive learning.
- Draw on the large library of CREL training modules and conduct training-of-trainers (TOT) workshops for BFD and Protibesh staff to build a cadre of skilled field staff charged with building CMO capacity.
- Establish and implement monitoring, evaluation, and learning (MEL) systems for NRM activities that track the outcomes of capacity-building and other activities in addition to simple output data, such as number of training participants.
- Connect the CMEC with an independent Nishorgo Network in the spirit of the co-management principle of collaboration. Ensure that the Network is not sidelined from SUFAL PA co-management and that it receives the support needed to become an effective national CMO apex organization (see also section 4.3).

An important element of USAID collaboration with the CMEC should be to promulgate PA co-management operational guidelines to provide DFOs and range officers with the means to interpret the PA Rules and provide them with specific descriptions of their rights and responsibilities. These guidelines would help with the often expressed complaint of turnover among BFD staff interacting with the CMCs by establishing a common set of practices for the BFD and reducing the problems that occur when BFD officers are rotated to a post with responsibility for a PA.

4.3 BANGLADESH FOREST DEPARTMENT

- Engage the BFD CCF and senior staff as well as supervisory staff of the World Bank’s SUFAL project in a series of frank discussions about the PA policy and the BFD’s willingness to share control of PAs. These discussions should go beyond general principles into the problematic specifics of co-management, such as revenue sharing (see Text Box 6) and the BFD’s willingness to financially support CMC activities (e.g., community patrol guards, ecotourism, and facility maintenance). The SUFAL project emphasizes PA co-management, and USAID should leverage SUFAL to encourage the BFD to adopt participatory and pro-poor approaches.

Text Box 6: Urgent Recommendation

USAID should engage the BFD in a discussion about the 2017 PA Management Rules revision currently underway and ensure that CMCs continue to have control over revenue sharing or other sustainable sources of funding and retain the authority to use those funds in implementing jointly approved PA management activities. An expert in Bangladeshi administrative law should determine the basis of the audit concerns and, if valid, assist in developing an appropriate revision.

- Engage the BFD in a less urgent albeit important discussion about the issues and opportunities in the CHT. It is not hyperbole to suggest that there is a historic opportunity in the CHT with the recently initiated forest reserve co-management pilot under USAID’s CHTWCA activity. This initiative, which began as a small activity to restore a few hundred hectares of watershed uplands, is notable because it was undertaken with the previously withheld consent of the CHT Regional Council.⁹² The objective would be to establish an agreement between the BFD and the Regional Council for further co-management of CHT reserve forests. The tribal communities will not accept a replication of the plains land co-management, but the peace treaty-based rules governing the CHT allows for alternatives to the rules that apply to the rest of the country.

While a broader agreement is being pursued, the CHTWCA should nurture the BFD/tribal upland watershed restoration, expanding it at a pace that allows trust to build ahead of activities. Given the challenges the BFD faces in the CHT, perhaps it would consider exchanging some of its control over the forest reserve in exchange collaborative forest management. One possibility would be to grant permanent or long-term land rights inside forest reserves for tribal people to establish new VCFs-CHT. Such an approach—exchanging community land rights in exchange for meeting forest restoration and productive management objectives—might offer a solution for plains land social forestry.

⁹² Communication with Raja Devashish Roy, October 8, 2019.

- Foster discussions with the BFD about operational matters. A high priority would be to create an institutional home for co-management at BFD headquarters. While the CMEC is a promising start, a stronger solution would be to create a Deputy CCF position, with technical staff empowered to work with DFOs and range officers to support CMO capacity-building, assist with CMC annual development plans, and monitor PA-related activities. This approach should help, moreover, with changing the BFD's traditional command and control mindset.
- USAID should encourage the BFD to demonstrate its commitment to co-management by supporting the Nishorgo Network with recognition and office space in the BFD headquarters. USAID should assist the Nishorgo Network to become an active member of the CMEC and empowered to represent CMOs in PA policy, strategy, annual planning, and budgeting. A small permanent staff should be led by an experienced co-management specialist under the direction of a board elected by CMC leaders. A strengthened Nishorgo Network could take charge of the Nishorgo.org website and the annual CMC meeting.
- Help the BFD to introduce co-management curricula in BFD-supported forestry training institutions at all levels: vocational, technical, and professional. CREL initiated such training, but it should be renewed and upgraded with a needs assessment and curriculum development plan. Adding new courses is difficult for Bangladeshi educational institutions that have set curricula across all levels. Nevertheless, this task is essential to building a cadre of community-sensitive foresters skilled in co-management. It could be an appropriate task for the Mission's new COMPASS activity with the U.S. Forest Service.
- USAID should use the COMPASS activity to support the BFD's Resource Information Management System (RIMS) in support of PA co-management. Among other things, RIMS should conduct time-series analysis of forest cover and encroachment of PAs, especially those with the longest support of the USAID co-management portfolio, to assist in assessing conservation impact. RIMS should also be engaged in management planning of PAs and other lands such as in the CHT.

Coastal Fisheries

If ECOFISH^{BD} is renewed, the following elements should be included in the activity:

- ECOFISH^{BD} should assist the DOF to adopt an appropriate hilsa fishery CMO structure and to incorporate this structure in the new World Bank coastal fisheries project. Without assurances to this effect, USAID should reconsider the fisheries co-management strategy.
- ECOFISH^{BD} should engage with the GOB team preparing the World Bank's BSCMFP DPP and coordinate USAID's coastal fisheries investment with the larger project.
- ECOFISH^{BD} should conduct a well-designed assessment of the impact of the hilsa fishing ban on fishing households and develop strategies for minimizing the hardships caused by the ban. This assessment should include social, economic, and technical aspects of the ban and alternatives to offset the hardship.

- ECOFISH^{BD} should conduct a review of the effectiveness of its AIGAs and restructure the activity to maximize the income impact on the poorest fisher households. This restructuring should include all options, such as employment, value added processing, and engagement of *aratdurs* to enlist their support in developing AIGAs during the ban.

4.4 ALTERNATIVE INCOME GENERATING ACTIVITIES

- AIGAs should be promoted in USAID NRM sector activities, despite the difficulty in finding efficacious opportunities, because they do have benefits for forest-dependent households and as a means of building community support for co-management. AIGAs should be a component of an integrated co-management activity, balanced with training and capacity-building, resource management interventions, and policy development.
- Conduct an assessment of AIGAs introduced by CREL to determine the most effective based on diverse criteria, such as most profitable, most appreciated by women or economically disadvantaged people, and greatest effect on decreasing forest extraction.
- When the objective is to find alternate income sources for resource users, then USAID-supported activities should be required to apply AIGA best practices including:
 - Identify target resource users and understand their motivations and capacities.
 - Identify profitable, manageable AIGAs through value chain and market assessments.
 - Prepare model business plans paired with sources of finance and capacity-building.
 - Plan and undertake outcome-focused M&E, learning, and adaptive management.
- AIGAs that provide women with supplementary (as opposed to alternate) income should be supported for their direct and indirect benefits of empowering women, improving household income, and enhancing access to education and improved health. While AIGAs may have some benefit to resource conservation such as reduced fuelwood extraction, they should not be over-valued for their conservation benefits.
- To have a significant impact on resources conservation, AIGAs need to reach men and generate sufficient and sustainable income to compensate for the loss of natural resource-dependent revenue. If AIGAs' benefits are insufficient to offset livelihood losses from USAID-promoted NRM interventions, USAID should ensure that those households are in some way compensated for those losses under the maxim of "do no harm."
- When supporting handicraft AIGAs, IPs should ensure that the interventions include training and that the handicrafts have a reliable market and sources of supplies and credit. The IPs must ensure that any third-party group supporting the handicraft AIGAs is solvent, has an established history in the business, and agrees to a dispute resolution mechanism.

ANNEXES

ANNEX I: STATEMENT OF WORK

USAID/Bangladesh: Economic Growth Office

Tasking Request: S008

Date of Request: May 7, 2019

Type of Task: Special Study or Assessment: Natural Resources Management (NRM) sector assessment

Description of Activity

This is a sector assessment covering a broad range of natural resources management activities in Bangladesh supported by USAID/Bangladesh and other donors. Over the past two to three decades in Bangladesh, the tradition of top-down management of natural resources has given way to a more participatory approach known as co-management. The examples of participation are in the co-management of protected areas and wetlands pioneered by the USAID-supported Management of Aquatic Ecosystems through Community Husbandry project, Nishorgo Support project, Integrated Protected Area Co-management project, and Climate-Resilient Ecosystems and Livelihoods project. In addition, USAID's Bengal Tiger Conservation and Enhanced Coastal Fisheries in Bangladesh activities continued USAID investments in the co-management sphere by actively engaging local communities to advance tiger conservation and fisheries management.

The co-management model allows communities and their representatives to "co-manage" the environment in conjunction with Forest Department officials. While much of this work focused on bringing interested parties together to achieve better resource management at the local level, USAID projects have also partnered with the national government to improve national policies and strengthen public institutions that are charged with protecting the environment in Bangladesh. These projects emphasized developing the capabilities of local resource management organizations to work with local communities to help them understand, accept and assume their roles and responsibilities under a co-management approach in collaboration with the Bangladesh Forest Department. The projects also promoted eco-friendly and climate-resilient alternative income generating activities and community-based eco-tourism to provide financial benefits to the communities living in and around the protected areas.

The objective of this assessment is to examine and evaluate conservation interventions that have engaged local communities in the management of natural resources, especially in and around protected areas and waterbodies. The assessment will provide evidence documenting the current status of community-based management (CBM) and similar approaches. It will further assess whether the conservation interventions (comprising both USAID and other donors) have resulted in the institutionalization of co-management approaches, to what extent alternative income generating activities have helped to conserve natural resources, and whether co-management models have remained functional. Based on the findings, the assessment will provide recommendations to USAID for current activities as well as inform future designs and interventions in the NRM sector.

Research Questions

1. What is the current status of community-based management (CBM) in the NRM sector in Bangladesh? To what extent has the co-management model been functional in the NRM sector? Evaluate the strengths, weaknesses, opportunities, and threats facing CBM.
2. How effective have Protected Area policies been for creating an enabling environment for CBM? What more needs to be done to increase the sustainability of progress made to date? Are there gaps or weaknesses in existing policies that need to be addressed to improve CBM effectiveness?
3. How have USAID and other donor investments contributed toward building stakeholder and institutional capacity for effective protected area co-management? In what ways have these development interventions incorporated learning to strengthen local governance structures for NRM? How has this contributed to the development of overall environmental governance in the country?
4. Has investments in CBM led to increased direct benefits (increased jobs or household income) in the communities? Do communities connect the direct benefits to the CBM efforts? Has there been increased indirect benefits (such as improved educational opportunities), and do the community members connect the indirect benefits to the CBM investments?

Geographic Coverage

The assessment will cover NRM sites from USAID and other donor projects in the divisions of Chattogram, Khulna, Barisal, and Sylhet.

Dates of performance and timeline

Expected start date is o/a June 9, 2019 (after Eid holidays) with field work commencing o/a June 16, 2019. The assessment is estimated to be no more than 60 days.

Team Composition/Qualifications of Consultants

USAID recommends a three-person team for undertaking this assessment. The team will include a Team Leader/Evaluation Specialist, a Senior NRM Governance Specialist and a Socio-Economic Development Expert.

Team Leader/Evaluation Specialist (National/International):

- The team leader will provide overall leadership for the team, and s/he will finalize the evaluation design, coordinate activities, arrange periodic meetings, consolidate individual input from team members, and coordinate the process of assembling the findings and recommendations into a high quality document. The team leader will possess good organizational and teambuilding skills. S/he must demonstrate cultural sensitiveness, particularly when interacting with a range of stakeholders, from high level government officials to community members. S/he will lead the preparation and presentation of the key evaluation findings and recommendations to the USAID/Bangladesh team and the major stakeholders.
- Must have a post graduate degree in natural resources management, environmental science, or in a related field.

- S/he will be a seasoned expert with demonstrated international experience of leading at least two evaluations/assessments in a developing country with similar scope and complexity in natural resources management and/or natural resources governance program within the last 5-6 years.
- S/he should have extensive experience in conducting quantitative and qualitative evaluations.
- S/he must be familiar with USAID regulations and systems including performance monitoring and evaluation guidance.
- Prior experience in conducting NRM program evaluations and assessments in South Asia is preferred.
- Excellent oral and written skills in English.

Senior NRM Governance Specialist (National):

- Must have a post graduate degree in natural resources management, environmental science or in a related field.
- S/he will have at least 7-10 years of experience in policy development and reforms associated with NRM (e.g., land tenure, wetland leasing, and community revenue sharing) and agriculture.
- S/he will have strong knowledge and demonstrated experience in environmental governance, particularly CBM.
- She will have strong knowledge and demonstrated experience of conservation and development projects, including institutional and policy approaches and financial approaches such as government/community co-management and revenue sharing, endowment funds, fee for environmental services, and private sector partnerships.
- Experience working with national and local governments is preferred.

Socio-Economic Development Expert (National):

- Must have a post graduate degree in anthropology, sociology, development studies, and economics or in a relevant field.
- S/he will have at least 5-7 years of experience in the areas of community and livelihoods development associated with NRM, particularly market driven livelihood approaches, with agriculture/fisheries and non-agricultural livelihood activities.
- Proven experience in analysis and research in the field of community development and socio-economic study in NRM is an asset.
- S/he will have strong knowledge of the Bangladeshi institutions working in the NRM sector, including the work of grassroots organizations, donor agencies, and relevant ministry partners.

Deliverables:

At a minimum, the assessment team will provide the following deliverables:

1. **Work plan/schedule:** A work plan/schedule, including data collection instruments, must be submitted to USAID for review and approval prior to conducting the assessment.
2. **Preliminary findings:** A presentation of preliminary findings will be made to USAID/Bangladesh to obtain feedback that will become part of the analysis report. An electronic version of the presentation must be shared with USAID at least one (1) business day prior to the date of the presentation.
3. **Draft Analysis report:** An electronic draft assessment report, in English, will be submitted to USAID/Bangladesh for comments and/or feedback before finalization.
4. **Final Analysis report:** The final assessment report, in English and publishable quality, should be submitted within 10 (ten) business days after the Mission provides comments and or feedback on the draft report. The final analysis report (Times New Roman, font size 12) should also include a comprehensive bibliography maintaining appropriate academic rigor.

ANNEX 2: USAID NRM SECTOR BASIC ACTIVITY DATA

Activity Acronym	Full Activity Title	Major Activities	CMO types supported	Primary Implementing Partner	Start	End	USD Funds Authorized	USD Funds Disbursed
MACH I	Management of Aquatic Ecosystem Through Community Husbandry	Fisheries co-management of <i>beels</i> , introduced the concept of AIGA to offset over-exploitation of resources, established VSGs	RMOs, RUGs	Winrock International	7/1/1998	8/31/2003	7,569,632	6,089,681
MACH II	Management of Aquatic Ecosystem Through Community Husbandry II	Continued activities established under MACH I, solidifying CMO governance, VSG and AIGAs focusing on sustainability of the approach, introduced FRUGs	RMOs, FRUGs, RUGs	Winrock International	10/30/2003	6/30/2008	3,099,433	3,099,433
NSP	Nishorgo Support Project	Established forest co-management in five protected areas, including a GOB gazetted complex of CMOs, built BFD capacity to support PA co-management, developed AIGAs and VSGs for forest-dependent households	Co-management Councils, CMCs, PFs, RUGs, and CPGs	International Resources Group	7/1/2004	6/1/2009	6,525,963	7,159,739
IPAC	Integrated Protected Areas Co-Management	Expanded NSP activities to 25 forest protected areas in five geographic clusters, incorporated MACH fisheries sites, replaced FUGs with VCFs, expanded AIGAs	Co-management Councils, CMCs, PFs, VCFs, CPGs, RMOs, FRUGs, RUGs, VCGs	International Resources Group	6/5/2008	6/4/2013	12,780,000	12,614,212
CREL	Climate-Resilient Ecosystems and Livelihoods	Strengthened and expanded work to include 45 CMO (CMCs, RMOs, VCGs), supported AIGAs for livelihood improvement	Co-management Councils, CMCs, PFs, VCFs, CPGs, RMOs, FRUGs, RUGs, VCGs	Winrock International	9/1/2012	9/1/2018	35,546,884	36,013,589

Activity Acronym	Full Activity Title	Major Activities	CMO types supported	Primary Implementing Partner	Start	End	USD Funds Authorized	USD Funds Disbursed
CHTWCA	Chittagong Hill Tracts Watershed Co-Management Activities	Supported 117 VCFs-CHT for sustainable management by involving local community and promoted sustainable land use practices for resilient ecosystems and livelihoods in the CHT	VCF Management Committee	UNDP	8/1/2013	11/15/2019	8,137,800	6,567,310
ECOFISH ^{BD}	Enhanced Coastal Fisheries in Bangladesh	Science-based fisheries co-management of hilsa and other coastal resource, improved livelihood resilience of coastal fishers, support in policymaking for coastal resource management	HCG, HGG, FMC, Community Fish Guard (CFG), UCC, UzCC, DCC	WorldFish	6/1/2014	12/31/2019	13,500,000	12,479,933
Bagh	Bengal Tiger Conservation Activity	Improved tiger survey, introduced SMART patrolling, raised tiger conservation awareness, reduced tiger/human conflict, introduced VTRT and tiger scouts	VTRTs	WildTeam	1/1/2014	1/1/2018	11,887,007	10,009,634
AF	Bangladesh Tropical Forests Conservation Foundation	Introduced CBM at private hilly areas and organized and strengthened VCFs	CBOs, VCFs	AF	9/12/2000	Ongoing	8,500,000	8,500,000
Totals							107,546,719	102,533,531

ANNEX 3: ASSESSMENT WORKPLAN AND DESIGN MATRIX

BACKGROUND

The United States Agency for International Development Bangladesh (USAID/Bangladesh) Economic Growth (EG) Technical Office issued Tasking Request S008 for the USAID Bangladesh Monitoring, Evaluation, and Learning (BMEL) Activity to conduct a Natural Resources Management (NRM) Sector Assessment. The assessment, which is related to USAID Development Objective (DO) 4, will cover a broad range of USAID-supported NRM activities in Bangladesh, and activities of other donors to the extent possible.

