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Report No: PAD2381

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 124.9 MILLION
(US\$175 MILLION EQUIVALENT)

TO THE

PEOPLE'S REPUBLIC OF BANGLADESH

FOR A

SUSTAINABLE FORESTS & LIVELIHOODS (SUFAL) PROJECT

September 18, 2018

Environment & Natural Resources Global Practice
South Asia Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective July 31, 2018

Currency Unit = Bangladeshi Taka (BDT)

BDT 84.5 = US\$1

US\$1.04 = SDR 1

FISCAL YEAR

July 1 - June 30

ABBREVIATIONS AND ACRONYMS

AIGA	Alternative Income-Generating Activity
ANR	Assisted Natural Regeneration
BEC	Bid Evaluation Committee
BFD	Bangladesh Forest Department
BFRI	Bangladesh Forest Research Institute
CCF	Chief Conservator of Forests
CFM	Collaborative Forest Management
CFMC	Collaborative Forest Management Committee
CHT	Chittagong Hill Tracts
COM	Community Operations Manual
CMO	Community Mobilization Officer
CPF	Country Partnership Framework
CRPARP	Climate Resilient Participatory Afforestation and Reforestation Project
DFO	Divisional Forest Officer
e-GP	Electronic Government Procurement
ESIA	Environmental and Social Impact Analysis
ESMAP	Energy Sector Management Assistance Program
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization of the United Nations
FAPAD	Foreign Aided Project Audit Directorate
FM	Financial Management
FMIS	Financial Management Information System
GDP	Gross Domestic Product
GIS	Geographic Information System
GOB	Government of Bangladesh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IDCOL	Infrastructure Development Company Limited
ICR	Implementation Completion and Results Report
IMED	Implementation Monitoring and Evaluation Division

IPF	Investment Project Financing
IRR	Internal Rate of Return
IT	Information Technology
IUFR	Interim Unaudited Financial Report
METG	Monitoring and Evaluation Technical Group
MOEFCC	Ministry of Environment, Forests, and Climate Change
M&E	Monitoring and Evaluation
M&R	Monitoring and Reporting
NGO	Nongovernmental Organization
NTFP	Non-timber Forest Product
PA	Protected Area
PD	Project Director
PDO	Project Development Objective
PEC	Proposal Evaluation Committee
PIC	Project Implementation Committee
PMU	Project Management Unit
PPI	Predictive Proxy Indicator
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
RIMS	Resource and Information Management Systems
SECDF	Small Ethnic Communities Development Framework
SMART	Spatial Monitoring and Reporting Tool
SOE	Statements of Expenditure
SRCWP	Strengthening Regional Cooperation for Wildlife Protection
SSP	Site-specific Plan
STEP	Systematic Tracking of Exchanges in Procurement
SUFAL	Sustainable Forests & Livelihoods
TOF	Trees Outside Forests
ToR	Terms of Reference

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Bangladesh	Sustainable Forests & Livelihoods (SUFAL) Project	
Project ID	Financing Instrument	Environmental Assessment Category
P161996	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
05-Oct-2018	30-Sep-2023

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To improve collaborative forest management and increase benefits for forest dependent communities in targeted sites.

Components

Component Name	Cost (US\$, millions)
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Strengthening Institutions, Information Systems and Training	16.24
Strengthening Collaborative Forest and Protected Areas Management	96.45
Increasing Access to Alternative Income Generating Activities (AIGAs), Forest Extension Services & Trees outside Forests (TOF)	54.14
Project Management, Monitoring and Reporting	12.07

Organizations

Borrower:	People's Republic of Bangladesh
Implementing Agency:	Bangladesh Forest Department (BFD)

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	178.90
Total Financing	178.90
of which IBRD/IDA	175.00
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Development Association (IDA)	175.00
IDA Credit	175.00

Non-World Bank Group Financing

Counterpart Funding	3.90
Borrower	3.90

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Total Amount
National PBA	175.00	0.00	175.00



Total	175.00	0.00	175.00
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Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024
Annual	6.90	25.80	39.92	43.68	46.78	11.93
Cumulative	6.90	32.70	72.62	116.30	163.07	175.00

INSTITUTIONAL DATA

Practice Area (Lead)

Environment & Natural Resources

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Substantial



5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● High
7. Environment and Social	● Substantial
8. Stakeholders	● Substantial
9. Other	● Substantial
10. Overall	● Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

☐ Yes ☒ No

Does the project require any waivers of Bank policies?

☐ Yes ☒ No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36	✓	
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11		✓
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants



Sections and Description

By no later than one (1) month after the Effective Date, the Recipient shall establish and thereafter maintain, throughout the period of implementation of the Project, a Project steering committee with a mandate, composition and resources satisfactory to the Association.

Sections and Description

By no later than three (3) months after the Effective Date, the Recipient shall establish and thereafter maintain, throughout the period of implementation of the Project, a Project management unit within BFD, with functions and resources satisfactory to the Association, and with staff in adequate numbers and with qualifications, experience and terms of reference satisfactory to the Association.

Sections and Description

Applied Research (Section I.B.1 of Schedule 2). For purposes of implementing Part 1.2(a) of the Project, by no later than one (1) month after the Effective Date, the Recipient shall: (a) establish a research coordination committee within BFD, with a mandate, composition and resources satisfactory to the Association; and (b) enter into a memorandum of understanding with the BFRI, under terms and conditions satisfactory to the Association.