Over the past two to three decades in Bangladesh, the tradition of top-down management of natural resources has given way to a more participatory approach known as co-management. Examples include the co-management of protected areas (PAs) and wetlands pioneered by the following USAID-supported projects:

- Management of Aquatic Ecosystems Through Community Husbandry (MACH) Project
- Nishorgo Support Project (NSP)
- Integrated Protected Area Co-Management (IPAC) Project
- Climate-Resilient Ecosystems and Livelihoods (CREL) Project

In addition, USAID has invested in the co-management sphere by actively engaging local communities in the following projects:

- Chittagong Hill Tracts Watershed Co-Management Activity (CHTWCA)
- National Forest Inventory Activity
- Arannayk Foundation (Bangladesh Tropical Forest Conservation Foundation)
- Enhanced Coastal Fisheries in Bangladesh (ECOFISH^{BD})
- USAID's Bengal Tiger Conservation

The co-management model allows communities and their representatives to “co-manage” the environment in conjunction with Forest Department (FD) officials. Much of this work has focused on bringing interested parties together to achieve better resource management at the local level. USAID projects have also partnered with the national government to improve national policies and strengthen public institutions that are charged with protecting the environment in Bangladesh.

USAID projects have emphasized developing the capabilities of local resource management organizations to work with local communities to help them understand, accept, and assume their roles and responsibilities under a co-management approach in collaboration with various Government of Bangladesh (GOB) Ministries and Departments. The projects also promoted eco-friendly and climate-resilient alternative income-generating activities and community-based eco-tourism to provide financial benefits to the communities living in and around the PAs.

ASSESSMENT RATIONALE

ASSESSMENT OBJECTIVE

The objective of the study is to assess conservation interventions that have engaged local communities in the management of natural resources, especially in and around PAs and water bodies. The assessment will provide evidence documenting the current status of community-based co-management (CBM) approaches. It will further assess whether conservation

interventions by USAID have resulted in the institutionalization of co-management approaches, to what extent alternative income-generating activities have helped to conserve natural resources, and whether co-management models have remained functional. The study also will assess NRM initiatives by other donors to the extent possible.

AUDIENCE AND INTENDED USE

The primary intended audience for the assessment is USAID/Bangladesh. The intended use is to provide recommendations to USAID for current projects and activities as well as to inform future designs and interventions in the NRM sector. USAID also may disseminate the report widely to stakeholders, such as implementing partners (IPs), GOB agencies, other sector-specific donors, non-governmental organizations, and the Development Experience Clearinghouse (DEC). The assessment's findings and recommendations will inform future designs and implementation of NRM projects.

ASSESSMENT QUESTIONS

The assessment team will assess the sector by answering the following five principal assessment questions and 11 sub-questions.

1. Status of CBM: Functionality and SWOT Analysis – What is the current status of CBM in the NRM sector in Bangladesh? (A) To what extent has the co-management model been functional in the NRM sector? (B) What are the strengths, weaknesses, opportunities, and threats (SWOT) facing CBM?
2. Enabling Environment Policies: Effectiveness and Sustainability – How effective have PA policies been for creating an enabling environment for CBM? (A) What gaps or weaknesses are present in existing policies that need to be addressed to improve CBM effectiveness? (B) What more needs to be done to increase the sustainability of progress made to date?
3. Environmental Governance: Capacities and Structures – How have USAID investments (and those of other donors, to the extent possible) contributed to the development of overall environmental governance in the country? (A) How have these investments contributed to building stakeholder and institutional capacity for effective PA co-management? (B) In what ways have these development interventions incorporated learning to strengthen local governance structures for NRM?
4. Direct and Indirect Benefits for Communities – (A) Have investments in CBM led to increased direct benefits (such as increased jobs or household income) in the communities? (B1) What indirect benefits (such as improved educational opportunities) have accrued? (B2) How do community members connect the indirect benefits to the CBM investments?
5. Relevance to Journey to Self-Reliance and Indo-Pacific Vision – How might results from this assessment of CBM inform and support Bangladesh's Journey to Self-Reliance (J2SR) and the U.S. Indo-Pacific Vision (IPV)? (A) What implications are there via CBM for enhancing the commitment and capacity of the GOB towards improved management of natural resources? (B) How might the CBM model serve to inform and improve the management and resilience of natural resources in the Indo-Pacific region? (C) What role might the private sector play in CBM?

ASSESSMENT DESIGN AND METHODOLOGY

DATA COLLECTION METHODS

A three-person core team and support staff will conduct the NRM assessment, utilizing a mixed-methods approach with qualitative and quantitative data gathering and analysis. The assessment will be conducted over a period of ten weeks beginning with home-based desk review in late July 2019, fieldwork in August-September, and submission of a draft report in September (see Annex 2). The assessment will cover selected NRM sites supported by USAID in the Khulna, Barishal, Sylhet, and Chittagong divisions, including five districts in Chittagong division specifically identified by USAID, including three districts in Chittagong Hill Tracts (CHT) (see Figure 1). The study also will assess NRM initiatives by other donors to the extent possible (see Annex 6).

The assessment methodology is summarized in the data collection matrix (see Annex 1) that links each assessment question to specific data collection approaches and data sources. The methodology will include four sequential and interrelated processes designed to enable the assessment team to address each set of questions. These processes include: 1) desk review; 2) consultation with USAID and a wide range of stakeholders through key informant interviews (KIIs) in Dhaka as well as KIIs, focus group discussions (FGDs), and a mini-survey in and around a limited number of NRM sites in four divisions; 3) analysis of collected information and data; and 4) articulation of findings and recommendations.

Document Review

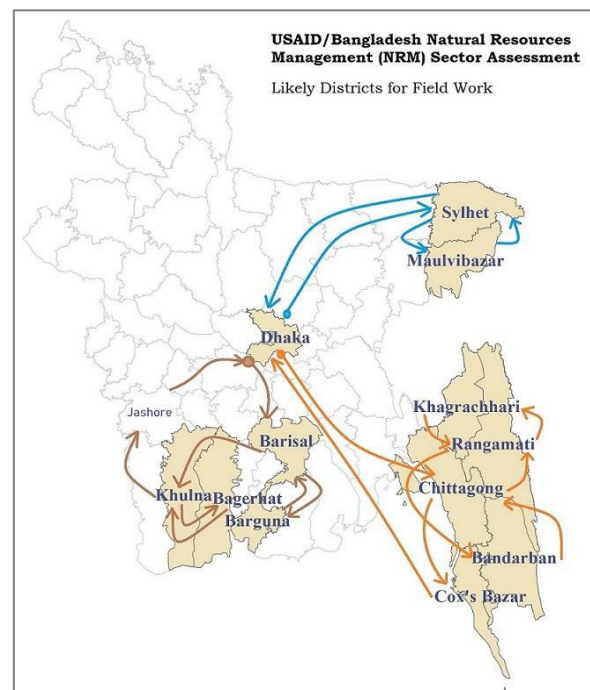
The assessment team began its work with a home-based (and ongoing) desk review of existing sources of information. Relevant sources of information include co-management activity documentation and reports, USAID program documentation, GOB documents, general technical and peer-reviewed background documents, and documents related to other donor projects in the NRM sector. Significant documentation was available to the assessment team at the time of this Work Plan preparation. The team will put further effort towards collecting additional documents from stakeholders during the course of the assessment. A partial list of key documents is included in Annex 7.

Stakeholder Consultations

The assessment team will begin with planning and limited stakeholder consultations in Dhaka. The team will travel to at least one district in each of four divisions, namely Khulna, Barishal, Sylhet, and Chittagong.

In each location, the assessment team will utilize complementary information and data gathering methods as described below.

Figure 1: USAID/Bangladesh NRM Sector Assessment – Likely Districts for Fieldwork



KIIs

The assessment team will conduct one-on-one interviews with a variety of stakeholders. Stakeholders include USAID personnel; host-government officials at the national, division and local levels; individuals working now or in the past with relevant USAID IPs; other donors and their partners; civil society organizations (CSOs); and academic and research institutions. Persons selected to participate in the KIIs will be individuals in key stakeholder groups with unique knowledge of co-management program activities supported by USAID and other donors, selected purposively in consultation with USAID and IPs.

- a. Relevant GOB institutions include the Ministry of Environment, Forest, and Climate Change (MOEFCC), Ministry of Fisheries and Livestock (MOFL), and Ministry of Land (MOL).
- b. Relevant local organizations include the Bangladesh Center for Advanced Studies (BCAS), Center for Natural Resource Studies (CNRS), Dhaka Ahsania Mission, and Society for Health Extension and Development (SHED).
- c. Relevant academic institutions include the Institute of Forestry and Environmental Sciences, Chittagong University (IFESCU) and Wildlife Rescue Center (WRC) of the Zoology Department and Geography Department, Jahangirnagar University.
- d. Relevant other donors include the United Nations Development Program (UNDP), Food and Agriculture Organization of the United Nations (FAO), and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

KIIs will be conducted by administering a semi-structured questionnaire, submitted for USAID approval as part of this work plan (see Annex 3). The assessment team leader with at least one Bangladeshi team member and an interpreter will conduct KIIs in division and district main cities as well as some KIIs with community leaders and other relevant individuals at NRM sites. Bangladeshi team members will travel to additional NRM sites for other KIIs, FGDs, and mini-surveys, as discussed below. A comprehensive list of the individuals and organizations consulted will be included as an annex to the Final Assessment Report.

FGDs

The Bangladeshi members of the assessment team will conduct FGDs with members of NRM co-management organizations (CMOs), village conservation forums (VCFs), women's livelihood groups, and other beneficiary groups supported by both USAID and non-USAID donors. A local language interpreter will support the assessment team in CHT. Participants will be gathered by community leaders and/or organizations working in the local areas, most of whom are known to team members. The team will organize separate FGDs with representatives of ethnic/indigenous groups and with women and men, if appropriate and possible. Each FGD will include 7-10 participants and will follow best-practice protocols, including assignment of a moderator and a note-taker. Moderators will use a semi-structured questionnaire submitted for USAID approval as part of this work plan (see Annex 4). Whenever possible, the team will have separate FGDs with female and male community members. Two female members of the team will facilitate FGDs with women, where needed and appropriate.

Mini-Survey

Before each FGD, the Bangladeshi members of the assessment team will conduct a short mini-survey of participants. The survey instrument (see Annex 5) multiple pre-coded answer possibilities for quick enumeration and easy daily data aggregation. The survey data will not be statistically significant or valid, but they will help to triangulate information gathered through other methods and will add texture to the assessment analysis.

Overall, the assessment team proposes to conduct approximately 70 KIIs and 45 FGDs involving up to 400 people in total. Table I shows how the KIIs and FGDs will be distributed among the four target divisions and Dhaka. (The actual number of KIIs and FGDs may be higher or lower than this estimate depending on the availability of key informants, the identification of additional key informants, and conditions encountered in the field.)

Table I: Estimated Number KIIs and FGDs by Location

Data Collection Activities	Dhaka	Chittagong	Barishal	Khulna	Sylhet
KIIs with USAID and IP staff	7	2	1	1	0
KIIs with GOB officials	3	3	4	4	4
KIIs with CMO leaders, relevant local leaders	0	10	4	6	6
KIIs with other donors	5	0	0	0	0
KIIs with CSOs	1	2	0	0	0
KIIs with other NRM experts	4	0	0	1	1
Sub-Total KIIs = 70	20	18	9	12	11
FGDs with CMO/VCF leaders and members	0	10	6	6	6
FGDs with women's livelihood groups	0	5	2	2	2
FGDs with PAs volunteer guards	0	2	2	1	1
Sub-Total FGDs = 45	0	17	10	9	9
Sub-Totals in Dhaka and Districts	20	50 KIIs, 45 FGDs			
Grand Total	70 KIIs, 45 FGDs (≈400 people)				

Sampling Approach

The assessment team will visit a purposively selected sample of co-management intervention sites. USAID provided a list of four administrative divisions and five districts within the Chittagong Division. In each location, the assessment team identified the PAs where USAID has supported NRM programming. The team took into consideration the following criteria to determine the sites to visit:

- Type of PA or ecotype (ensuring a range of forest, wetland, etc.);
- USAID programs which were/are active in each location to ensure coverage of all programs;
- Geographic accessibility within the assessment's time constraints; and
- Whether NRM projects funded by other donors are active in the same area.

The team will visit all or most of 16 selected locations presented in Table 2. In each location, the team will conduct a minimum of one KII and one FGD, as noted in Table I above.

Table 2: Proposed Sites for NRM Assessment Field Work

No.	District	Upazila	Ecotype	Site	Relevant Projects						
					MACH	NSP	IPAC	CREL	Arannayk	CHTWCA	ECOFISH ^{BD}
Chittagong Division											
1	Chittagong	Lohagara	Forest	Chunati Wildlife Sanctuary (WS)							
2	Chittagong	Fatikchari	Forest	Hazarikhil WS							
3	Rangamati	Kaptai	Forest	Kaptai National Park (NP)							
4	Rangamati	Multiple	Forest	Reserve Forest/Village Conservation Forest (VCF) ⁹³							
5	Bandarbans	Multiple	Forest	Reserve Forest/VCF							
6	Khagrachari	Multiple	Forest	Reserve Forest/VCF							
7	Cox's Bazar	Chakaria	Forest	Fasiakhali WS							
8	Cox's Bazar	Cox's Bazar Sadar	Forest	Himchari NP							
9	Cox's Bazar	Teknaf	Wetland	Fishery							
Khulna Division											
10	Bagerhat	Sarankhola	Forest	Sarankhola							
11	Bagerhat	Mongla	Forest	Chandpai							
Barishal Division											
12	Barishal	Multiple	Wetland	Fish Sanctuary							
13	Borguna	Taltali	Forest	Tengragiri WS							
Sylhet Division											
14	Sylhet	Gowainghat	Forest	Ratargul Stand Basal Area							
15	Moulvibazar	Sreemongal	Wetland	Hail Haor							
16	Moulvibazar	Kamalgonj	Forest	Lawachara NP							

Data Analysis

Proposed data analysis methods for the qualitative data collected through the desk review, KIs, and FGDs and the quantitative data collected with the mini-survey are described below. Key findings will be compared across regions, the type of PA or ecotype, and population sub-groups (including women and ethnic minorities, as appropriate), and types of informants (e.g.,

⁹³ Also referred to as Village Common Forest.

government, CMO members, etc.), and nested in the secondary data source. The team will also employ sequential analyses to build a logical chain of evidence, if appropriate.

Qualitative Data Analysis

The assessment team will use content analysis to analyze qualitative data collected through the desk review, KIIs, and FGDs. Data will be coded according to the sub-themes articulated within the assessment questions and any other related sub-themes that are revealed through the data collection process. Analysis will flow from this coding, frequency of answers, and weight of specific data points from all interlocutors.

The assessment team will document narrative responses at a sufficient level of detail to permit a systematic content analysis of these qualitative data. Narrative reviews of interview and discussion responses are expected to provide an in-depth understanding of beneficiary experiences and perceptions. Qualitative data analysis begins with note-taking. Data gathered at each KII and FGD will be written up and shared among team members, so everyone has the most complete picture possible of all information obtained. The team will hold debriefings (in-person or remotely) at the end of each data collection week, during which they will begin to identify common themes to use in developing an inductive coding framework.

Themes identified during debriefings will serve as initial overarching categories for classifying respondents' phrases, concepts, events, and assessments. This process will identify responses mentioned by more than one key informant or discussion participant. Those with the highest frequency of response will be identified as key findings. However, the assessment team will look for outliers, rare data that do not fit the pattern, but with disproportionately high weight in understanding key developments in the CBM and NRM sector. Outliers can be approaches, solutions that are employed only in one area and/or subsector and unexpectedly have produced significant positive or results and can serve to build lessons and/or recommendation for future actions. In this way, key pieces of evidence from the interviews, discussions, and documents are compared and triangulated to identify the main qualitative findings that respond to the assessment questions.