Sections and Description

Innovation Window (Section I.B.2 of Schedule 2). For purposes of implementing Part 1.2(b) of the Project, the Recipient shall: (a) review and appraise all the Innovation Grant's proposals in accordance with the terms and conditions of the Innovation Grant Manual; and (b) make an Innovation Grant under a Sub-grant Agreement with the respective selected Beneficiary under terms and conditions acceptable to the Association.

Sections and Description

Sub-projects under Part 3.2 of the Project (Section I.D. of Schedule 2). For purposes of carrying out the Sub-projects under Part 3.2 of the Project, the Recipient shall: (a) review and appraise all the Sub-projects' proposals in accordance with the terms and conditions of the Community Operations Manual; and (b) make an AIGA Grants under a Sub-project Agreement with the respective Selected CFM Communities under terms and conditions acceptable to the Association.

Sections and Description

Project Implementation Plan, Innovation Grant Manual and Community Operations Manual (Section I.E of Schedule 2). The Recipient shall carry out the Project in accordance with the Project Implementation Plan, Part 1.2(b) of the Project in accordance with the Innovation Grant Manual and Part 3.2 of the Project in accordance with the Community Operations Manual; all in a manner satisfactory to the Association.

Sections and Description

Safeguards (Section I.F.1 of Schedule 2). The Recipient shall ensure and cause to ensure that the Project is carried out in accordance with the provisions of the EMSF, the RPF, the SEDCDF and all Safeguard Assessments and Plans and the requirements of the Grievance Redress Mechanism. To this end, the Recipient shall ensure, and cause BFD to ensure, that the appropriate review, clearance and public disclosure, and implementation of all Safeguard Assessments and Plans as required by the EMSF, the RPF and the SEDCDF.



Conditions

Type	Description
Disbursement	Notwithstanding the provisions of Part A above, no withdrawal shall be made: (a) under Category (2) until the Recipient submits evidence satisfactory to the Association showing that the Innovation Grant Manual has been issued by BFD in a manner satisfactory to the Association; and (b) under Categories (3) until the Recipient submits evidence satisfactory to the Association showing that the Community Operations Manual has been issued in a manner satisfactory to the Association.



I. STRATEGIC CONTEXT

A. Country Context

1. Bangladesh has made remarkable progress on poverty reduction over the past two decades. Strong emphasis on human development and employment generation has reduced extreme poverty and boosted shared prosperity. Poverty incidence (based on the international \$1.90 per capita per day poverty line¹) has declined from 44.2 percent in 1991 to 13.8 percent in 2016. The gross domestic product (GDP) grew well above the average for developing countries in recent years, averaging 6.5 percent since 2010, with an officially projected growth of 7.65 percent in FY18, driven by manufacturing and services. Such progress notwithstanding, the pace of poverty reduction and the rate of job creation has slowed since 2010. Bangladesh needs more effort in improving its growth rate to meet its target of moving up the middle-income rankings by 2021 and eliminating poverty by 2030.

2. Sustainability of this growth rate and the attainments on poverty reduction depend on the effective management of natural resources and environmental risks. Bangladesh is among the most densely populated countries in the world, with scarce land resources. Rapid urbanization increasingly threatens its remaining forests and risks the watershed services that sustain its agriculture and fisheries, the backbone of food self-sufficiency, particularly for the 70 percent in rural areas. The country's vulnerability to climate change and natural disasters² is well documented. Effective management of the negative externalities of urbanization and industrial growth and increasing resilience to climate change warrants greater efforts to sustainably manage the country's forests, wetlands, and mangroves.

B. Sectoral and Institutional Context

3. Bangladesh's forests are a safety net for the poor and enhance climate resilience and mitigation but have been steadily declining in quality and cover. It is estimated that at least 19 million Bangladeshis are dependent on forests for their livelihoods, and forest income as a proportion of total household income is estimated at between 8.9 percent and 18.6 percent.³ Fuelwood and other tree-sourced biomass is an important source of cooking energy, accounting for around 60 percent of total energy consumption.⁴ However, the proportion of land under forests (11 percent) is substantially lower than the average in Asia (26 percent), and growing stock with an average of 48 m³ per hectare, is also low compared to other countries in the region.⁵ Clearing for agriculture and infrastructure development, and unmanaged fuelwood and timber extraction and fires for shifting cultivation in the northeast of the country^{6,7} are

¹ Purchasing power parity exchange rate.

² World Bank, 2015, Bangladesh Country Snapshot; Maplecroft, 2014, Climate Vulnerability Index.

³ Environment, Forestry and Biodiversity Conservation, 2015, Background paper for the Seventh Five Year Plan, Planning Commission, Government of Bangladesh.

⁴ Asaduzzaman, M., Barnes, D.F., and Khandker, S.R. 2010. Restoring Balance: Bangladesh's Rural Energy Realities. World Bank Working Paper No. 181.

⁵ Bhutan, India, Nepal, and Pakistan had a growing stock of 200, 80, 178, and 95 m³ per hectare respectively in 2010. FAO. 2012. South Asian Forests and Forestry to 2020. Sub-regional Report of the Second Asia-Pacific Forestry Sector Outlook Study.