Quantitative Data Analysis

The assessment team will tabulate frequencies and percentages from the mini-survey data disaggregating them by gender, age, and profession/employment. No statistical significance tests will be conducted or inferential analysis performed because the sample will not be selected using any probabilistic technique. However, frequencies will be triangulated with qualitative data collected through KIIs and FGDs to ensure validity of findings.

Methodological Strengths and Limitations

Strengths

The use of various data sources further enables the assessment team to triangulate information before identifying findings and making conclusions and recommendations. The selection of data analysis methods allows triangulation between researchers, methods, and data, which further enhances the reliability and validity of the evidence-based findings.

Limitations

Methodological limitations will be described in the assessment report. First, some of the relevant USAID projects are not currently active and the availability of desired participants is unpredictable, which means that some gaps in data may be unavoidable. Second, the limited time available for the assessment will constrain the team's ability to reach relatively isolated communities living in and near protected areas, thereby limiting the breadth and depth of data that can be collected. Third, almost all potential participants have some kind of vested interest to minimize or maximize phenomena relevant to the study. Fourth, social desirability bias can result in respondents answering questions to conform with what is perceived as acceptable. The use of different data collection methodologies and data triangulation will mitigate some of these limitations to some extent.

The team will also obtain information from non-project sources, particularly USAID, about key individuals to include in the assessment. The availability of desired key informants may vary; thus, the assessment team must work with those available at the specified times, which may mean that some gaps in data are unavoidable. To mitigate this risk, the assessment team will try to secure interviews and discussion participants in advance to ensure that key respondents are reached.

Finally, the most effective approach to combating bias is to use multiple data sources, data collection, and analysis methodologies to triangulate responses. By combining information found in documents or interviews from multiple sources, any one piece of biased data will not skew the analyses.

WORK PRODUCTS

The assessment team will provide the following work products/deliverables:

1. Work Plan [This document] – Within three business days of the arrival of the team leader in Dhaka, the assessment team will submit a work plan to USAID, including a deployment schedule, data collection instruments, and an assessment analysis matrix, for review and approval.
2. Weekly Brief Updates – ME&A will submit to USAID brief weekly updates of assessment team activities.
3. Preliminary Findings – The team will present its preliminary findings to USAID immediately before the departure of the team leader from Bangladesh in order to obtain feedback that will be incorporated into the assessment report. An electronic version of the presentation will be shared with USAID at least one business day prior to the date of the presentation.
4. Draft Assessment Report – ME&A will submit to USAID an electronic version of a draft assessment report in English for comments and feedback.
5. Final Assessment Report – ME&A will submit the final assessment report within ten business days after the Mission provides comments and feedback on the draft report. The final assessment report, in English and of publishable quality (Times New Roman, font size 12), will include a comprehensive bibliography.

REPORTING

Within 15 working days after the team leader arrives home from Bangladesh, the assessment team will submit a full draft assessment report, including recommendations. Based on USAID feedback, the team will make required changes, and ME&A will submit the final and fully formatted assessment report.

The assessment report will adhere to USAID Evaluation Policy. The assessment team will submit the Final Assessment Report that incorporates Mission comments and suggestions no later than ten working days after USAID/Bangladesh provides written comments on the Draft Assessment report. The format of the final report is provided below. The report will be submitted electronically in English.

The final report will meet the following criteria to ensure the quality of the report:

- The assessment report will represent a thoughtful, well-researched, and well-organized effort to objectively evaluate what worked in the project, what did not, and why. The assessment report will address all assessment questions included in the scope of work (SOW).
- The assessment report will include the SOW as an annex.
- The assessment methodology will be explained in detail. All tools used in conducting the assessment (questionnaires, checklists, and discussion guides) will be included in an annex in the final report.
- Limitations to the assessment will be disclosed in the report, with particular attention to the limitations associated with the assessment methodology (selection bias, recall bias, etc.).
- Assessment findings will be based on an analysis of collected data. Limitations and assumptions associated with the collection, analysis, and interpretation of the data and analysis will be clearly articulated.
- Findings will be specific, concise, and supported by strong quantitative or qualitative evidence.
- Sources of information will be properly identified and listed in an annex.
- Recommendations will be supported by a specific set of findings.
- Recommendations will be action-oriented, practical, and specific, with defined responsibility for the action.

The total pages of the final report, excluding Table of Contents, acronyms, references, and annexes, will be no more than 30 pages. The following content (and suggested length) will be included in the report:

- **Table of Contents**
- **List of Acronyms**
- **Executive Summary** – concisely state the project purpose and background, key assessment questions, methods, and most salient findings and recommendations (2-3 pp.);
- **Introduction** – country context, including a summary of any relevant history,

demography, socio-economic status, etc. (1 pp.);

- **The Development Problem and USAID’s Response** – brief overview of the development problem and USAID’s strategic response, including design and implementation of USAID projects implemented in response to the problem, (2 pp.);
- **Purpose of the Assessment** – purpose, audience, and synopsis of task (1 pp.);
- **Assessment Methodology** – describe assessment and analytical methods, including strengths, assumptions, constraints, and data gaps (1-2 pp.);
- **Findings and Conclusions** – describe and analyze findings for each assessment question using graphs, figures, and tables, as applicable, and include data quality and data sources, issues, and outcomes. Conclusions should be credible and should be supported by the findings (12-15 pp.);
- **Recommendations** – prioritized for each assessment question; should be separate from conclusions and be supported by clearly defined set of findings and conclusions. Include recommendations for future project implementation or relevant program designs (2-3 pp.);
- **Lessons Learned** – provide a brief of key technical and/or administrative lessons on what has worked, not worked, and why for future project or program designs (2-3 pp.);
- **Annexes** – to include the assessment SOW, documents reviewed, assessment methods, data generated from the assessment, tools used, interview lists, meetings, FGDs, surveys, and tables. The Assessment Design Matrix will be presented as an annex to the report.

All quantitative data, if gathered, will be 1) provided in an electronic file in an easily readable format; 2) organized and fully documented for use by those not fully familiar with the project or the assessment; 3) owned by USAID and made available to the public barring rare exceptions and excluding procurement-sensitive information.

ASSESSMENT MANAGEMENT AND TEAM

Day-to-day supervision in Bangladesh will be the responsibility of the BMEL Chief of Party (COP), Ashley Barr. BMEL Evaluation Lead, Ada Huibregtse, will provide technical expertise for the assessment, working in Dhaka and remotely. ME&A Program Director Mirela McDonald, based at ME&A headquarters, will review deliverables before submission to USAID.

A three-person core assessment team will be responsible for conducting the deskwork and fieldwork for the assessment. Two coordinators/note-takers will support the assessment team.

Team Composition

Team Leader/Assessment Specialist (International) – John Michael Kramer

Mr. John Michael Kramer is a senior international environment and development expert with more than 40 years of experience in design, implementation, and evaluation of a wide range of large and complex, donor-funded programs. His technical expertise emphasizes participatory community-based NRM, livelihoods and value chain development, national policy formulation and institution building, and climate change adaptation. He served as Team Leader for the 2015-2016 Mid-Term Performance Evaluation of the CREL project for USAID/Bangladesh and as Team Leader for the Performance Evaluation of USAID South Pacific’s Climate Change program,

Previously, he was the Director for Asia Region Environment and Climate Change for Chemonics (2010-2012); Director of Environment for International Resources Group (1990-1992); Director for Agriculture and Natural Resources for CARE (1981-1988); and provided long-term senior technical support to USAID's Forestry and Natural Resources Office and, later, Environment Center. Mr. Kramer has an M.S. in Renewable Natural Resources Management from the University of Arizona, Tucson.

Senior NRM Governance Specialist (Bangladeshi) – Mr. Md. Shams Uddin

Mr. Md. Shams Uddin has 20 years of experience in natural resource co-management as well as livelihoods and socio-economic development in forest-dependent and coastal communities. His skills include research, social and environmental impact assessment, and capacity-building for various stakeholders. Mr. Uddin has an M.Sc. in Environmental Science and B.Sc. in Forestry. He has experience working with all levels of relevant GOB departments, including directly for the Ministry of Water Resources Bangladesh Water Development Board (BWDB) and for the BWDB-World Bank's Water Management Improvement Project (WMIP). He also has worked with the IPs of international donor agencies, most recently for the UNDP Reducing Emissions from Deforestation and Forest Degradation (REDD+) Project. Previously he led climate-resilient natural resources management in forest, mangrove, wetland and marine ecosystems for the USAID CREL Project.

Socio-Economic Development Expert (Bangladeshi) – Mr. Humayan Kabir

Mr. Humayun Kabir has 30 years of experience related to socio-economic development, NRM, and livelihoods and market systems for the GOB and international and national organizations, including USAID programs, and the private sector. He holds an M.S. degree in Agricultural Extension, an M.B.A., and is working toward a Ph.D. He has held a multitude of positions directly relating to NRM, market-driven, agricultural, and nonagricultural livelihood activities. Mr. Kabir has extensive experience in designing and implementing formative social research, including data gathering, analysis and writing reports for surveys, evaluations, assessments, and reviews related to socio-economic aspects of NRM, livelihoods, and market system development. He has strong relationships with government, non-government, and private institutions. He is fluent in English, and Bangla is his native language.

ASSESSMENT DESIGN MATRIX

#	Assessment Questions	Data Source	Data Collection Methods	Data Analysis Methods
Status of CBM: Functionality and SWOT Analysis				
1.	What is the current status of CBM in the NRM sector in Bangladesh?	<ul style="list-style-type: none"> • Activity contracts and Cooperative Agreements (CAs) • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, Country Development Cooperation Strategy (CDCS), 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)
1.1	To what extent has the co-management model been functional in the NRM sector?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)
1.2	What are the strengths, weaknesses, opportunities, and threats (SWOT) facing CBM?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)

#	Assessment Questions	Data Source	Data Collection Methods	Data Analysis Methods
Enabling Environment Policies: Effectiveness and Sustainability				
2.	How effective have PA policies been for creating an enabling environment for CBM?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)
2.1	Are there gaps or weaknesses in existing policies that need to be addressed to improve CBM effectiveness?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)
2.2	What more needs to be done to increase the sustainability of progress made to date?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)

#	Assessment Questions	Data Source	Data Collection Methods	Data Analysis Methods
Environmental Governance: Capacities and Structures				
3.	How have USAID investments (and those of other donors, to the extent possible) contributed to the development of overall environmental governance in the country?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)
3.1	How have these investments contributed to building stakeholder and institutional capacity for effective PA co-management?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)
3.2	In what ways have these development interventions incorporated learning to strengthen local governance structures for NRM?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • GOB documentation including gazetted policy and legal instruments • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with CMCs and community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence)

#	Assessment Questions	Data Source	Data Collection Methods	Data Analysis Methods
Direct and Indirect Benefits for Communities				
4	Have investments in CBM led to increased direct benefits (such as increased jobs or household income) in the communities?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • FGDs with CMCs • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review; • KIIs • FGDs (including women's livelihood groups) 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events; • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence) • Data will be disaggregated by gender or ethnicity, if appropriate
4.1	Have there been indirect benefits (such as improved educational opportunities)?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • FGDs with CMCs • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence) • Data will be disaggregated by gender or ethnicity, if appropriate
4.2	Do community members connect the indirect benefits to the CBM investments?	<ul style="list-style-type: none"> • Activity contracts and CAs • Activity annual reports • FGDs with CMCs • Evaluations • Site visits to selected intervention sites • KIIs with USAID, GOB, IPs • FGDs with community groups • USAID program documentation, CDCS, 118/119 • Secondary and peer-reviewed literature 	<ul style="list-style-type: none"> • Desk review • KIIs • FGDs 	<ul style="list-style-type: none"> • Content analysis to identify patterns through frequency of themes, outcomes, and events • Identification of outlier evidence with disproportionately high weight in understanding key developments in the CBM and NRM sector • Comparative analyses (among levels/informant groups) • Cross-checking/triangulation between/among methods • Sequential analyses (building a logical chain of evidence) • Data will be disaggregated by gender or ethnicity, if appropriate

ANNEX 4: USAID NRM SECTOR SUPPORTED SITES VISITED BY ASSESSMENT TEAM

#	District	Site	Relevant Projects						
			MACH	NSP	IPAC	CREL	Arannayk	CHT WCA	ECOFISH ^{BD}
1	Chattogram	Chunati Wildlife Sanctuary (WS)							
2	Chattogram	Hazarikhil WS							
3	Rangamati	Village Common Forest (VCF-CHT)							
4	Bandarbans	VCF-CHT							
5	Khagrachari	VCF-CHT							
6	Cox's Bazar	Fasiakhali WS							
7	Cox's Bazar	Himchari National Park (NP)							
8	Cox's Bazar	Sheik Jamal Inani NP							
9	Cox's Bazar	Jolodaspara Fishing Village							
10	Bagerhat	Sarankhola Range reserve forest							
11	Bagerhat	Chandpai Range reserve forest							
12	Barishal	Fish Sanctuary							
13	Borguna	Tengragiri WS							
14	Sylhet	Ratargul Special Biodiversity Conservation Area							
15	Moulvibazar	Hail Haor							
16	Moulvibazar	Lawachara NP							
17	Moulvibazar	Sathchari NP							

ANNEX 5: ASSESSMENT TRAVEL SCHEDULE

NRM Assessment Travel Schedule		
Date	Activity	Division or District
Saturday, August 17	Mini-survey and FGD Hazarakhil CMC	Chattogram
Sunday, August 18	KII Conservator of Forests, Chattogram, Division Forest Office, Chattogram North KII Professor Institute of Forestry (Institute of Forestry and Environmental Sciences, Chattogram University)	Chattogram
Monday, August 19	KII CODEC Executive Director, DFO Wildlife Management KII CHTWCA Program Officer Rangamati KII DFO Forest Khagrachari FGD Arannayk CBO Rangamati Sadar	Chattogram and Rangamati
Tuesday, August 20	KII with Chunati Range Officer Mini-survey and FGD Chunati CMC KII CHTWCA Program Officer, Khagrachari, Mini-survey and FGD Itchari VCF	Chattogram (Team A) Khagrachari (Team B)
Wednesday, August 21	Mini-survey and FGD ECOFISH ^{BD} , Gudampara Village Fisheries Group Mini-survey and FGD ECOFISH ^{BD} , Jolodaspara Village Fisheries Group Mini-survey and FGD Komolchari VCF Khagrachari Mini-survey and FGD Bhoiropa VCF	Cox's Bazar (Team A) Khagrachari (Team B)
Thursday, August 22	KII with Ukhiya Upazila Chairperson Mini-survey, FGD Inani CMC Mini-survey, FGD Himchari CMC	Cox's Bazar
Friday, August 23		
Saturday, August 24	KII with Bolipara Nari Kalyan Somity (BNKS) leader KII Tribal leader (Headman, Kabari) Mini-survey, FGD Ramdhonpara VCF, Alikpdom Mini-survey, FGD Fashiakhali CMC Mini-survey, FGD with VCF Women	Cox's Bazar and Bandarban
Monday, August 26	KII Deputy Division Director Dept Fisheries KII Senior Aratdar Barishal Fish Market, ECOFISH ^{BD} Researcher KII with Upazilla Fisheries Officer, Mehendigonj, KII ECOFISH ^{BD} Community Fish Guard, Mehendigonj Mini-survey, FGD FMC Mehendiganj	Barishal
Tuesday, August 27	KII with Aratdar Fish Market KII with CODEC Field Mobilizer KII Range Officer Rengragiri Mini-survey, FGD with FMC, Chandramahan Mini-survey, FGD with CSG Chandramahan Mini-survey, FGD with CMC Tengragiri	Barishal
Wednesday, August 28	KII with ECOFISH ^{BD} Fish Guard Mini-survey, FGD with CSG Mini-survey, FGD with HCG Mini-survey, FGD with CSG, Hizla KII with Fish Guard in Hizla	Barishal
Thursday, August 29	KII with BFD Khulna Division, Division Forest Office, Khulna West Circle	Khulna

NRM Assessment Travel Schedule		
Date	Activity	Division or District
Friday, August 30		
Saturday, August 31	Mini-survey, FGD with CMC Soronkhola Mini-survey, FGD with VCF Soronkhola Mini-survey, FGD with CMC Joymoni Mongla Mini-survey, FGD with VCF Joymoni Mongla Mini-survey, FGD with VCF Hoglabunia.	Khulna
Sunday, September 1	Mini-survey, FGD with VCF GIZ Mini-survey, FGD with VTRT KII with GIZ Manager KII with WildTeam KII with DFO Khulna West	Khulna
Tuesday, September 3	KII with Director Forestry Science and Technology Institute (FSTI) Sylhet KII with DFO Moulavibazar Mini-survey, FGD with Ratargul CMC Mini-survey, FGD with VCF Ratargul	Sylhet and Sreemongol
Wednesday, September 4	KII with Fisheries Officer KII with Center for Natural Resource Studies (CNRS) Mini-survey, FGD with RMO Hail Haor KII with Range Officer Mini-survey, FGD with CMC Mini-survey, FGD with VCF	Sreemongol
Thursday, September 5	KII Khasia Villager KII with Fee Collector, Accounts CMC Lawachara Mini-survey, FGD CPG Mini-survey, FGD with VCF Mini-survey, FGD with CMC Lawachara	Sreemongol