⁶ UN-REDD Bangladesh National Program. 2016. Drivers of Deforestation and Forest Degradation in Bangladesh: Final report. UN-REDD Bangladesh National Program, January 10, 2017.

⁷ FAO. 2012. South Asian Forests and Forestry to 2020. Sub-regional Report of the Second Asia-Pacific Forestry Sector Outlook



generally identified as the direct drivers of forest degradation. Like in the other countries of the region, degradation is a bigger challenge than deforestation. The indirect drivers are poverty and governance. However, there is little data to determine the relative contribution of these drivers.⁸

4. Increased salinity and more frequent cyclones leave less time for recovery from damage of mangrove forests which could reduce their protection function. Helping the country's coastal forests and mangroves thrive is important not only for biophysical resilience against cyclones and the rich supply of plant and sea food they provide, but also for climate mitigation—they store nearly four times more carbon than other forests,⁹ and if destroyed, will rapidly release this CO₂ to the atmosphere. The sudden influx and settling of over 750,000 Rohingyas from Myanmar in the forests of Cox's Bazar district is an unprecedented event which has led to the loss of nearly 13,000 ha of forest and elephant habitat. While this refugee situation is an enormous humanitarian crisis that needs urgent attention, the poorest among the host communities are also affected due the loss of forests and plantations and face increased risk of landslides and soil erosion, increasing the likelihood of social tensions and conflicts.

5. The public sector's approach to forest management needs a transformation to reverse this decline in forest cover. The mandate of the Bangladesh Forest Department (BFD) is to protect all government-owned forests. The moratorium on timber from natural forests is evidence that the Government of Bangladesh (GOB) greatly values the ecological and climate benefits of forests. The Seventh Five Year Plan (2016–2020)¹⁰ has explicit goals to increase forest and tree cover. The Social Forestry¹¹ program contributes to some extent toward this goal as does private homestead planting commonly known as 'trees outside forests' (TOF).¹² However, degradation of natural forests continues, making the GOB's goal of attaining a tree cover of over 20 percent of the land surface and ensuring that ecologically healthy native forests are restored and protected in all public forest lands very difficult.

6. Strong partnerships with communities are essential to sustainably manage the country's forests. The increase in TOF and the popularity of Social Forestry programs are evidence that a stake in the resource and clarity of tenure are essential to encourage community interest in sustainable forest management. However, there is no policy for the BFD to share benefits and responsibility with communities for management of natural forests. The BFD's mandate of protection encourages greater

Study. Bangkok.

⁸ To fill one of the data gaps the World Bank will undertake a fuelwood demand-supply assessment with Energy Sector Management Assistance Program (ESMAP) funds in 2018–19.

⁹ Alongi, D. 2012. "Carbon Sequestration in Mangroves." *Carbon Management* 3 (3).

¹⁰ Planning Commission, Government of The People's Republic of Bangladesh: Seventh Five Year Plan (2016–20); The goals include: (a) To achieve tree cover over 20 percent of the land surface (with tree density > 70 percent) and restore and protect ecologically healthy native forests in all public forest lands (about 16 percent of land); (b) mitigate climate change impacts and increase adaptive capacity (by among other actions, establishing and protecting a 500 m wide permanent green belt along the coast and; (c) improve the socioeconomic conditions of forest-dependent communities.

¹¹ The program is in operation since the 80s. Plantations are raised on degraded forest lands with selected beneficiaries. Each beneficiary is assigned 1 acre and receives inputs from the BFD for planting, tending, and final harvest in the 12th year. From the timber revenue, 70 percent timber goes to the beneficiary, 20 percent to the BFD, and 10 percent to the Tree Farming fund to fund the next rotation. Mostly fast-growing monocultures are raised for 2–3 rotations. The program is popular due to the monetary incentive but there are concerns regarding beneficiary selection and conversion of forest lands into monocultures through Social Forestry.

¹² TOF refers to trees grown on land that does not have the legal status of a forest in the country. These trees are frequently grown on village commons or privately-owned land. Nearly 50 percent of the tree canopy cover in the country is from TOF.



emphasis on law enforcement than on collaboration. The lack of resources and the population pressure make it nearly impossible for effectively managing forests using this approach. On the other hand, there is ample global experience¹³ that local communities are best-positioned to sustainably manage forests when they are part of the decision-making process and have a clear stake in the outcomes. The positive responses to social forestry and tree planting in the country point to an untapped opportunity for collaboration with communities for sustainably managing natural and planted forests around the country.

7. In tandem, investments are needed in income-generating activities that reduce dependency on forests. Bangladesh's rural economy is diversifying in response to increased market links, land constraints on agriculture, and Government efforts to improve economic resilience and rural incomes.¹⁴ Economic diversification has the potential to reduce pressure on forests by providing income that depends less on activities that negatively impact forests¹⁵ and encourage those which promote growth and sustainable use of the resource. This will be important as communities initiate collaborative management and need alternative incomes to compensate for loss of income from forests and as benefits from forest protection will take time to materialize. This will be particularly important for women who are among the poorest and depend more on collecting fuelwood and non-timber forest products (NTFPs) for subsistence.