ANNEX 6: PARTICIPANTS IN KIIS

USAID NRM Sector Assessment List of Key Informant Interviews			
#	Date	Institution	Participants
1	Aug. 4, 2019	BFD (retired), IUCN (retired)	Ishtiaq Uddin
2	Aug. 4, 2019	Arannayk Foundation	Farid Uddin Ahmed
			Mohd Abdul Quddus
3	Aug. 5, 2019	WorldFish-ECOFISH ^{BD}	Abdul Wahab
			Md. Jalilur Rahman
			Peerzadi Rumana Hossain
4	Aug. 6, 2019	UNDP-CHTWCA	Ram Sharma
			Prasenjit Chakma
			Biplab Chakma
			Jhuma Dewan
			Shariful Alam
5	Aug. 6, 2019	UNDP Reducing Emissions from Deforestation and Forest Degradation Project (REDD)	Khurshid Alam
6	Aug. 6, 2019	GIZ	Carina Van Weelden
7	Aug. 7, 2019	BFD	Md. Shaiful Alam Chowdhury
			Zahir Uddin Ahmed
			Md. Zaheer Iqbal
			Md. Rakibul Hasan Mukul
			Mihir Kumar Doe
			Mariam Akhter
			Md. Abdullah Abraham Hossain
			Md. Oliul Haque
8	Aug. 7, 2019	FAO	Md. Shaheduzzaman
			William Manuel
			Anil Kumar Saha
			Mathew Henry (video conference)
9	Aug. 7, 2019	UNDP	Ram Sharma
10	Aug. 10, 2019	CNRS	M. Mokhlesur Rahman
			M. Aminul Islam
11	Aug. 11, 2019	MACH, CREL	Darrel Deppert
12	Aug. 12, 2019	Formerly with USAID	Azharul Mazumder
13	Aug. 14, 2019	BFD	Zaheer Iqbal
14	Aug. 14, 2019	International Resources Group (IRG)	Bob Winterbottom
15	Aug. 15, 2019	USAID	John Smith-Sreen
			Kerry Reeves
			Patrick Meyer
			Michael Weaver
			Farzana Yasmeen
			Shahadat Shakil
16	Aug. 17, 2019	IRG	Sumaiya Firoz
			Philip DeCosse

USAID NRM Sector Assessment List of Key Informant Interviews			
#	Date	Institution	Participants
17	Aug. 18, 2019	BFD	Mohammad Abdul Awal Sarker
			M. Mohammad Kabir
18	Aug. 18, 2019	BFD	Md. Baktiar Nur Siddiq
19	Aug. 18, 2019	Institute of Forestry and Environmental Sciences, Chattogram University	Mohammed Kamal Hossain
20	Aug. 19, 2019	Community Development Center (CODEC)	Khursid Alam
			Munir Helal
21	Aug. 19, 2019	DFO	ANM Yasin Newaz
22	Aug. 19, 2019	DFO	Md. Towfiqul Islam
23	Aug. 19, 2019	UNDP	Oishwarja Chakma
			Nikhilesh Chakma
			Binita Bidham Khisa
			Mohammad Ali
24	Aug. 20, 2019	DFO	Mohammed Mizanur Rahman
25	Aug. 20, 2019	UNDP	Priyatar Chakma
			Ushingmong Chowdhury
26	Aug. 22, 2019	Union Chairman	Hamidur Rahman
27	Aug. 24, 2019	BNKS	Willim Marma
			Badlipu Tenchunga
			Hero Mdma
28	Aug. 24, 2019	Headman, Karbari	Mongju Marma
			Agastin Tripura
29	Aug. 26, 2019	DOF	Azizul Haque
			Bimal Chandra Das
			Anisur Rahman Talukder
30	Aug. 26, 2019	ECOFISH ^{BD}	Balaram Mahalder
31	Aug. 26, 2019	Aratdar	Md. Nirob Hossain Totul
32	Aug. 26, 2019	ECOFISH ^{BD}	Mohadeb Das
33	Aug. 26, 2019	DOF	Shimu Rani Pal
34	Aug. 27, 2019	BFD	Nayan Mistri
35	Aug. 28, 2019	Community Fish Guards	Motaleb Bepari
			Kadam Ali Kha
36	Aug. 28, 2019	Fish Guards	Md. Yusuf
			Anower
37	Aug. 29, 2019	BFD	Md. Moyeen Uddin Khan
			Md. Bashirul-Al-Mamun (1)
38	Sept. 1, 2019	BFD	Md. Bashirul-Al-Mamun (2)
39	Sept. 1, 2019	WildTeam, Khulna	Ram Krishna Mohanto
			Md. Mizanur Rahman
			Abu Zafar
			Pronesh Dutta
40	Sept. 1, 2019	GIZ	Panchanon Kumar Dhali
			Mostafa Omar Sharif

USAID NRM Sector Assessment List of Key Informant Interviews			
#	Date	Institution	Participants
41	Sept. 3, 2019	FSTI	Md. Shofiquil Islam
42	Sept. 3, 2019	BFD	A. N. M. Abdul Wadud
			Monayem Hossen
43	Sept. 4, 2019	BFD	Mahmud Hussain
44	Sept. 4, 2019	CNRS	Shyamol Kanti Baidya
45	Sept. 5, 2019	CMC	Md. Afjalul Huq
			Md. Shahin Mia
			Abdul Mossabi
46	Sept. 5, 2019	Khasiya villager	Hatim Ali
47	Sept. 7, 2019	Chakma King Raja	Raja Debasish Roy
48	Sept. 8, 2019	Consultant	Paul Thomson
49	Sept. 9, 2019	World Bank	Md. Istiak Sobhan
50	Sept. 9, 2019	WB-BFD	Ruhul Mohaiman Chowdhury
51	Sept. 15, 2019	USAID	John Smith-Sreen
			Kerry Reeves
			Patrick Meyer
			Michael Weaver
			Farzana Yasmeen
			Shahadat Shakil
			Sumaiya Firoz
			Peter Khaemba
Boby Sabur			

ANNEX 7: KEY INFORMANT INTERVIEW GUIDE

This KII protocol was tailored for several categories of informants (GOB, CMC, NGO, etc.).

KII for Field Level GoB and Project Staff

মাঠ পর্যায়ের সরকারি ও প্রকল্প কর্মীদের জন্য কে আই আই

Thank you for participating in this discussion. My name is _____ and my colleagues are _____ and _____. Our team is assessing natural resources management in Bangladesh for the United States Agency for International Development in Bangladesh (USAID). We are here today because you are involved in managing natural resources. Your views will inform our recommendations about future USAID programs.

We have prepared a few questions to guide our discussion, which will take approximately one hour. Your participation in this interview is voluntary. We encourage you to be as candid as possible. Your answers will be kept confidential; we will not use your name in any way. If there are any questions that you don't want to answer, that's fine. We would like to audio record this discussion to ensure that we accurately remember what you say. This recording will be kept confidential. Do we have your consent to record? Do you have any questions before we begin?

এই সাক্ষাৎকারে অংশগ্রহণের জন্য আপনাকে ধন্যবাদ। আমার নাম _____ এবং _____ ও _____ আমার সহকর্মী। আমাদের দল বাংলাদেশে প্রাকৃতিক সম্পদের ব্যবস্থাপনা বিষয়ে *US Agency for International Development (USAID)* বাংলাদেশের পক্ষে একটি মূল্যায়ন পরিচালনা করছে। আজকে আমরা এখানে এসেছি কারণ আপনি প্রাকৃতিক সম্পদের ব্যবস্থাপনার সাথে জড়িত। আপনাদের মতামত আমাদেরকে ভবিষ্যতের জন্য প্রাকৃতিক সম্পদের ব্যবস্থাপনা বিষয়ক কর্মকাণ্ডের ব্যাপারে বিভিন্ন সুপারিশ সংশ্লিষ্ট কর্তৃপক্ষকে অবহিত করতে সহায়তা করবে।

আমরা আপনাদের আলোচনা পরিচালনা করার জন্য কিছু প্রশ্ন প্রস্তুত করেছি, যার জন্য আনুমানিক ১ ঘন্টা সময় লাগবে। এই সাক্ষাৎকারে আপনার অংশগ্রহণ *ঐচ্ছিক*। আমরা আপনাকে অকপটে উত্তর প্রদানে উৎসাহিত করছি। আপনার উত্তর গোপন রাখা হবে; আমরা কোনভাবেই আপনার নাম ব্যবহার করব না। আপনি যদি কোনো প্রশ্নের উত্তর দিতে না চান, তবে কোনো অসুবিধা নেই। আপনার মতামতের সঠিক উপস্থাপন নিশ্চিত করতে আমরা এই আলোচনাটির শব্দ ধারণ (অডিও রেকর্ড) করতে চাই। ধারণকৃত রেকর্ডিং গোপন রাখা হবে। কথোপকথনটি ধারণ করার ক্ষেত্রে আপনার সম্মতি আছে কি? আলোচনা শুরু করার আগে আপনার কোন প্রশ্ন থাকলে বলুন।

I. Please help us understand your (or your institution's) involvement in the community based NRM or co-management activities? (We will call these community-based management (CBM)).

১। আপনি (অথবা আপনার প্রতিষ্ঠান) সমাজ-ভিত্তিক প্রাকৃতিক সম্পদ ব্যবস্থাপনা অথবা সহ-ব্যবস্থাপনা কর্মকাণ্ডের সাথে কিভাবে সম্পৃক্ত, বুঝিয়ে বলুন।

I.1. What is the history your institution's involvement in the CBM? (Probe about when they started, if a donor supported them, where they worked and what activities they conducted.)

১.১। সমাজ-ভিত্তিক ব্যবস্থাপনায় আপনার প্রতিষ্ঠানের সম্পৃক্ততার ইতিবৃত্ত আমাদের বলুন (কোনো দাতা সংস্থা এতে সহযোগিতা করেছে কিনা, কর্মকাণ্ডের স্থান, এবং কি ধরনের কর্মকাণ্ড পরিচালিত হয়েছে তা জেনে নিন।)

I.2. What are your current activities in CBM? (Probe about what activities they are doing, where, and who they are working with, if donor-supported or otherwise.)

১.২। সমাজ-ভিত্তিক ব্যবস্থাপনার মাধ্যমে বর্তমানে কি কি কর্মকাণ্ড চলছে? (কি ধরনের কর্মকাণ্ড চলছে, কর্মকাণ্ডের স্থান, এবং দাতা সংস্থা বা অর্থায়নের উৎস সম্পর্কে জেনে নিন।)

I.3. What are your plans for future activities in CBM? (Probe for specific activities)

১.৩। ভবিষ্যতে সমাজ-ভিত্তিক ব্যবস্থাপনার মাধ্যমে কর্মকাণ্ড পরিচালনার ক্ষেত্রে আপনার পরিকল্পনা কি? (কর্মকাণ্ড সম্পর্কে নির্দিষ্টভাবে জেনে নিন।)

1.4. Do you have any documents that would help me understand your CBM activities and their impact?

১.৪। আপনাদের কি এমন কোনো ডকুমেন্ট বা নথি আছে যা সমাজ-ভিত্তিক ব্যবস্থাপনা নিয়ে আপনার কর্মকাণ্ড এবং এর প্রভাব সম্পর্কে বুঝতে আমাদের সহায়তা করবে?

1.5. Have you piloted any alternatives to co-management in your activities?

১.৫। আপনারা কি আপনাদের কার্যক্রমে পরীক্ষামূলক ভাবে সহ-ব্যবস্থাপনা পদ্ধতির কোনো বিকল্প উপায় ব্যবহার করেছেন?

1.6. How is gender inclusion currently addressed in your activities? Any examples? What else could be done?

১.৬। বর্তমানে আপনাদের কর্মকাণ্ডে জেন্ডার অন্তর্ভুক্তির বিষয়টি কিভাবে কাজ করে? আপনার কর্মকাণ্ডের কিছু উদাহরণ দিন। এক্ষেত্রে আর কি করা যেত বা যায় বলে আপনি মনে করেন?

1.7. How are ethnic minorities currently addressed in your activities? Any examples? What else could be done?

১.৭। বর্তমানে আপনাদের কর্মকাণ্ডে জাতিগতভাবে সংখ্যালঘু জনগোষ্ঠী কিভাবে জড়িত? আপনার কর্মকাণ্ডের কিছু উদাহরণ দিন। এক্ষেত্রে আর কি করা যেত বা যায় বলে আপনি মনে করেন?

2. Let's discuss the strengths and weakness of implementation of CBM in Bangladesh?

২। বাংলাদেশে সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতি বাস্তবায়নের সামর্থ্য ও দুর্বলতা নিয়ে কথা বলা যাক:

2.1. What would be the three most significant achievements of your CBM activities?

২.১। সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতিতে পরিচালিত আপনাদের কর্মকাণ্ড থেকে সবচেয়ে উল্লেখযোগ্য তিনটি অর্জনের কথা বলুন।

2.2. What would be the three most significant obstacles to your CBM activities?

২.২। সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতিতে কর্মকাণ্ড পরিচালনার ক্ষেত্রে সবচেয়ে উল্লেখযোগ্য তিনটি বাধার কথা বলুন।

2.3. What are the important legal/policy factors affecting (promoting or hindering) CBM implementation?

২.৩। সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতির বাস্তবায়নকে প্রভাবিত করে (ইতিবাচক অথবা নেতিবাচক ভাবে) এমন উল্লেখযোগ্য আইনগত/নীতিগত বিষয়গুলো কি?

3. Let's discuss the opportunities and threats to CBM in Bangladesh,

৩। বাংলাদেশে সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতি বাস্তবায়নের ক্ষেত্রে সুবিধা ও ঝুঁকিসমূহ নিয়ে কথা বলা যাক:

3.1. What opportunities do you see that could allow CBM to be implemented more widely?

৩.১। সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতি আরও ব্যাপক পরিসরে বাস্তবায়নের ক্ষেত্রে কি ধরনের সুযোগ রয়েছে বলে আপনি মনে করেন?

3.2. What threats do you see to implementation of CBM?

৩.২। সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতি বাস্তবায়নের ক্ষেত্রে কি কি ঝুঁকি রয়েছে বলে আপনি মনে করেন?

4. Let's discuss how Protected Area (PA) management policies (rules and procedures) have influenced CBM (a) buy-in and (b) implementation?

৪। রক্ষিত এলাকা ব্যবস্থাপনা নীতিমালা, সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতিকে কিভাবে প্রভাবিত করেছে তা নিয়ে কথা বলা যাক: (ক) গ্রহণযোগ্যতা (খ) বাস্তবায়ন

4.1. Could discuss how PA Rules have promoted CBM? Have there been any negative impacts of PA Rules?

৪.১। রক্ষিত এলাকা ব্যবস্থাপনা নীতিমালা, সমাজ-ভিত্তিক ব্যবস্থাপনাকে কিভাবে এগিয়ে নিয়ে গেছে? রক্ষিত এলাকা ব্যবস্থাপনা নীতিমালার কোনো নেতিবাচক প্রভাব কি দেখা গেছে?

4.2. Are there any gaps in the PA rules that could be addressed to promote CBM? What changes to policies would you recommend for improved CBM?

৪.২। রক্ষিত এলাকা ব্যবস্থাপনা নীতিমালায় কি এমন কোনো ফাঁক/ ঘাটতি/ বৈসাদৃশ্য আছে যা সমাজ-ভিত্তিক ব্যবস্থাপনাকে এগিয়ে নিয়ে যেতে সহায়ক হত? সমাজ-ভিত্তিক ব্যবস্থাপনার উন্নয়নে নীতিমালায় কি কি পরিবর্তন দেখতে চান?

4.3. (For FD DFO only): Have you had success in revenue sharing in the past? What about now? What is the issue?

৪.৩। (শুধুমাত্র বন অধিদপ্তরের জেলা বন কর্মকর্তার জন্য): আপনি কি অতীতে রাজস্ব/ আয় বন্টন পদ্ধতি থেকে সাফল্য পেয়েছেন? বর্তমানে এর কি অবস্থা? এক্ষেত্রে কি কি সমস্যা রয়েছে?

4.4. What opportunities do you see to institutionalize current CBM achievements? Legal, institutional, human resources?

৪.৪। সমাজ-ভিত্তিক ব্যবস্থাপনা থেকে প্রাপ্ত সাফল্যগুলোকে প্রাতিষ্ঠানিক রূপ দেয়ার ক্ষেত্রে কি ধরনের সুযোগ রয়েছে? আইনগত, প্রাতিষ্ঠানিক, মানবসম্পদ বিষয়ক?

5. Let discuss how the USAID program has influenced governmental capacity and structures and how the CBM promoted by the USAID fits within the current GOB strategies for CBM.

৫। USAID'র প্রকল্প সরকারের সামর্থ্য ও কাঠামোকে কিভাবে প্রভাবিত করেছে এবং USAID দ্বারা প্রচলিত সমাজ-ভিত্তিক ব্যবস্থাপনা সরকারের কর্মকৌশলের সাথে কতটা মানানসই তা নিয়ে কথা বলা যাক:

5.1. What donor project have assisted you in CBM?

৫.১। কোন্ দাতা সংস্থার প্রকল্প আপনাদেরকে সমাজ-ভিত্তিক ব্যবস্থাপনা বাস্তবায়নে সহায়তা করেছে?

5.2. (If USAID or other donor (by name): Could you provide examples of USAID or other donor name funded project assistance in institutional capacity-building in CBM?

৫.২। (USAID বা অন্য দাতা সংস্থার নাম উল্লেখ করে জিজ্ঞেস করুন): আপনি কি USAID বা অন্য দাতা সংস্থার (নাম)-অর্থায়নে প্রাতিষ্ঠানিক সামর্থ্য তৈরির জন্য পরিচালিত কোনো প্রকল্প বা সহায়তার উদাহরণ দিতে পারবেন?

5.3. How did this assistance strengthen your institution's capacity for effective PA co-management? (Probe for any specific change(s) in standard operating procedures or staff capacity to implement CBM, awareness of CBM, etc.)

৫.৩। এই প্রকল্প সহায়তা, রক্ষিত এলাকায় কার্যকরীভাবে সহ-ব্যবস্থাপনা বাস্তবায়নের জন্য আপনার প্রাতিষ্ঠানের সামর্থ্যকে জোড়াল করতে কিভাবে ভূমিকা রেখেছে? (উপযুক্ত কার্য-নির্বাহ পদ্ধতি, সহ-ব্যবস্থাপনা বাস্তবায়নে কর্মীদের সামর্থ্য বৃদ্ধি বা সহ-ব্যবস্থাপনা বিষয়ে সচেতনতা তৈরির ক্ষেত্রে কোনো নির্দিষ্ট পরিবর্তন এসেছে কিনা তা জেনে নিন।)

5.4. How did USAID project assistance affect the capacity of groups that you serve (VCF, village livelihood or patrol groups, etc.) to do CBM? (Probe for changes in their activities, resource management practices, AIGAs, decreased misuse of the forest or wetland, etc.)

৫.৪। USAID প্রকল্প সহায়তা, সমাজ-ভিত্তিক ব্যবস্থাপনা বাস্তবায়নে আপনার দলের (ভিসিএফ, জীবিকা বিষয়ক দল, গ্রাম্য টহল দল, ইত্যাদি) সামর্থ্যকে কিভাবে প্রভাবিত করেছে? (দলের কর্মকাণ্ড, সম্পদ ব্যবস্থাপনার রীতি, বিকল্প আয়ের উৎস সৃষ্টি, বনজ ও জলজ সম্পদের অপব্যবহারের ক্ষেত্রে কোনো পরিবর্তন এসেছে কিনা তা জেনে নিন।)

5.5. What would you recommend to increase or improve implementation of CBM?

৫.৫। সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতি বাস্তবায়নের বৃদ্ধি বা উন্নয়নে আপনি কি কি সুপারিশ করতে চান?

5.6. Are the CMO groups that you support able to continue their activities without donor support? Is the government providing financial support to the groups?

৫.৬। আপনি যেসব সহ-ব্যবস্থাপনা প্রতিষ্ঠান দলের সাথে সম্পৃক্ত তারা কি দাতা সংস্থার সাহায্য ছাড়া তাদের কর্মকাণ্ড চালিয়ে নিতে সক্ষম? সরকার কি দলগুলোকে আর্থিকভাবে সহায়তা করছে?

6. Let's discuss your views of the impact of CBM has had on resource management and the livelihoods and well-being of local communities

৬। সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতি, সম্পদ ব্যবস্থাপনা এবং স্থানীয় জনগোষ্ঠীর জীবিকা ও সমৃদ্ধিকে কিভাবে প্রভাবিত করেছে এ ব্যাপারে আপনার মতামত নিয়ে কথা বলা যাক:

6.1. Could you provide examples of the direct impact your institution's support has had on CBM? Indirect impact? (Probe for impact on resources and people's livelihoods.)

৬.১। আপনার প্রতিষ্ঠানের সহযোগিতা, সমাজ-ভিত্তিক ব্যবস্থাপনা পদ্ধতির উপর যেসব প্রত্যক্ষ প্রভাব রেখেছে তার কয়েকটি উদাহরণ দিন। এছাড়া কোনো পরোক্ষ প্রভাব রয়েছে কি? (সম্পদ ও মানুষের জীবিকার উপর প্রভাবগুলো জেনে নিন।)

ANNEX 8: FOCUS GROUP DISCUSSION GUIDES

For these protocols, CMO refers to all types and levels of organizations involved in management of resource commons and state resources whether indigenous or supported by the GOB and donors.

CMO FGD Questionnaire

সহ-ব্যবস্থাপনা প্রতিষ্ঠানের (সিএমও) সদস্যদের সাথে এফজিডি প্রশ্নাবলী

Thank you for participating in this discussion. My name is _____ and my colleagues are _____ and _____. Our team is assessing natural resources management in Bangladesh for the United States Agency for International Development in Bangladesh (USAID). We are here today because you are involved in managing natural resources. Your views will inform our recommendations about future USAID programs.

We have prepared a few questions to guide our discussion, which will take approximately one hour. Your participation in this interview is voluntary. We encourage you to be as candid as possible. Your answers will be kept confidential; we will not use your name in any way. If there are any questions that you don't want to answer, that's fine. We would like to audio record this discussion to ensure that we accurately remember what you say. This recording will be kept confidential. Do we have your consent to record? Do you have any questions before we begin?

এই সাক্ষাৎকারে অংশগ্রহণের জন্য আপনাকে ধন্যবাদ। আমার নাম _____ এবং _____ ও _____ আমার সহকর্মী। আমাদের দল বাংলাদেশে প্রাকৃতিক সম্পদের ব্যবস্থাপনা বিষয়ে US Agency for International Development (USAID) বাংলাদেশের পক্ষে একটি মূল্যায়ন পরিচালনা করছে। আজকে আমরা এখানে এসেছি কারণ আপনি প্রাকৃতিক সম্পদের ব্যবস্থাপনার সাথে জড়িত। আপনাদের মতামত আমাদেরকে ভবিষ্যতের জন্য প্রাকৃতিক সম্পদের ব্যবস্থাপনা বিষয়ক কর্মকাণ্ডের ব্যাপারে বিভিন্ন সুপারিশ সংশ্লিষ্ট কর্তৃপক্ষকে অবহিত করতে সহায়তা করবে।

আমরা আপনাদের আলোচনা পরিচালনা করার জন্য কিছু প্রশ্ন প্রস্তুত করেছি, যার জন্য আনুমানিক ১ ঘন্টা সময় লাগবে। এই সাক্ষাৎকারে আপনার অংশগ্রহণ ঐচ্ছিক। আমরা আপনাকে অকপটে উত্তর প্রদানে উৎসাহিত করছি। আপনার উত্তর গোপন রাখা হবে; আমরা কোনভাবেই আপনার নাম ব্যবহার করব না। আপনি যদি কোনো প্রশ্নের উত্তর দিতে না চান, তবে কোনো অসুবিধা নেই। আপনার মতামতের সঠিক উপস্থাপন নিশ্চিত করতে আমরা এই আলোচনাটির শব্দ ধারণ (অডিও রেকর্ড) করতে চাই। ধারণকৃত রেকর্ডিং গোপন রাখা হবে। কথোপকথনটি ধারণ করার ক্ষেত্রে আপনার সম্মতি আছে কি? আলোচনা শুরু করার আগে আপনার কোন প্রশ্ন থাকলে বলুন।

Note to facilitators: Manage your limited time effectively. State each question once, briefly and simply. Then wait for an answer. Do not repeat the question; do not offer hints or suggestions. Do not go around the room asking the same question to each person. Ask for a volunteer from the group and say, "Tell us ONE thing only." Then ask for another volunteer. If no one volunteers, ask a specific person to answer. Remind the new person to "Tell us ONE thing, something different than what was said before." Stop after about five things have been mentioned and move to the next question.

ফ্যাসিলিটের সহায়তাকারীদের প্রতি নির্দেশনা: আপনার সীমিত সময় কার্যকরীভাবে ব্যয় করুন। প্রতিটি প্রশ্ন সংক্ষেপে এবং সহজে একবার করে বলুন। এরপর উত্তরের জন্য অপেক্ষা করুন। প্রশ্নের পুনরাবৃত্তি করবেন না, কোনো আভাস, ইঙ্গিত বা পরামর্শ দিবেন না। একই প্রশ্ন ঘুরে ঘুরে প্রত্যেককে আলাদাভাবে জিজ্ঞেস করবেন না। কোনো একজন অংশগ্রহণকারীকে স্বেচ্ছায় উত্তর দিতে বলুন এবং তাকে বলুন "নির্দিষ্টভাবে একটি উত্তর দিন"। তারপর আরেকজন অংশগ্রহণকারীকে স্বেচ্ছায় উত্তর দিতে বলুন। যদি কেউ স্বেচ্ছায় উত্তর না দেয় তাহলে একজন নির্দিষ্ট অংশগ্রহণকারীকে বেছে নিয়ে উত্তর দিতে বলুন। নতুন উত্তরদাতাকেও মনে করিয়ে দিন, "নির্দিষ্টভাবে একটি উত্তর দিন, এমন কিছু বলুন যা আগে বলা হয়নি"। প্রায় পাঁচটি উত্তর গ্রহণ করার পর থামুন এবং পরের প্রশ্নে চলে যান।

SWOT Analysis and Enabling Environment Policies

সোয়ট বিশ্লেষণ ও উপযুক্ত পরিবেশ নিশ্চিতকরণ নীতিgvjv

1. What is the purpose of this group (CMC, RMO, VCF, VCG)?

১। এই কমিটি বা দলের (সিএমসি/ আরএমও/ ভিসিএফ/ ভিসিজি) লক্ষ্য ও উদ্দেশ্য কি?

2. What activities are your group doing now?

২। আপনাদের এই কমিটি বা দল বর্তমানে কি কি কvh@ug পরিচালনা করছে

3. Please tell us ONE positive aspect of the co-management approach [or community-based natural resources management approach] and why is it positive. [Instruction to facilitators: Limit each respondent to saying ONE positive aspect/quality.]

৩। অনুগ্রহ করে সহ-ব্যবস্থাপনা পদ্ধতির [অথবা সম্প্রদায়-ভিত্তিক প্রাকৃতিক সম্পদ ব্যবস্থাপনা পদ্ধতি]

একটি ভাল দিক বলুন এবং আপনি কেন Bnv±K ভাল বলে মনে ক±Qন। [ফ্যাসিলিটেরদের প্রতি

নির্দেশনা: অংশগ্রহণকারী-প্রতি একটি করে উত্তর লিখুন। যদি কোন একটি উত্তর অন্য উত্তরগুলোর

চেয়ে বেশিবার আসে তবে নোট রাখুন।]

3.1. [If everyone repeats the same thing, probe by saying:] Please tell us ONE other positive aspect that has not been mentioned yet.

৩.১। [যদি সবাই একই উত্তরের পুনরাবৃত্তি করতে থাকে তবে তা থামিয়ে দিয়ে বলুন] “এমন আরও একটি ভাল দিকের কথা বলুন যা এখনও বলা হয়নি।

4. What is ONE achievement of this group that you are proud of? [Instruction to facilitators: Limit each respondent to saying ONE achievement only.]

৪। এই দলের এমন একটি অর্জনের কথা বলুন যা নিয়ে আপনি গর্বিত। [ফ্যাসিলিটেরদের প্রতি

নির্দেশনা: অংশগ্রহণকারী-প্রতি একটি করে উত্তর লিখুন। যদি কোন একটি উত্তর অন্য উত্তরগুলোর

চেয়ে বেশিবার আসে তবে নোট রাখুন।]

4.1. [If everyone repeats the same thing, probe by saying:] Please tell us ONE other achievement of this group that has not been mentioned yet.

৪.১। [যদি সবাই একই উত্তরের পুনরাবৃত্তি করতে থাকে তবে তা থামিয়ে দিয়ে বলুন] এমন আরও একটি অর্জনের কথা বলুন যা এখনও বলা হয়নি”।

5. What is ONE problem/obstacle you want to overcome to make this group more successful? [Instruction to facilitators: Limit each respondent to saying ONE problem/obstacle.]

৫। এই দলকে আরও সফল করে তুলতে কোন্ সমস্যা বা বাধাটি অতিক্রম করা প্রয়োজন বলে মনে করেন? [ফ্যাসিলিটেরদের প্রতি নির্দেশনা

অংশগ্রহণকারী-প্রতি একটি করে উত্তর লিখুন। যদি কোন একটি উত্তর অন্য উত্তরগুলোর চেয়ে বেশিবার আসে তবে নোট রাখুন।]

5.1. [If everyone repeats the same thing, probe by saying:] Please tell us ONE other problem/obstacle that has not been mentioned yet.

৫.১। [যদি সবাই একই উত্তরের পুনরাবৃত্তি করতে থাকে তবে তা থামিয়ে দিয়ে বলুন] এমন আরও একটি সমস্যা বা বাধার কথা বলুন যা এখনও বলা হয়নি।

For CMCs and RMOs only
শুধুমাত্র সিএমসি এবং আরএমও সদস্যদের জন্য

6. What rules and procedures have been helpful in your CMO's work?

৬। কোন্ কোন্ **bxwZgvjv** ও কার্যপ্রণালী আপনাদের সহ-ব্যবস্থাপনা প্রতিষ্ঠানের জন্য সহায়ক হয়েছে?

7. What rules and procedures have been problems/obstacles in your CMO's work?

৭। কোন্ কোন্ **bxwZgvjv** ও কার্যপ্রণালী সহ-ব্যবস্থাপনা প্রতিষ্ঠানের জন্য সমস্যা বা বাধার কারণ হয়েছে?

8. What needs to be improved in the CMO's rules and procedures?

৮। সহ-ব্যবস্থাপনা প্রতিষ্ঠানের **bxwZgvjv** ও কার্যপ্রণালীতে কি কি পরিবর্তন বা উন্নতিসাধন করা প্রয়োজন?

CMO Functionality, Governance, Representation, and Effectiveness

সিএমও'র কার্যক্রম, পরিচালনা, প্রতিনিধিত্ব এবং কার্যকারিতা

For all Groups

সকল দলের জন্য

9. Are your group's meetings held on a regular schedule? If not, who initiates a meeting and why? Please give ONE example of why someone called for (initiated) a group meeting?

৯। আপনাদের দলের মিটিংগুলো কি একটি নিয়মিত সময়সূচী মেনে হয়? যদি তা না হয়, তবে কে এই মিটিংয়ের উদ্যোগ নেয় এবং কেন? এমন একটি উদাহরণ দিন যার কারণে কেউ দলীয় মিটিং ডেকেছে বা উদ্যোগ নিয়েছে।

9.1. How many people usually attend the meetings?

৯.১। মিটিংয়ে সাধারণত কত জন অংশগ্রহণ করে?

9.2. Do people who are needed in the meeting regularly attend?

৯.২। মিটিংয়ে যাদের অংশগ্রহণ প্রয়োজন তারা কি নিয়মিত অংশগ্রহণ করে?

10. After you make a decision in a group meeting, how often does the decision get implemented [always, often, sometimes, never]? Who implements the group decision and how? Can you give ONE example?

১০। দলীয় মিটিংয়ে একটি সিদ্ধান্ত গৃহীত হবার পর, সিদ্ধান্তটি কি সবসময় বাস্তবায়িত হয় [সবসময়, প্রায়ই/ মাঝে মাঝে, কখনই না]? দলীয় সিদ্ধান্ত কে এবং কিভাবে বাস্তবায়িত করে? আপনারা কি এ ব্যাপারে একটি উদাহরণ দিতে পারেন?

11. Who participates in the group decision-making process?

১১। দলীয় সিদ্ধান্ত গ্রহণের প্রক্রিয়ায় কারা অংশগ্রহণ করে?

11.1. Tell us about organizations or people outside the group that influence its decision making. What are the effects of the outside influence—are they mostly positive or mostly negative?

১১.১। দলের বাইরের এমন কোনো ব্যক্তি বা প্রতিষ্ঠানের কথা বলুন যে বা যারা দলীয় সিদ্ধান্ত গ্রহণকে প্রভাবিত করে। বাইরের এসব প্রভাবের ফলাফল কি - বেশিরভাগ সময় এগুলো কি ইতিবাচক নাকি নেতিবাচক?