8. The increase in TOF¹⁶ in the country indicates that tree planting is economically profitable for farmers. The domestic market for furniture in Bangladesh is growing (19 percent per year), and demand for timber is expected to reach 9.77 million m³ by 2030.¹⁷ Many private sector nurseries are servicing the demand for tree seedlings. The BFD as the technical leader in the sector can be effective in ensuring that the private sector meets this demand with quality benchmarks and advance market information to ensure profitability to farmers. To do this the BFD needs to reorient its role in forest extension and work more closely with farmers and private nurseries.

9. A shortage of adequate and predictable financing hinders the BFD's ability, among others, to plan and execute field activities necessary to maintain forest quality. This lack of active management contributes to both a decrease in forest quality and possible increase in illegal activity. Diversion of forest lands to other uses is sometimes unavoidable (as in the case of Rohingya camps) but there is no policy to compensate such loss with resources to raise forests in other locations. Policies on compensation for large-scale forest diversion and other options to finance forest development could help the BFD discharge its functions more effectively.

¹³ FAO. 2016. "Forty Years of Community-based Forestry: A Review of its Extent and Effectiveness." FAO Forestry Paper 176.

¹⁴ Khandker, S.R., Samad, H.A., and R. Ali. 2011. "Does Access to Finance Matter in Microenterprise Growth? Evidence from Bangladesh." World Bank Policy Research Working Paper 6333. This study attributed a 6 percent causal increase in income to participation in microenterprises facilitated by microcredit programs in Bangladesh. They conclude that returns to microenterprise investment are relatively high and that suboptimal private sector provision of credit (due to transaction costs and market failures) necessitates microfinance institutions; and World Bank, 2016, Country Partnership Framework (CPF).

¹⁵ World Bank, 2016, CPF. Non-agricultural activities are a growth area: rural non-farm employment is 50 percent higher than all urban employment and is growing faster than urban employment. Three-quarters of rural households in Bangladesh are estimated to have a non-farm source of revenue.

¹⁶ Potapov, P. V., B. N. Siddiqui, Z. Iqbal, T. Aziz, B. Zzaman, A. Islam, A. Pickens, Y. Talero, A. Tyukavina, S. Turubanova, and M. C. Hansen. 2017. "Comprehensive Monitoring of Bangladesh Tree Cover Inside and Outside of Forests, 2000–2014." *Environment Research Letters*. 12 (10) 4015

¹⁷ PKF. 2013. *Technical Report: Furniture Sector Value Chain Analysis and Proposed Action Plans. The EU INSPIRED Program for Bangladesh.*



10. To achieve progress toward its forest and tree cover goals, the BFD needs to make key shifts from a purely regulatory and enforcement approach to one of collaboration and service delivery and enhance income-generation options for the forest-dependent poor. The proposed Sustainable Forests & Livelihoods (SUFAL) Project will help achieve this by (a) creating the space for community stewardship and collaborative management to restore degraded forests and establish forest plantations in 79,000 ha; (b) improving extension and service delivery to farmers and the private sector to increase the area planted with TOF; and (c) enhancing the BFD's institutional capacity to address (a) and (b).

C. Relevance to Higher Level Objectives

11. The project directly contributes to the GOB's stated Seventh Five Year Plan goals related to increasing forest and tree cover, increasing climate resilience, and improving the well-being of forest-dependent communities. It is aligned with the World Bank Group strategy to reduce poverty and increase shared prosperity and the CPF (FY2016–2020) objectives 2.4 (Enhanced rural income opportunities for the poor through a participatory approach to afforestation and reforestation) and 3.1 (Increased resilience of population to natural disasters in urban and coastal areas through investing in coastal afforestation to expand the coastal green shelter belt). The project responds to the World Bank Group's Forest Action Plan (2016–2020) Focus Area 1: 'Sustainable Forestry' and cross-cutting theme 'Institutions and Governance' with investments which optimize the use of natural and planted forests, sustain livelihoods, and improve the policy and regulatory framework. The project also contributes to the Climate-Smart Land Use, Water, and Food Security action area of the World Bank Group Climate Change Strategy (2016–20) through investments in the coastal green belt, forest restoration, and biodiversity conservation. It is one among a growing cohort of forest landscape operations in the South Asia Region¹⁸ that will contribute to improving regional forest ecosystems, biodiversity, and wildlife habitats by investing in the conservation of critical elephant and tiger habitats and contributing to the ongoing cooperation¹⁹ on sharing information on illegal trade.

II. PROJECT DESCRIPTION

12. The project supports strengthening of the BFD's approach to (a) collaborative forest management with forest-dependent communities in all types of forests; and, (b) providing forest extension and service delivery to enhance private sector engagement. These changes, particularly (a), will take time as it requires building of mutual trust and behavior change in the BFD and communities. To ensure that collaboration with communities is successful, the BFD will support alternative income-generating activities (AIGAs) for the forest-dependent poor. These are intended to compensate for loss of forest-based income due to reduced access to and increased protection of forests, and because benefits from sustainably managed forests take longer to materialize. The BFD will, for the first time, empower communities by transferring funds to their accounts to build mutual trust and strengthen the partnership.

¹⁸ The India Meghalaya community-led landscapes management project is approved. Forest landscapes projects in Nepal and Bhutan will follow the SUFAL Project.

¹⁹ The Strengthening Regional Cooperation for Wildlife Protection (SRCWP) in Asia project (P121210) was the first phase of a Regional Adaptable Program Loan with investments in Bangladesh and Nepal to address common issues of transboundary protected area (PA) management and sharing knowledge and information on wildlife trade and crime. The SRCWP Project established the Regional South Asia Wildlife Enforcement Network to exchange information and monitor illegal trade. The project closed in December 2016.



By addressing these changes, the project will address the key underlying drivers of forest degradation (see Results Chain in annex 2) and simultaneously invest in increasing forest and tree cover in the country's coastal and inland forest and non-forest lands. A detailed project description is given in the Project Implementation Plan. The project will be implemented in selected sites in 147 upazilas/sub-districts of 28 districts. These areas include most natural forests and PAs. The project will finance activities in Cox's Bazar district with host communities, outside the Rohingya camps, to complement the IDA Emergency operation in the camps. Most activities of Components 2 and 3 will be co-located to reinforce the objective of CFM.

A. Project Development Objective

PDO Statement

13. The Project Development Objective (PDO) is to improve collaborative forest management and increase benefits for forest dependent communities²⁰ in targeted sites.

PDO-Level Indicators

- (a) Forest areas at targeted sites managed according to site specific collaborative management plans (ha)
- (b) Share of targeted forest-dependent people with access to alternative income generating activities (%; disaggregated by gender and ethnic group)
- (c) Collaborative Forest Management Committees with increased monetary or non-monetary benefits from forests (%)
- (d) Share of targeted forest-dependent people with rating 'Satisfied' or above on project interventions (livelihoods, forest management, other) (%; disaggregated by gender and ethnic group)

²⁰ Identified from among residents of villages located within 1 km from the boundary of the forest beat area and residents of the nearest village in the case of mangroves, using criteria specified in the community operations manual (COM).



B. Project Components

Table 1. Project Components and Subcomponents

Component	IDA (US\$, millions)	GOB (US\$, millions)	Subcomponents
Component 1	15.13	0.11	Subtotal
Strengthening Institutions, Information Systems and Training	3.70	0.11	1.1 Strengthening Organizational Capacity
	2.83	-	1.2 Applied Research
	3.44	-	1.3 Training
	2.76	-	1.4 Strengthening Monitoring, Information Management Systems and Forest Inventory
	2.40	-	1.5 Communication and Outreach
Component 2	95.0	1.45	Subtotal
Strengthening Collaborative Forest and Protected Areas Management	4.03	0.10	2.1 Institutionalizing Collaborative Forest Management
	88.74	1.35	2.2 Restoration of Degraded Forests, Coastal Green Belt and Renovation of Field Infrastructure
	2.23	-	2.3 Improving Protected Areas and Wildlife Management
Component 3	54.0	0.14	Subtotal
Increasing Access to Alternative Income Generating Activities (AIGAs), Forest Extension Services and Trees Outside Forests	5.01	0.14	3.1 Community Mobilization and Organization
	40.90	-	3.2 Alternative Income Generating Activities
	8.09	-	3.3 Extension Services and Trees Outside Forests
Component 4	9.87	2.20	Subtotal
Project Management, Monitoring and Reporting	8.01	2.20	4.1 Project Management
	1.86	-	4.2 Monitoring, Reporting and Evaluation
Project Preparation Advance²¹	1.00	-	
Total	175.00	3.9	

14. Counterpart funding of US\$3.9 million from the GOB will be provided as parallel co-financing. This will be used for the costs that are not covered in the existing Country Financing Parameters but required for the project such as vehicles, fuel, workshop allowances, sitting allowances, cash per diems and honoraria.

Component 1: Strengthening Institutions, Information Systems and Training (US\$15.13 million)

15. This component will focus on improving organizational capacity, administrative and operational procedures, research and information systems, that will enable implementation of other components of the project and have wider positive impacts across the BFD that last well beyond the project.

²¹ This amount is included in Component 1 in the PAD data sheet.



16. **Subcomponent 1.1: Strengthening Organizational Capacity.** This subcomponent will include a functional review and recommend actions related to BFD roles and organizational needs, information technology (IT) and geographic information system (GIS) requirements, and policies that impact community and private sector participation in forestry. It will increase the BFD's knowledge and skills in understanding and addressing climate change impacts, increasing resilience of plantations, ecotourism management, and addressing gender dimensions in forestry.

17. **Subcomponent 1.2: Applied Research.** This subcomponent will focus on sourcing of high quality planting material of known origin (essential for adapting to the changing climate) and promoting better technologies in private sector nurseries and small-scale wood processing. An Innovation Window will fund proposals related to climate change impacts on forests and biodiversity conservation and other topics that support the objective of the SUFAL Project from individuals or institutions including, companies, educational institutions and nongovernmental organizations (NGOs). The BFD will enter into a memorandum of understanding with the Bangladesh Forest Research Institute for technical assistance for applied research under this subcomponent.

18. **Subcomponent 1.3: Training.** Aligned with the functional review, a training plan will be developed to identify the training requirements and training capacity needs. BFD staff, including female staff, will receive training on a range of issues (some of which will be undertaken before project implementation) including, among others, site-specific management planning; procurement and financial management (FM); project management; Open Source and other IT technologies, GIS, database and internet mapping as well as customized business workflows; CFM; forest inventory, governance, and economics; climate change and carbon measurement; wildlife (including legal regulations and enforcement), biodiversity, and ecotourism management; and gender.