12. How has your group encouraged participation by women and/or ethnic minorities? Can you give ONE example?

১২। আপনাদের দল নারী এবং/অথবা জাতিগতভাবে সংখ্যালঘু জনগোষ্ঠীকে অংশগ্রহণে কিভাবে উৎসাহিত করেছে? আপনারা কি এ ব্যাপারে একটি উদাহরণ দিতে পারেন?

13. Do FD or government officials attend your group's meetings?

১৩। বন অধিদপ্তর বা সরকারি কর্মকর্তাগণ কি আপনাদের দলের মিটিংয়ে উপস্থিত থাকে?

13.1. *If yes: Who exactly attends the meetings? Do they attend every time you meet or only occasionally? Is it helpful when they attend or not helpful?*

১৩.১। যদি থাকে: নির্দিষ্টভাবে কে কে মিটিংগুলোতে উপস্থিত থাকে? প্রতিটি মিটিংয়েই কি তারা উপস্থিত থাকে নাকি শুধু মাঝে মাঝে থাকে? মিটিংয়ে তাদের উপস্থিত থাকাটা কি আপনাদের জন্য সহায়ক নাকি সহায়ক নয়?

CBM/CMO Sustainability
সিবিএম/ সিএমও'র স্থায়িত্ব

14. *Why do you and your community to get involved in the group and implement the CBM approach? (What motivates you?)*

১৪। আপনি এবং আপনার এলাকাকবাসী কেন এই দলে সম্পৃক্ত থাকেন এবং সম্প্রদায়-ভিত্তিক ব্যবস্থাপনা (CBM) বাস্তবায়িত করেন? (কোন কোন বিষয় এক্ষেত্রে আপনাদের উৎসাহ দেয়?)

15. *What would increase your group's motivation to continue your work?*

১৫। ভবিষ্যতে কর্মকাণ্ড চালিয়ে নিতে আপনাদের দলের উৎসাহিত কিভাবে বৃদ্ধি পাবে?

16. *What part of the group's work requires government involvement, and what part can you do independently (by yourselves)?*

১৬। আপনাদের দলের কার্যক্রমের কোন কোন ক্ষেত্রে সরকারের সম্পৃক্ততার প্রয়োজন আছে এবং কোন কোন কাজ আপনারা নিজেরাই স্বাধীনভাবে করতে পারেন?

17. *How have your group's capacities changed (improved) over time? Please give ONE specific example.*

১৭। সময়ের সাথে সাথে আপনাদের দলের সক্ষমতা কিভাবে পরিবর্তিত (উন্নত) হয়েছে? অনুগ্রহ করে একটি নির্দিষ্ট উদাহরণ দিন।

18. *What other activities would you like your group to do?*

১৮। আপনাদের দল আর কি কি কর্মকাণ্ড পরিচালনায় আগ্রহী?

Co-Management/CBM Direct and Indirect Benefits

সহ-ব্যবস্থাপনা/ সম্প্রদায় ভিত্তিক ব্যবস্থাপনা (সিবিএম) থেকে প্রাপ্ত প্রত্যক্ষ ও পরোক্ষ সুবিধাসমূহ

19. Tell us ONE direct benefit to you or your community from the CBM/co-management approach?

১৯। এমন একটি প্রত্যক্ষ সুবিধার কথা উল্লেখ করুন যা আপনি বা আপনার এলাকাবাসী সম্প্রদায় ভিত্তিক ব্যবস্থাপনা (সিবিএম)/ সহ-ব্যবস্থাপনা পদ্ধতি থেকে প্রাপ্ত বলে মনে করেন।

20. Tell us ONE other social or other kind of benefit from the CBM/co-Management approach?

২০। সম্প্রদায় ভিত্তিক ব্যবস্থাপনা (সিবিএম)/ সহ-ব্যবস্থাপনা পদ্ধতি থেকে প্রাপ্ত আরও একটি সামাজিক বা অন্য কোনো ধরনের সুবিধার কথা বলুন।

20.1.[If no one has mentioned yet:] Because of CBM/co-management [or name a specific project], has anything changed about the way your community governs itself / the way things are managed in your community?

২০.১। [যদি এখনও কেউ কোনো সুবিধার কথা উল্লেখ না করে:] সম্প্রদায় ভিত্তিক ব্যবস্থাপনা (সিবিএম)/ সহ-ব্যবস্থাপনা পদ্ধতির কারণে [অথবা একটি নির্দিষ্ট প্রোজেক্টের নাম বলুন] কি আপনাদের এলাকার বা সমাজের পরিচালনা পদ্ধতি বা সমাজ ব্যবস্থাপনায় কোনো পরিবর্তন এসেছে?

20.2.[If no one has mentioned yet:] Because of CBM/co-management [or name a specific project], has anything changed inside your household?]

২০.২। [যদি এখনও কেউ কোনো সুবিধার কথা উল্লেখ না করে:] সম্প্রদায় ভিত্তিক ব্যবস্থাপনা (সিবিএম)/ সহ-ব্যবস্থাপনা পদ্ধতির কারণে [অথবা একটি নির্দিষ্ট প্রোজেক্টের নাম বলুন] কি আপনাদের পরিবারের মধ্যে কোনো পরিবর্তন এসেছে?

20.3.[If no one has mentioned yet:] Because of CBM/co-management [or name a specific project], has anything changed about your family's health, nutrition, or anything else?

২০.৩। [যদি এখনও কেউ কোনো সুবিধার কথা উল্লেখ না করে:] সম্প্রদায় ভিত্তিক ব্যবস্থাপনা (সিবিএম)/ সহ-ব্যবস্থাপনা পদ্ধতির কারণে [অথবা একটি নির্দিষ্ট প্রোজেক্টের নাম বলুন] কি আপনাদের পরিবারের স্বাস্থ্য, পুষ্টি, বা অন্য কিছুতে কোনো পরিবর্তন এসেছে?

ANNEX 9: MINI-SURVEY AND SELECTED DATA

Before each FGD, the Bangladeshi members of the assessment team conducted a mini-survey among participants. The survey was administered one-by-one among individuals who agreed to join each FGD.

Survey participants included CMC members, VCF members, forest guard groups, women's livelihood groups, and fisher cooperatives.

USAID NRM Assessment

Mini Survey Questionnaire ছোট জরিপের প্রশ্নমালা

Mini-survey Instructions:

1. Complete the survey with each person as quickly as possible. (যত তাড়াতাড়ি সম্ভব জরিপ সম্পন্ন করতে হবে) প্রতিটি ফোকাস গ্রুপ ডিসকাশন (এফ জি ডি)
2. Read every word written on the paper. Do not explain the question or add any other words. If a person does not understand the question, simply read the question one more time. If a person does not give an answer or says "I don't know," circle NA. (কাগজে লিখিত প্রতিটি শব্দ পড়বে। প্রশ্ন ব্যাখ্যা করবেন না। কোন কারণে অন্য কোন শব্দ বা ব্যাখ্যা যোগ করবেন না, যদি কোন ব্যক্তি কোন বিষয় না বোঝে তাহলে বা "জানি না" তাহলে "প্রযোজ্য নয়" লিখুন)
3. Read one question. Wait for an answer. Tick the correct box. একটি প্রশ্ন পড়ুন। উত্তরের জন্য অপেক্ষা করুন। সঠিক (ঘরে) টিক দিন
4. Write a short answer in each blank space, if appropriate. সংক্ষিপ্ত উত্তর লিখুন ফাঁকা জায়গায় (_____), যদি উপযুক্ত হয়।
5. If the person wants to give a long explanation, please interrupt her/him. যদি ব্যক্তি দীর্ঘ ব্যাখ্যা দিতে চায়, অনুগ্রহ করে তার/তাকে বাঁধা দিন

Name of the Protected Area Nearby:								
Division: (বিভাগ)				District: জেলা:				
Upazila: উপজেলা				Closest Town or Village: নিকটতম শহর/বাজার				
Survey Participant								
Male or Female পুরুষ বা মহিলা			Age (Years Old) বয়স:			Years Living in this Area কত বছর ধরে এই এলাকাতে বসবাস করছেন?		
CMC	VCF	PF	HCG	CSG	VCG	RMO	CPG	
Primary Work/Income Generating Activity আপনি কি কাজ করেন? আপনার আয়ের উৎস কি?								

I would like to ask you a few questions. It will take about 10 minutes. There is no right or wrong answer. I will not tell anyone else about your answers. May I ask the questions?

আমি আপনাকে কিছু প্রশ্ন জিজ্ঞাসা করতে চাই? এটা প্রায় ১০ মিনিট সময় লাগবে। এখানে কোন সঠিক বা ভুল উত্তর নেই। আমি আপনার উত্তর সম্পর্কে অন্য আর কাউকে বলবো না। আমি কি প্রশ্ন শুরু করতে পারি?

Question		Answer			
<p>What is the name of the Protected Area / natural resource nearby? আপনার কাছাকাছি সংরক্ষিত এলাকা/বা প্রাকৃতিক সম্পদ কি আছে তার নাম বলতে পারবেন? [X = name of the Protected Area nearby]</p>					
1	<p>What kind of uses/resources does your family get from X? কি কি ধরনের উপকরন বা সম্পদ আপনি এই জায়গা থেকে নিয়ে থাকেন? (DO NOT READ ANSWER CHOICES. Tick ALL answers given by the respondent.) (নিচের উত্তরগুলো পড়ে শোনাবেন না, উত্তরদ্বারা যতগুলো উত্তর প্রদান করবেন, সকল উত্তর টিক দিন)</p> <p>IA ___ fuel wood/timber (জালানী, কাঠ) IB ___ fish (hilsa)/crab (ইলিশ মাছ, কাকড়া) IC ___ other food: fruit (ফল) / honey (মধু) / other (অন্যান্য) _____ ID ___ plants: <i>golpata</i> / bamboo / rattan /other (গোলপাতা/বাম্বু/অন্যান্য) _____ IE ___ Other: (অন্যান্য) _____</p>				
2	<p>Thinking about 5 years ago, did your family/community use <u>more, less, or the same</u> natural resources from X? (Circle one answer.) আপনি যদি পাচ বছর আগের কথা চিন্তা করেন, তাহলে আপনার পরিবার কি পরিমান সম্পদ বা প্রয়োজনীয় জিনিস পেতেন? (শুধু মাত্র একটি উত্তর এ টিক চিহ্ন দিন)</p>	More	Less	Same	NA
3	<p>Thinking about 20 years ago, did your family/community use <u>more, less, or the same</u> natural resources from X? (Circle one answer.) আপনি যদি বিশ বছর আগের কথা চিন্তা করেন, তাহলে আপনার পরিবার কি পরিমান সম্পদ বা প্রয়োজনীয় জিনিস পেতেন? (শুধু মাত্র একটি উত্তর এ টিক চিহ্ন দিন)</p>	More	Less	Same	NA
4	<p>Who manages the resources in X—is it <u>government, or community, or both together</u>? কে এই জায়গা টা দেখভাল করে? সরকার অথবা সমাজের মানুষ আপনারা যারা আছেন বা উভয়? (If only government or only community, END SURVEY.) (যদি এমন হয় শুধু সরকার দেখাশোনা করে বা শুধু সমাজের মানুষ দেখাশোনা করে তাহলে তাহলে সার্ভে এইখানে শেষ করে দিতে হবে)</p>	Gov't	Comm	Both	NA
5	<p>According to your knowledge, how many years have <u>government and community managed X together</u>? আপনার জানা মতে কত বছর ধরে এই জায়গা টা সরকার এবং সমাজের মানুষ এক সাথে দেখভাল/দেখাশোনা করছে? (Write number of years in appropriate box.) (সঠিক নম্বরের ঘরে টিক চিহ্ন দিন)</p>	1-5	6-10	11+	NA
6	<p>In your opinion, is the co-management of X functioning <u>very successfully, somewhat successfully, or not at all successfully</u>? (Circle one answer.) আপনার মতে এই ব্যবস্থাপনা কতটা সফল, খুব সফল/কোনভাবে সফল/সফল নয়? (শুধু মাত্র একটি উত্তর এ টিক চিহ্ন দিন)</p>	Very	Some	Not	NA

7	<p>In your opinion, in reality (actually) who has power / control/authority over X—is it <u>government, or community, or both government and community?</u> (Circle one answer.)</p> <p>আপনার মতে, কে এই জায়গা তে বেশী ক্ষমতার অধিকারী? সরকার/সমাজের মানুষ,অথবা দুজনই (শুধু মাত্র একটি উত্তর এ টিক চিহ্ন দিন)</p>	Gov't	Comm	Both	NA
8	<p>In your opinion, who should have the power/control/ authority over X—is it <u>government, or community, or both government and community?</u> (আপনার মতে কার বেশী ক্ষমতা থাকা উচিত এই জায়গার প্রতি? সরকার/সমাজের মানুষ,অথবা দুজনই) (Circle one answer.) (শুধু মাত্র একটি উত্তর এ টিক চিহ্ন দিন)</p>	Gov't	Comm	Both	NA
9	<p>Now please think about your personal involvement in co-management of X. What is ONE benefit/advantage for your family or community because of your involvement in co-management of X? আপনি এই সহ ব্যবস্থাপনার সাথে জড়িত হয়ে আপনার পরিবার বা সমাজের জন্য কি উপকার করতে সক্ষম হয়েছেন বলে মানে করেন? একটি উদাহরণ দিয়ে বলতে পারবেন?</p> <p>(DO NOT READ CHOICES. Write the number 1 next to the answer.) (উত্তর গুলো পড়ে শোনাবেন না, যে সমস্যা টি উত্তর দ্বারা উল্লেখ করেন তার পাশে ১ নম্বর লিখুন)</p> <p>What is ONE MORE benefit/advantage for your family or community because of your involvement in co-management of X? আমাকে আরো একটি উদাহরণ দিয়ে বলেন যে আর কি উপকার আপনার বা আপনার সমাজের জন্য আপনি করতে পেরেছেন? (DO NOT READ CHOICES. Write the number 2 next to the answer.) (উত্তর গুলো পড়ে শোনাবেন না, যে সমস্যা টি উত্তর দ্বারা উল্লেখ করেন তার পাশে ২ নম্বর লিখুন)</p> <p>9A ___ increased income/money (ইনকাম বেড়েছে?) 9B ___ alternative livelihoods/income generating activities/eco-tourism/jobs (ভিন্ন কোন জীবিকা/আয়ের পথ/পর্যটন ব্যবস্থা) 9C ___ better nutrition/more nutritious food (পুষ্টির খাদ্যের সরবরাহ বেড়েছে?) 9D ___ natural resources for future generations / better for environment-climate-wildlife আগামী প্রজন্মের জন্য প্রকৃতিক সম্পদ/ভাল পরিবেশ/ 9E ___ technology/skills/knowledge/awareness/information/capacity. প্রযুক্তি/দক্ষতা/সচেতনতা/তথ্য/ 9F ___ increased confidence/empowerment/leadership/my voice is heard/prestige আত্মবিশ্বাস বেড়েছে/নেতৃত্ব/সিদ্ধান্ত দেবার অধিকার/ 9G ___ improved health/access to health care (স্বাস্থ্য সেবার উন্নয়ন বা আগমন টা বেশী ঘটেছে). 9H ___ increased access to education for my children ছেলে মেয়েদের শিক্ষা ব্যবস্থার উন্নয়ন হয়েছে? 9I ___ I'm contributing something positive for my community (আমি আমার সমাজে কিছু ভাল অবদান রাখতে পেরেছি?) 9J ___ Other(অন্যান্য): _____</p>				
10	<p>Now, can you tell me ONE problem or challenge related to the co-management of X? আপনি আমাকে একটি সমস্যার কথা বলুন যা সহ-ব্যবস্থাপক হিসেবে কাজ করতে গিয়ে আপনি পেয়েছেন? (DO NOT READ CHOICES. Write the number 1 next to the answer.) (উত্তর গুলো পড়ে শোনাবেন না, যে সমস্যা টি উত্তর দ্বারা উল্লেখ করেন তার পাশে ১ নম্বর লিখুন)</p> <p>What is ONE MORE problem or challenge about co-management of X? আপনি কি আমাকে আরো একটি সমস্যার কথা বলতে পারেন সহ-ব্যবস্থাপক হিসেবে কাজ করতে গিয়ে যা আপনার মানে হয়েছে? (DO NOT READ CHOICES. Write the number 2 next to the answer.) (উত্তর গুলো পড়ে শোনাবেন না, যে সমস্যা টি উত্তর দ্বারা উল্লেখ করেন তার পাশে ২ নম্বর লিখুন)</p>				
10A	community not really included in decision-making				

	<p>সমাজের মানুষকে সিদ্ধান্ত অংশ নেয়ার বাইরে রাখা হয়</p> <p>I0B ___ powerful people in the community have control সমাজের অন্য ক্ষমতাধর ব্যক্তিগণ এটা নিয়ন্ত্রণ করে থাকে</p> <p>I0C ___ decrease in income/livelihood/job/income-generating opportunities (আয় কমে গেছে/জীবিকার পথ কমে গেছে/ চাকুরী নাই/</p> <p>I0D ___ decreased access to the resources we need (wood/land/fishing area/other) (সম্পদের উৎস কমে গেছে যা আমরা পেতাম (কাঠ/জমি/মাছ ধরার জায়গা/)</p> <p>I0E ___ decreased responsiveness/services (সেবা প্রভাবের জায়গা টা কমে গেছে) I0F ___ Other (অন্যান্য)_____</p>				
I1	<p>Regarding your personal involvement in co-management of X – Do you have <u>all, some, or none</u> of the skills and information you need?</p> <p>আপনার কি মনে হয়, এই সহ-ব্যবস্থাপনার সাথে যুক্ত থাকার জন্য আপনার সকল ধরনের তথ্য বা জ্ঞান রয়েছে [If all, END SURVEY] (যদি উত্তরটি হয় সব তাহলে সার্ভে বা জরিপ টি শেষ করে দিন)</p>	All	Some	None	NA
I2	<p>To be more involved (or make a stronger contribution) in co-management of X, what additional information and/or skills do you need?</p> <p>যদি আপনি আরো বেশী এই সহ-ব্যবস্থাপনা কাজের সাথে যুক্ত (বেশী অবদান) থাকতে চান তাহলে আপনার আর কোন ধরনের দক্ষতা প্রয়োজন বলে আপনি মনে করছেন?</p>				

Thank you very much for giving your time to answer these questions.