19. **Subcomponent 1.4: Strengthening Monitoring, Information Management Systems and Forest Inventory.** The BFD's physical and human capacity will be strengthened so that a Forest Management Information System in the Resource and Information Management System (RIMS) unit can be incrementally developed and the National Forest Inventory and national tree canopy cover assessment in Bangladesh²² can be updated. A central database for the storage of all forest resource information will be hosted by the Bangladesh Computer Council to ensure all cybersecurity and backup safeguards are in place. A new forest management planning system based on the site-specific plan (SSP) approach and the common database will be developed (using Free Open Source Software technology) and piloted in three management planning divisions.

20. **Subcomponent 1.5 Communications and Outreach:** Under the communication plan formulated in the first year, the Project Management Unit (PMU) will pursue an outreach program to motivate participating partners, especially women, about collaborative management, PA management, wildlife protection and related themes.

²² Potapov, P. V., B. N. Siddiqui, Z. Iqbal, T. Aziz, B. Zzaman, A. Islam, A. Pickens, Y. Talero, A. Tyukavina, S. Turubanova, and M. C. Hansen. 2017. "Comprehensive Monitoring of Bangladesh Tree Cover Inside and Outside of Forests, 2000–2014." *Environment Research Letters*. 12 (10) 4015.



Component 2: Strengthening Collaborative Forest and Protected Areas Management (US\$ 95.0 million)

21. This component will finance restoration and afforestation through CFM which will give forest-dependent communities a stake in the management of forests and PAs.

22. **Subcomponent 2.1: Institutionalizing Collaborative Forest Management.** Using this approach, the project will plant trees in approximately 79,000 ha of forest area which will increase sustainable supply of fuelwood and timber and non-timber products and increase climate change mitigation and resilience. Village-level CFM committees (CFMCs) will be established and an institutional framework and rules for CFM will be developed in consultation with communities. CFMCs will be formed with membership being open to all households in the village. The CFMCs will participate in the preparation of the SSP for the forest area to be treated under the project. The CFMC will be the point of entry for the activities on livelihoods diversification under Component 3 of this project. The project will support targeted consultations and awareness raising sessions to promote women's participation as office bearers in the CFMCs (at least 33 percent in each CFMC) which will be elaborated in the COM.

23. In addition to the establishment of CFMCs, activities will include (a) identifying policy and regulatory measures to strengthen collaboration with communities in different ecosystems; (b) identifying the most forest-dependent communities where the project will form CFMCs; (c) awareness raising, capacity development, and training on the CFM approach for the committees' and BFD staff; (d) strengthening CFMCs with their own bank account and operating fund; and (e) developing an institutional framework and rules for CFM during the first year of the project in consultation with communities. The formation of CFMCs will be facilitated by the NGO partners in consultation with the BFD Range and Beat staff. The NGOs will provide the capacity-building support under Component 3 of the project and CFMCs will be the main platform for activities under both Components 2 and 3 of the project.

24. **Subcomponent 2.2: Restoration of Degraded Forests, Coastal Green Belt and Renovation of Field Infrastructure.** Using the CFM approach, forest restoration and planting on nearly 79,000 ha will take place along the coast, hill forests, and central and northern plains. Preliminary criteria for site selection included (a) extent of degradation and suitability for restoration; (b) feasibility of community participation; and (c) clear tenurial status. Afforestation/reforestation (through plantations of mixtures of fast and slow growing species, mangrove plantings, assisted natural regeneration (ANR), and enrichment planting) will be preceded by site-specific planning (in consultation with CFMCs). The Divisional Forest Officers (DFOs) will be accountable for the SSP quality and approval, for the release of funds for SSP implementation, and for monitoring SSP implementation in their divisions. The SSPs will also form the baseline for independent third-party monitoring of the interventions on the ground. The PMU will develop and disseminate guidelines and train staff on SSP preparation. SSPs will prescribe interventions for each site based on actual site requirements. The SSP process and data generated will (a) enable the BFD to create a detailed geo-spatial database of the treated sites with field data collected through smartphones; (b) enable robust monitoring and assessment of treated sites; (c) increase transparency and accountability of field activities; and (d) serve as an entry point for consultations with local communities on the field forestry activities. To support the field operations, field offices, residences, and training centers will be renovated and climate proofed (they will also serve as cyclone shelters in coastal districts). Construction activities under the project will not involve land acquisition or take place on land with any other encumbrances.



25. **Subcomponent 2.3: Improving Protected Areas and Wildlife Management.** The project will support the development and /or implementation of PA management plans for about 10 PAs with co-management committees comprising communities living in or near the PAs. Other wildlife activities will include (a) scaling up of endangered species conservation programs for 13 endangered species; (b) scaling up Spatial Monitoring and Reporting Tool (SMART) patrolling (excluding support to active enforcement activities); and (c) restoration and protection of natural habitats in select wildlife corridors (3,800 ha).

Component 3: Increasing Access to Alternative Income Generating Activities (AIGAs), Forest Extension Services and Trees Outside Forests (TOF) (US\$ 54.0 million)

26. **Subcomponent 3.1: Community Mobilization and Organization.** Access to AIGAs will increase incomes and resilience of forest-dependent communities. A COM will elaborate the rules and criteria for the implementation of AIGAs. NGOs will be contracted by the BFD to mobilize, organize, and provide training to communities so that they have the capacity to plan and implement the AIGAs and manage the AIGA funds. NGOs will be selected through a national competitive process and will be subject to the World Bank's procurement prior review. Only NGOs with relevant experience and manpower for working with forest-dependent communities on livelihoods activities will be selected. An important aspect will be organizing and providing women and adolescent girls tailored training and income-generation activities. These activities will be organized in a way that is conducive to women's participation and compatible with their multiple responsibilities.

27. **Subcomponent 3.2: Alternative Income Generating Activities (AIGAs).** Priority for AIGAs will be given to members of CFMCs who are (a) the poorest in the village; (b) all women-headed households; (c) landless and lack year-round employment; or (d) belong to ethnic minority communities. Funds will be channeled from the PMU directly to community accounts. The AIGA fund will be maintained as a revolving fund at the community level and will be available to community members as microcredit. The choice of AIGAs will be demand driven and will be aligned with the objectives of the SUFAL Project, that is, to reduce forest loss and improve forest management. AIGAs will be screened for, among others, climate resilience and safeguards. A list of activities that may not be financed by the project will be in the COM but both on- and off-forest activities may be financed. The NGOs will help with the forward links to markets and banking and credit facilities, with special emphasis on providing women with these links. AIGAs will be implemented in up to 600 villages, covering about 40,000 households.

28. **Subcomponent 3.3: Extension Services and Trees Outside Forests (TOF).** The TOF value chain (nurseries, individual farmers in participating upazilas, and sawmills) will be supported by (a) establishing a timber market information system; (b) technology transfer and training to nursery owners and farmers through Social Forestry Nursery and Training Centers; (c) training; and (d) a review and updating of policies to ease procedures, costs, and difficulty for tree growers, sawmill owners, and exporters. Activities will include plantations, outreach programs with upazila parishads to encourage planting of trees on public and private land, and seedling distribution to farmers and participating upazilas. Efforts will be made to organize extension and training in locations and at times that encourage participation of women farmers and entrepreneurs.



Component 4: Project Management, Monitoring and Reporting (US\$ 9.87 million)

29. **Subcomponent 4.1: Project Management.** This project will finance the BFD's PMU at the headquarters and in the 28 districts where field implementation will take place. Support will be provided for contracting key specialists such as in the areas of social and gender, FM, procurement, knowledge management, and community development.

30. **Subcomponent 4.2: Monitoring, Reporting and Evaluation.** The PMU will have the overall coordinating role of the monitoring and reporting (M&R) function and the Project Manager will ensure that data and information from all field offices are produced and collected on time and is of sufficient and necessary quality. The project will form a Monitoring and Evaluation Technical Group (METG). In addition, monitoring and evaluation (M&E), including a baseline survey, midterm and end-of-project evaluations, independent third-party monitoring, external and social audits, and geo-spatial monitoring and analysis of administrative records, will be financed. The forest inventory and the new module on TOF, will be financed under Component 1.

C. Project Beneficiaries

31. The project will directly benefit about 40,000 households (at least 50 percent of the beneficiaries will be women) through the AIGAs to diversify and increase their income. Special emphasis will be given to training of women and adolescent girls on AIGAs. About 600 villages located in or near forests in the selected districts will benefit directly and indirectly through CFM. Members of CFMCs, at least 33 percent of the office bearers being female, will benefit from training and capacity building on book keeping, collaborative management, social audit, and so on. In addition, about 180,000 people will benefit through involvement in CFM activities. Farmers who undertake tree planting on their own land will benefit from the project's improved quality of saplings and training programs on tree farming. Other beneficiaries will be nursery owners who will benefit from training on improved nursery techniques and from the demand generated for saplings by the project. The project's interventions will help improve the quality and quantity of domestically grown timber which in turn will benefit tree farmers and sawmills and wood processing units. Sawmill owners will also benefit from training on improved processing techniques. At least 1,200 BFD staff will benefit directly from training and skill development opportunities through the project.

D. Results Chain

32. For the Results Chains, see annex 2. The project addresses the direct drivers of forest loss (expansion of infrastructure, industries, and encroachment for agriculture and unmanaged extraction of fuelwood and timber) and the underlying drivers (low capacity of public sector forest institutions, weak governance, and lack of benefit sharing mechanism for communities in forest management) by (a) strengthening the capacity of public sector institutions for collaborative management, governance, and increasing incentives for private sector involvement in forestry; (b) initiating a mechanism for CFM with communities and investing in extensive planting and restoration of forests in the hills, plain lands, and coastal areas; and (c) by providing AIGAs to the forest-dependent poor, to reduce unsustainable extraction and provide incentives and technologies to increase tree cover outside forests on private and other government lands. In the short to medium term, these investments are expected to result in increased tree cover and improved well-being of communities through diversification of income-generation options



and more forest benefits through collaborative management. In the long term, the investments will result in increased resilience to climate-induced extreme weather events, improved watershed benefits and soil stabilization, improved biodiversity and opportunity for tourism, and increased supply of wood and timber for the domestic and export markets.