আপনাকে অনেক ধন্যবাদ আমাকে সময় দেয়ার জন্য

MINI-SURVEY SELECTED DATA TABLES

Q2. Thinking about five years ago, did your family/community use more, less, or the same natural resources from the local PA/natural resource source?

Q3. Thinking about 20 years ago, did your family/community use more, less, or the same natural resources from the local PA/natural resource source?

Answers	Five Years Ago	20 Years Ago
More	80 33.8%	122 51.5%
Same	4 1.7%	0 0.0%
Less	151 63.7%	110 46.4%
N/A	2 0.8%	5 2.1%
N= 237		

Q6. In your opinion, is the co-management of the local PA/natural resources functioning very successfully, somewhat successfully, or not at all successfully?

Answers	Frequency	Percent
Very successfully	72	54.5%
Somewhat successfully	59	44.7%
Not successfully at all	0	0.0%
N/A	1	0.8%
N= 132		

Q7. In your opinion, in reality (actually) who has power/control/authority over the local PA/natural resources—is it government, or community, or both government and community?

Q8. In your opinion, who should have the power/control/authority over the local PA/natural resources—is it government, or community, or both government and community?

Answers	Who has the authority? (Q7)		Who should have the authority? (Q8)	
	Frequency	Percent	Frequency	Percent
Government	30	22.9%	17	12.9%
Community	32	24.4%	45	34.1%
Both	69	52.7%	70	53.0%
N = 131			N = 132	

Q9. Please think about your personal involvement in co-management of the local PA/natural resources. What is the ONE benefit/advantage for your family or community because of your involvement in co-management of the local PA/natural resources. (What is ONE MORE benefit/advantage? (DO NOT READ CHOICES.)

Benefits/Advantages	Benefit 1		Benefit 2		No answer	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Increased income/money	48	20.3%	13	5.5%	176	74.3%
Alternative livelihoods/income generating activities/eco-tourism/jobs	31	13.1%	28	11.8%	178	75.1%
Better nutrition/more nutritious food	0	0.0%	2	0.8%	235	99.2%
Natural resources for future generations/ better for environment-climate-wildlife	16	6.8%	21	8.9%	200	84.4%
Technology/skills/knowledge/awareness/ information/capacity	9	3.8%	12	5.1%	216	91.1%
Increased confidence/empowerment/ leadership/my voice is heard/prestige	7	3.0%	21	8.9%	209	88.2%

Benefits/Advantages	Benefit 1		Benefit 2		No answer	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Improved health/access to health care	0	0.0%	2	0.8%	235	99.2%
Increased access to education for my children	0	0.0%	3	1.3%	234	98.7%
I'm contributing something positive for my community	1	0.4%	3	1.3%	233	98.3%
Other	14	5.9%	9	3.8%	214	90.3%
N= 237						

Q10. Now, can you tell me ONE problem or challenge related to the co-management of the local PA/natural resources? (And can you tell me ONE more problem or challenge?) (DO NOT READ CHOICES.)

Challenges	Challenge 1		Challenge 2		No selection	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Community not really included in decision-making	3	1.3%	2	0.8%	232	97.9%
Powerful people in the community have control (influential/loggers)	14	5.9%	5	2.1%	218	92.0%
Decrease in income/livelihood/job/IGA opportunities (anything related to money/income)	10	4.2%	6	2.5%	221	93.2%
Decreased access to the resources we need (wood/land/fishing area/other)	41	17.3%	10	4.2%	186	78.5%
Decreased responsiveness/services	2	0.8%	4	1.7%	231	97.5%
Other: Misunderstanding/conflict among community members	32	13.5%	18	7.6%	187	78.9%
N= 237						

Q11. Regarding your personal involvement in co-management of the local PA/natural resources—do you have all, some, or none of the skills and information you need? [If all, END survey]

Do you have the skills and information you need?	Frequency	Percent
None	5	3.8%
Some	122	93.1%
All	4	3.1%
Blank	106	44.7%
N=237		

Q12. To be more involved (or make a stronger contribution) in co-management of the local PA/natural resources, what additional information and/or skills do you need?

What additional skills and information do you need?	Frequency	Percent
AIGAs	79	61.7%
Group management skills	31	24.2%
Forest/fisheries management/conservation/protection	36	28.1%
N=128		

ANNEX 10: USAID NRM CO-MANAGEMENT THEORY OF CHANGE AND RESULTS FRAMEWORK

Project	Objective	Intermediate Results						Source Document
MACH I	Improved Management of Open Water and Tropical Forest Resources	1. Improved Floodplain Resource Management Practices	2. Increased Public Awareness	3. Generate Supplemental Income				MACH I Mid-term Review December 2001
MACH II	Improved Management of Open Water & Tropical Forest Resources	1. Effective Community Based Resource Management Mechanisms Implemented	2. Select Habitats and Ecosystems Improved	3. Select Policies Implemented that Support IRs 1 & 2	4. Public Awareness of Key Issues Increased	5. Improved Institutional Capacity		MACH II Completion Report Volume I, Main Report
NSP	Improved Management of Open Water and Tropical Forest Resources	1. Effective Community Based Resource Management Mechanisms Implemented	2. Create alternative income generation opportunities for key local stakeholders associated with pilot co-managed Protected Areas	3. Develop policies conducive to improved Protected Area management and build constituencies to further these policy goals	4. Strengthen the institutional systems and capacity of the Forest Department and key stakeholders so that improvements in co-management can be made permanent	5. Build or reinforce the infrastructure within Protected Areas that will enable better management and provision of visitor services at comanaged sites	6. Design and implement a program of habitat management and restoration for pilot Protected Areas	Nishorgo Support Project Completion Report April 2009
IPAC	Contribute to the sustainable co-management of natural resources and to enhance biodiversity conservation in targeted forest and wetland protected area landscapes	1. Developed sustainable natural resources sector	2. Developed protected area strategy	3. Improved technical capacity of stakeholders	4. Expanded area under co-management	5. Enhanced Climate Change Adaptation Capacity		IPAC Revised Performance Monitoring Plan, Third Edition May 30, 2011

Project	Objective	Intermediate Results						Source Document
CREL	Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments	1. Improved Governance of Natural Resources and Biodiversity	2. Enhanced Capacity of Key Stakeholders	3. Strengthened Implementation of Climate Resilient NRM	4: Improved Livelihoods that are Environmentally Sustainable and Resilient to Climate Change			CREL Mid-term Performance Evaluation Final Report December 15, 2015
CHTWCA	Improved climate resiliency and ecosystems in Chattogram Hill Tracts	1. Improved participatory management of Village Common Forests and Reserved Forests	2. Improved livelihoods that are environmentally sustainable and resilient to climate change					Draft CHTWCA Year 6 Annual Work Plan
ECOFISH^{BD}	Improved resilience of the Meghna River ecosystem and communities reliant on coastal fisheries	1. Improved science-based fisheries management decision making	2. Strengthened fisheries adaptive co-management	3. Enhanced socio-ecological and economic resilience of target communities				ECOFISH ^{BD} Program Description April 2014

ANNEX II: LIST OF DOCUMENTS

#	Full Title, Author, Date Published	Date Received	Source
GOB Laws, Policies and Strategy Documents			
1	Forest Act, 1927	Jul. 21, 2019	USAID
2	Bangladesh Biodiversity Act, 2014	Jul. 21, 2019	USAID
3	Bangladesh Climate Change Strategy and Action Plan, GoB, 2009	Jul. 21, 2019	USAID
4	Bangladesh Elephant Conservation Action Plan	Jul. 21, 2019	USAID
5	Bangladesh Tiger Action Plan, MOEFCC, 2009-2017	Jul. 21, 2019	USAID
6	Environmental Conservation Act, 1995	Jul. 21, 2019	USAID
7	National Biodiversity Strategy and Action Plan, GoB, 2004	Jul. 21, 2019	USAID
8	National Conservation Strategy Executive Summary, 2016-2031	Jul. 21, 2019	USAID
9	National Fisheries Policy, Ministry of Fisheries and Livestock, 1998	Jul. 21, 2019	USAID
10	National Sustainable Development Strategy	Jul. 21, 2019	USAID
11	Wildlife (Preservation and Security) Act, 2012	Jul. 21, 2019	USAID
12	National Adaptation Programme of Action (NAPA), GoB, 2005	Jul. 21, 2019	USAID
13	Background Paper of 7th Five Year Plan Climate Change and Disaster Management	Jul. 21, 2019	USAID
14	Background Paper of 7th Five Year Plan Environment Forestry and Biodiversity	Jul. 21, 2019	USAID
15	Background Paper of 7th Five Year Plan Opportunities and Strategies	Jul. 21, 2019	USAID
16	Bangladesh Forestry Master Plan 2017-2036, Draft December 2016	Jul. 21, 2019	USAID
17	Forest Investment Plan Draft, 2017	Jul. 21, 2019	USAID
18	Perspective Plan Final	Jul. 21, 2019	USAID
19	National Aquaculture Development Strategy and Action Plan of Bangladesh 2013–2020	May 7, 2019	Web
20	The submission of Bangladesh's Forest Reference Level for REDD+ under the United Nations Framework Convention for Climate Change, MOEFCC, GOB, December 2018	Sept. 23, 2019	Web
USAID NRM Policies and Activities			
21	USAID Bangladesh Environment Sector Assessment and Strategic Analysis, 2010	Jul. 21, 2019	USAID
22	USAID Bangladesh Tropical Forests and Biodiversity Assessment, May 2016	May 7, 2019	Web
23	2016 USAID Bangladesh Tropical Forests and Biodiversity Assessment	May 7, 2019	Web
24	2017 Foreign Assistance Act Sections 118/119 Tropical Forest and Biodiversity Analysis Best Practices Guide	May 7, 2019	Web
25	January 2019 Effective Engagement with Indigenous Peoples: USAID Biodiversity Sector Guidance Document	May 7, 2019	Web
Arannayk Foundation			
26	Tales from The Forests_VOI 03 Issue 02	Sept. 15, 2019	Arannayk
27	Alternative_Livelihood-Well_Conserved_Forests	Sept. 15, 2019	Arannayk
28	CRPARP_ALSFC_Completion-Report-2017	Sept. 15, 2019	Arannayk
29	Arannayk Foundation Top Forest Cons Act Report 2009	Sept. 15, 2019	Arannayk
30	Arannayk Program Strategy Options	Sept. 15, 2019	Arannayk
31	Strengthening Arannayk Foundation Pub Aware and Site Selection 2002	Sept. 15, 2019	Arannayk

#	Full Title, Author, Date Published	Date Received	Source
Bagh			
32	Bagh-Program Description	Aug. 21, 2019	USAID
33	Bagh-Mid Term Performance Evaluation-Final Report- February 21, 2017	Jul. 24, 2019	USAID
34	Bagh Request for Application RFA Final	Aug. 21, 2019	USAID
35	Bagh RFA Request for Application Amendment 1	Aug. 21, 2019	USAID
36	Bagh RFA Request for Application Amendment 2	Aug. 21, 2019	USAID
37	Bagh_M&E Plan, Revised 5 September	Aug. 21, 2019	USAID
38	Bagh - Building Capacity to Protect Tigers in Bangladesh _ UNOPS	Aug. 14, 2019	USAID
CHTWCA			
39	CHTWCA Annual Progress Report, August 30, 2017 to August 29, 2018, September 2018	May 22, 2019	USAID
40	CHTWCA VCFs Bandarban District (Excel spreadsheet)	May 22, 2019	USAID
41	CHTWCA Final VCF _ Covered in Bandarban District (Excel spreadsheet)	Jul. 28, 2019	USAID
42	CHT: The Haven of Wildlife Under Severe Threat, M. Monirul H. Khan, June 2013	Aug. 21, 2019	USAID
43	CHT Regulation-1900	Aug. 7, 2019	USAID
44	Letter of Agreement-UNDP and FD	Aug. 7, 2019	USAID
45	Workshop Report VCF June 2019	Aug. 6, 2019	USAID
46	Natural Resource Depletion in CHT Bangladesh	Aug. 7, 2019	USAID
CREL			
47	CREL Final Performance Report 2012-2018, Winrock International, November 30, 2018	May 7, 2019	USAID
48	CREL Project Mid-term Performance Evaluation-Final Report - December 15, 2015	Jul. 24, 2019	USAID
49	Case Study-Winrock-CMOs Recommended by USAID	Aug. 14, 2019	USAID
50	CMO Assessment Report-3013-February 2014	Aug. 27, 2019	USAID
51	Bangladesh Climate-Resilient Ecosystem Curriculum (BACUM). USAID CREL. Winrock International. 2016	May 7, 2019	Web
52	CREL Monitoring and Evaluation Plan-June 5, 2013	Aug. 21, 2019	CREL
53	CREL-TR7-Women Empowerment	Aug. 6, 2019	CREL
54	DAI Case Study 2018	Aug. 21, 2019	CREL
55	Forest Carbon Inventory 2014 (8 PAs)	Aug. 9, 2019	CREL
56	Forest Carbon Inventory 2015 (5 PAs)	Aug. 9, 2019	CREL
57	Forest Carbon Inventory Standard Operating Procedure (SOP) 2014	Aug. 9, 2019	CREL
58	Forest Carbon Inventory-Carbon and Biophysical Following a REDD+ Framework Bangladesh	Aug. 9, 2019	CREL
59	Gender Opportunity and Action Learning Strategy Final, Submitted to USAID-June 25, 2014	Aug. 6, 2019	CREL
60	Himchari National Park Management Plan_BFD_January 2015	Aug. 9, 2019	USAID
61	Chunati Wildlife Sanctuary Management Plan	Aug. 9, 2019	CREL
62	Dudpukuria Dopachari Wildlife Management Plan	Aug. 9, 2019	CREL
63	Fashiakhali Wildlife Sanctuary Management Plan	Aug. 9, 2019	CREL
64	Kaptai National Park Management Plan	Aug. 9, 2019	CREL

#	Full Title, Author, Date Published	Date Received	Source
65	Khadimnagar National Park Management Plan	Aug. 9, 2019	CREL
66	Lawachara National Park Management Plan	Aug. 9, 2019	CREL
67	Medakochopia National Park Management Plan	Aug. 9, 2019	CREL
68	Modhupur National Park Management Plan	Aug. 9, 2019	CREL
69	Remakhalenga National Park Management Plan	Aug. 9, 2019	CREL
70	Satchari National Park Management Plan	Aug. 9, 2019	CREL
ECOFISH			
71	ECOFISH Annual Report-Year 4, WorldFish, October 2017 - September 2018	Aug. 4, 2019	USAID
72	ECOFISH Program Description final-April 1, 2014	Jul. 30, 2019	USAID
73	ECOFISH M&E Plan-revised_19 April 17_Final	Jul. 30, 2019	USAID
74	ECOFISH intervention area July 31, 2019 from ECOFISH	Jul. 31, 2019	ECOFISH ^{BD}
75	ECOFISH Activity Midterm Evaluation Report-February 2018-ACME-IBTCI	Jul. 24, 2019	USAID
76	ECOFISH Co-Management Guideline (draft)	Aug. 9, 2019	ECOFISH ^{BD}
77	ECOFISH intervention area 31 July 2019	Aug. 9, 2019	ECOFISH ^{BD}
78	ECOFISH Map-Landing Station	Sept. 15, 2019	ECOFISH ^{BD}
79	ECOFISH Map-Ukhiya Teknaf-Village-Name	Sept. 15, 2019	ECOFISH ^{BD}
80	ECOFISH Non-Consumptive value-Hilsha	Aug. 20, 2019	ECOFISH ^{BD}
81	ECOFISH Six Sanctuaries-Nijhum	Sept. 15, 2019	ECOFISH ^{BD}
82	FMC guidelines English August 2018 Updated	Aug. 31, 2019	ECOFISH ^{BD}
83	Hilsha Fisheries Options	Aug. 21, 2019	ECOFISH ^{BD}
84	USAID-Land-Tenure-TGGC_Bangladesh-Lessions_Hilsha_Fishery	Aug. 23, 2019	ECOFISH ^{BD}
IPAC			
85	IPAC Connecting Comm. & Conservation 2013	Jul. 20, 2019	USAID
86	IPAC Project Performance Evaluation 2013	Jul. 20, 2019	USAID
87	Dudhpukuria-Dhupchara Wildlife Sanctuary-IPAC Assessment-Report Ecotourism Planning-DDSW	Sept. 4, 2019	USAID
88	IPAC Final Report revised CM unsensitized	Jun. 20, 2019	USAID
89	IPAC Performance Monitoring Plan Final 2011	Aug. 21, 2019	USAID
MACH-I			
90	Baseline Report on Fisheries, Vegetation, wildlife and household protein consumption	Aug. 14, 2019	MACH I
91	Completion Report Final-Edited 11 November 2003	Aug. 14, 2019	MACH I
92	Evaluation by Wiedemann Associates	Aug. 14, 2019	MACH I
93	Gender Integration Report 03_V2	Aug. 14, 2019	MACH I
94	MACH 4 th Annual Report 16 March 2003	Aug. 14, 2019	MACH I
95	MACH Profile	Aug. 14, 2019	MACH I
96	Mid Term Evaluation 2001	Aug. 14, 2019	MACH I
MACH-II			


#	Full Title, Author, Date Published	Date Received	Source
97	Community Based-Co-Management policy brief	Aug. 14, 2019	MACH II
98	Local Government support policy brief	Aug. 14, 2019	MACH II
99	Restoring Wetland Environments and Biodiversity Policy	Aug. 14, 2019	MACH II
100	Improving Livelihoods Policy Brief	Aug. 14, 2019	MACH II
101	Livelihood Diversification Policy Brief	Aug. 14, 2019	MACH II
102	Fishing Rights Policy Brief	Aug. 14, 2019	MACH II
103	Scaling up Community Based Co-Management	Aug. 14, 2019	MACH II
104	Community Based Wetland Co-Management MACH Case Study, March 2007	Aug. 14, 2019	MACH II
105	Completion report MACH II	Aug. 14, 2019	MACH II
106	MACH II Case Studies 2006	Aug. 14, 2019	MACH II
107	MACH-CBFM workshop March 2007	Aug. 14, 2019	MACH II
108	TP2 Lesson from Community Based Co management	Aug. 14, 2019	MACH II
109	World Resources 2008 Roots of Resilience-Chapter 3	Aug. 14, 2019	MACH II
National Forest Inventory (NFI)			
110	FAO-Forest Monitoring Activity PD	Sept. 9, 2019	USAID
111	FAO NFI Completion Report	Sept. 9, 2019	USAID
112	M & E Plan Forest Inventory-USAID Comments	Sept. 9, 2019	USAID
113	CONFIDENTIAL - BFI_report_final draft (rec from USAID 20 Aug 2019)	Sept. 9, 2019	USAID
114	NFI Socio Economy Survey Design	Sept. 9, 2019	USAID
115	Working with Bangladesh on their National Forest Inventory _ US Forest Service	Sept. 9, 2019	USAID
Nishorgo Support Project (NSP)			
117	2006 Evaluation of USAID Bangladesh Environment Program	Aug. 14, 2019	USAID
118	Lessons from Nishorgo in Bangladesh 2012.12.12	Aug. 21, 2019	USAID
119	Co-Management of PAs in Bangladesh-Strategy for Inst. framework-Nishorgo	May 6, 2019	USAID
120	Introduction and Context for Forest Co-Management in Bangladesh	May 6, 2019	USAID
121	Nishorgo AIGA Role	Aug. 21, 2019	USAID
Technical Reports and Publications			
122	Identifying Policy Change, Sadath, 2012	Jul. 21, 2019	USAID
123	Landscape Based Tiger Conservation Strategy, Wikrmanayake, 2011	Jul. 21, 2019	USAID
124	Bangladesh Sundarban Delta Vision 2050, IUCN Bangladesh Country Office, August 2014	Jul. 21, 2019	USAID
125	Climate Change and Farm Level Adaptation Decision and Strategies in Drought Prone and Groundwater Areas of Bangladesh - an Empirical investigation, Alauddin Sarker, August 24, 2014.	Jul. 21, 2019	USAID
126	The last tiger of Bangladesh, Bangladesh Nature Quest, Monirul Khan, January-August 2010	Jul. 21, 2019	USAID
127	Salinity Impact on Agro- Biodiversity in Bangladesh 2111, Rahman PDF	Jul. 21, 2019	USAID
128	Tiger Prey Threat Sundarban, Mohsanin, 2012	Jul. 21, 2019	USAID
129	Human Tiger Conflict in Context, In skip 2013	Jul. 21, 2019	USAID

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130	Counting Tigers at Macro Ecological Scales, Gopaldaswamy, 2015	Jul. 21, 2019	USAID
131	Causes of Biodiversity Depletion in Bangladesh and Their Consequence on Ecosystem	Jul. 21, 2019	USAID
132	The Impact of Climate Change on Prawn Postlarv, Ahmed, Occhipinti, Ambrogi and Muir	Jul. 21, 2019	USAID
133	Elephant Movement, Human Elephant conflict Situation in CXB, IUCN, 2018	Jul. 21, 2019	USAID
134	Human Elephant Conflict Mitigation Measures- Lessons from Bangladesh, IUCN, 2016	Jul. 21, 2019	USAID
135	Community Forest Management Addressing Social Vulnerability of Forest, Koli, 2013	Jul. 21, 2019	USAID
136	Governance of Forest Conservation and Co Benefits - for Bangladesh Under Changing Climate, February 2012	Jul. 21, 2019	USAID
137	Community Forestry for sust for Management. Jashimuddin, December 21, 2012	Jul. 21, 2019	USAID
138	Community Perceptions of State Forest Ownership and Management, Roy, 2013	Jul. 21, 2019	USAID
139	Livelihood and Adaptive Capacity in Bangladesh, April 2006	Jul. 21, 2019	USAID
140	Sustainable Shrimp Farming –ICZM, Afroz, 2013	Jul. 21, 2019	USAID
141	Building Resilience of Urban Slums in Dhaka, Bangladesh, Iftekhar Ahmed, 2016	Jul. 21, 2019	USAID
142	Vulnerability of Rural Livelihoods to Multiple Stressors - A case study Iqbal et al	Jul. 21, 2019	USAID
143	Livelihood Resilience in The Fate of Climate Change	Jul. 21, 2019	USAID
144	Adaptation and Development -Livelihood and Climate Change in Sundarban, Bangladesh, Pouliotte et al, 2009	Jul. 21, 2019	USAID
145	Improving Land Administration and Management Final	Jul. 21, 2019	USAID
146	Bangladesh NRS, June 25, 2019.	Jul. 21, 2019	USAID
147	Bangladesh GCF CP, Draft	Jul. 21, 2019	USAID
148	Climate Change Profile Bangladesh.	Jul. 21, 2019	USAID
149	Climate of Bangladesh, BMD, 2016.	Jul. 21, 2019	USAID
150	Community Based Ecosystem Conservation and Adaptation in Ecologically.	Jul. 21, 2019	USAID
151	Development Project Proforma (DPP) Manual Part 1, March 2014.	Jul. 21, 2019	USAID
152	Development Project Proforma (DPP) Manual Part 2, March 2014	Jul. 21, 2019	USAID
153	Fifth National Report of Bangladesh to the Convention on Biological Diversity	Jul. 21, 2019	USAID
154	Forest Investments Program Bangladesh, 2017	Jul. 21, 2019	USAID
155	INDC of Bangladesh, 2015.	Jul. 21, 2019	USAID
156	Climate Change Impact in Environment & Biodiversity Bangladesh, Shamim Hosen, University of Dhaka, 2014	Jul. 21, 2019	USAID
157	Overcoming the Challenges to Conservation Monitoring, Stephenson et al, July 5, 2015	Jul. 21, 2019	USAID
158	Using Biodiversity Indicator for Conservation, Stephenson O'Connor Reidhead and Loh, 2015	Jul. 21, 2019	USAID
159	Co-Management and Benefit Sharing from Coastal Afforestation Final Report, BFD, May 20, 2018	Jul. 21, 2019	USAID
160	Evaluating Co-Management within the National Parks and Wildlife Sanctuary in Bangladesh, Shams Uddin, John W.K Parr, May 1, 2018.	Jul. 21, 2019	USAID
161	Effect of Land Use Intensity on Surface Temperature - A Study on Chattogram City Corporation Area, Shamim Ara, Ashraful Islam, Sanjida Showkat, 2016.	Jul. 21, 2019	USAID
162	Moving Towards Inclusive Urban Adaptation Approaches to Integrating Community Based Adaptation to Climate Change at City and National Scale. Archer et al, February 2014.	Jul. 21, 2019	USAID

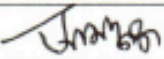
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163	Climate Change Adaptation Actions in Bangladesh, R. Shaw et al (eds.), 2013	Jul. 21, 2019	USAID
164	Economics of Adaptation to Climate Change, World Bank, 2010.	Jul. 21, 2019	USAID
165	Ecosystem Based Adaptation to CC, Reid & Sarder, 2014.	Jul. 21, 2019	USAID
166	Climate Change Adaptation and Vulnerability Assessment of Water Resources Systems in Developing Countries, Gain et al, March 2012	Jul. 21, 2019	USAID
167	Climate Change Adaptation - The Bangladesh Experience, Groom (2018) Published October 2012	Jul. 21, 2019	USAID
168	Pro-poor Adaptation for the Urban Extreme Poor in the Context of Climate Change -A study of Dhaka City, Hossain and Rahman, August 2017.	Jul. 21, 2019	USAID
169	Mainstreaming Community-based Adaptation into National and Local Planning, Reid and Huq, 2014	Jul. 21, 2019	USAID
170	Moving Towards Inclusive Urban Adaptation Approaches to Integrating Community-Based Adaptation to Climate Change at City and National Scale, Diane Archer, March 28, 2015.	Jul. 21, 2019	USAID
171	Reconceptualising Adaptation to Climate Change as Part of Pathways of Change and Response, R.M Wise, Fazey, December 2, 2013.	Jul. 21, 2019	USAID
172	Flood Vulnerability and Adaptation to Climate Change In Bangladesh. A review, Younus, Fazal, September 2014.	Jul. 21, 2019	USAID
173	Community Based Flood Vulnerability and Adaptation Assessment -A case study from Bangladesh, Younus, Harvey, September 4, 2013.	Jul. 21, 2019	USAID
174	Vulnerability and Adaptation to Climate Change in Bangladesh, Younus PhD Thesis.	Jul. 21, 2019	USAID
175	Ahmed (2016) Building Resilience of Urban Slums in Dhaka, Bangladesh	Jul. 21, 2019	USAID
176	Roe, Dilys, et al. 2015. Are alternative livelihood projects effective at reducing local threats to specified elements of biodiversity and/or improving or maintaining the conservation status of those elements? Environmental Evidence. https://environmentalevidencejournal.biomedcentral.com/track/pdf/10.1186/s13750-015-0048-1	Oct. 31, 2019	Web
177	Mijani-Rahman Md, Begum A. Implication of livelihood diversification on wetland resources conservation: a case from Bangladesh. J Wetlands Ecol. 2011;5:59-65	Oct. 31, 2019	Web
178	Rahman, Mohammad Mahfuzur, Md. Abdullah Al Mahmud, and Farid Uddin Ahmed. 2017. Developing alternative income generation activities reduces forest dependency of the poor and enhances their livelihoods: the case of the Chunati Wildlife Sanctuary, Bangladesh. https://www.tandfonline.com/doi/full/10.1080/14728028.2017.1320590	Oct. 31, 2019	Web
Maps, Images, Videos and Short Texts			
179	Community Patrol Groups Women (video) Lawachara, Moulavibazar district, Sylhet division	May 8, 2019	Web
180	Prey Selection by Tigers, For Print-sp-JBNHS	Jul. 21, 2019	USAID
181	Atlas Routes and Corridor of Asian Elephants in Bangladesh, IUCN, 2017	Jul. 21, 2019	USAID
182	Bangla REDD Roadmap	Jul. 21, 2019	USAID
183	Bangladesh REDD Roadmap Summary Presentation, March 27, 2012.	Jul. 21, 2019	USAID
184	Community Based Ecosystem Conservation and Adaptation in Ecologically Critical Area of Bangladesh, Department of Environment, June 2015	Jul. 21, 2019	USAID
185	PARKS-The international Journal of Protected areas and Conservation, May 1, 2018	Jul. 21, 2019	USAID
186	Tiger Density Sundarban, Monirul Khan JoTT, February 2012	Jul. 21, 2019	USAID

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188	Bird diversity in 5 Pas in Bangladesh, Khan and Aziz, 2012	Jul. 21, 2019	USAID
189	Modelling Spatial Distribution of Critically Endangered, Alamgir, Mukul, Sturton	Jul. 21, 2019	USAID
190	Habit Preferences of Tiger, Panthera Tigris Khan, 2007	Jul. 21, 2019	USAID
191	Status of Asia Elephants in Bangladesh, IUCN, 2017	Jul. 21, 2019	USAID
192	NTPF Incomes Bangladesh, Kar, 2013	Jul. 21, 2019	USAID
193	PES Standards Naeem Ingram Varga Col Et al Science 2015	Jul. 21, 2019	USAID
194	Local Wisdom-Indigenous Practices for Mitigating Disaster Loss, USAID	Jul. 21, 2019	USAID


ANNEX 12: CONFLICT OF INTEREST FORMS

Name	John Michael Kramer
Title	Team Leader
Organization	ME&A
Evaluation/Assessment Position?	X Team Leader <input type="checkbox"/> Team member
Evaluation/Assessment Award Number (or RFTOP or other appropriate instrument number)	Bangladesh Monitoring, Evaluation and Learning Activity (BMEL) Tasking Request S008
Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	USAID/Bangladesh Natural Resources Management (NRM) Sector Assessment
I have real or potential conflict of interest to disclose.	X Yes <input type="checkbox"/> No
<p>If yes answered above, I disclose the following facts:</p> <p><i>Real or potential conflicts of interest may include, but are not limited to:</i></p> <ol style="list-style-type: none"> 1. Close family member who is an employee of the DoS operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the DoS operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation. 	<p>Re item 4: As shown on my CV submitted at the time of my consideration as team leader for this assessment, I have worked as a short-term consultant for Winrock International, the implementing organization for CREL, one of the activities included in this assessment. I have also worked as an employee for International Resources Group, which was an IP for two of the activities, NSP and IPAC, included in this assessment.</p> <p>Re item 5: As shown on my CV submitted at the time of my consideration as team leader for this assessment, I have worked for several organizations that are competitors to Winrock International and International Resources Group. This includes Chemonics, TetraTech, AECOM, CARE, and the Cloudburst Group.</p>
Signature	
Date	November 19, 2019

Name	Md. Shams Uddin
Title	Senior NRM Governance Specialist
Organization	ME&A
Evaluation/Assessment Position?	<input type="checkbox"/> Team Leader <input checked="" type="checkbox"/> Team member
Evaluation/Assessment Award Number (or RFTOP or other appropriate instrument number)	Bangladesh Monitoring, Evaluation and Learning Activity (BMEL) Tasking Request S008
Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	USAID/Bangladesh Natural Resources Management (NRM) Sector Assessment
I have real or potential conflict of interest to disclose.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes answered above, I disclose the following facts: <i>Real or potential conflicts of interest may include, but are not limited to:</i> <ol style="list-style-type: none"> 1. Close family member who is an employee of the DoS operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the DoS operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation. 	<p>Re item 4: As shown on my CV submitted at the time of my consideration as a team member for this assessment, I have worked as an employee for Winrock International, the implementing organization for CREL, one of the activities included in this assessment.</p>

Signature	
Date	25/07/2019

Name	Humayun Kabir
Title	Socio-economic Development Expert
Organization	ME&A
Evaluation/Assessment Position?	<input type="checkbox"/> Team Leader <input checked="" type="checkbox"/> Team member
Evaluation/Assessment Award Number (or RFTOP or other appropriate instrument number)	Bangladesh Monitoring, Evaluation and Learning Activity (BMEL) Tasking Request S008
Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	USAID/Bangladesh Natural Resources Management (NRM) Sector Assessment
I have real or potential conflict of interest to disclose.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>If yes answered above, I disclose the following facts:</p> <p><i>Real or potential conflicts of interest may include, but are not limited to:</i></p> <ol style="list-style-type: none"> 1. Close family member who is an employee of the DoS operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the DoS operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation. 	<p>Re item 4: As shown on my CV submitted at the time of my consideration as a team member for this assessment, I have worked as a short-term consultant for WorldFish, the implementing organization for ECOFISH^{BD}, one of the activities included in this assessment.</p>

Signature:	
Date:	25 July 2019