E. Rationale for Bank Involvement and Role of Partners

33. **Rationale for World Bank involvement.** The World Bank has a longstanding partnership in this sector with Bangladesh, with the two most recent investments, the Climate Resilient Participatory Afforestation and Reforestation Project (CRPARP) and the SRCWP in Asia Project, closing after satisfactory implementation. The SUFAL Project builds on the successful experiences of both projects. The World Bank's global footprint in the forest sector presents an opportunity to draw on lessons and experiences from different countries and will be particularly useful for lessons on community forest management, improved nursery technologies, and wildlife and PA management from operations in other regions. The project will also benefit from the World Bank's knowledge and analytical work on green accounting and payment for ecosystem services.

34. **Maximizing Finance for Development.** Strategic public sector investments in forests are needed owing to the public goods nature of many forest benefits (coastal and watershed protection, biodiversity, sequestration of carbon, and so on), and the BFD is the public sector institution vested with the responsibility for protection, management, and restoration of state forests in Bangladesh. The GOB prefers to conserve natural forests for ecosystem benefits rather than timber production. Private enterprise in forestry is active in the TOF value chain—nurseries, farms, and sawmills. The project will facilitate the growth of this value chain with technology transfer, training, and market information and by addressing policy and regulatory hurdles to facilitate the flow of sustainable, legal timber for value addition and export. The project will provide direct support to private nurseries through the development and transfer of technology (that is, improved seed supply, tissue culture, root trainers); applied research and training; and by purchasing seedlings from nurseries to introduce a system of standards and quality assurance which currently does not exist. Initially 20 percent of the seedlings to be distributed in upazilas will be supplied by the private sector, and if successful, this will be maintained during the project lifetime.

35. Post project, private nurseries will be able to supply the demand for seedlings with high-quality seedlings. Due to the moratorium on timber harvest from natural forests, TOF supply about 70 percent of the domestic timber demand. The domestic market for furniture in Bangladesh is growing (19 percent per year) and is expected to reach 9.8 million m³ by 2030²³. It is estimated that the project will generate an average of 700,000 m³ of fuelwood, poles, and timber annually over the 43 years in which outputs can be expected (2025–2067). This equates to roughly 8 percent of the current overall annual consumption. From 2028, output suitable for use in the timber industry will average around 300,000 m³ annually, and this extra raw material supply will allow for the expansion of the timber processing industry, adding additional jobs. Mahogany is a popular species for TOF plantations and is a valuable timber. It is listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora Appendix 2 (endangered in its native Central American habitats) which requires special certification for export. However, as the species is exotic to Bangladesh, export certificates can be easily and legitimately

²³ PKF. 2013. *Technical Report: Furniture Sector Value Chain Analysis and Proposed Action Plans. The EU INSPIRED Program for Bangladesh.*



provided, thus providing the opportunity for creating export-led value addition in country. The AIGAs will also encourage the establishment of small and micro enterprises which could also help support the harvesting, extraction, and processing of the additional timber and non-timber forest products being brought into the market.

36. **Role of partners.** ESMAP is partnering to provide technical assistance for analysis of fuelwood and access to improved cookstoves in the project areas through its Efficient, Clean Cooking and Heating program. The project will coordinate with the recently approved Rural Electrification and Renewable Energy Development II Project and the Infrastructure Development Company Limited (IDCOL) to provide access to clean cookstoves in the project areas under Component 3, and the increase in availability of sustainably grown fuelwood will help IDCOL in the marketing of improved cookstoves to a larger consumer group.

F. Lessons Learned and Reflected in the Project Design

37. Partnerships with communities result in better forest management outcomes. Globally it has been well established that when communities have a clear stake and role in forest management, it results in better forest quality over the long term. For over three decades, countries have experimented with a range of arrangements to include communities in the management of forests and PAs, moving away from a purely law enforcement approach toward collaborative arrangements. Examples from Mexico, India, Albania, and other countries demonstrate that community management arrangements are successful when adapted to local conditions, without compromising the spirit of partnership. Initiation of a collaborative management approach will be at the core of the project which will shape the other activities related to wildlife and PA management and afforestation and the AIGAs.

38. An incremental approach to institutional change is more likely to be effective in the long term. The forestry department in Bangladesh, as in other countries in South Asia, continues to operate as a tradition-bound and regimented institution, taking quite long to imbibe new technologies and approaches. Based on the experience of past World Bank operations in the region and in other parts of the world, institutional changes to support collaborative management and extension will be initiated with extensive field piloting and internal consultation and dialogue with staff in all ranks and positions. New technologies and GIS-based approaches will also be introduced on an incremental basis, in tandem with training and skill development and to match the changes being mandated by the GOB in all parts of the government.

39. Community-led implementation of AIGAs helps reduce pressure on forests. The CRPARP supported AIGAs for the most vulnerable communities to reduce pressure on forests and build resilience to climate change in coastal and hilly areas.²⁴ The reported increase in income of at least 30 percent for AIGA participants was attributed in the Implementation Completion and Results Report to project-financed activities. Studies on this program's effectiveness reported fuelwood use decreases of over 200 kg per month, and incomes 1.38–1.49 times higher among program beneficiaries following intervention. The increased income is also likely to encourage use of improved cookstoves and improve women's health and reduce firewood consumption. The BFD's Nishorgo Support Project similarly supported AIGAs to

²⁴ World Bank, 2017, ICR for the CRPARP.



improve protection of key conservation areas with considerable success.²⁵ Experience from the Nuton Jibon project in Bangladesh and others in the region demonstrate that when communities are empowered to manage funds and make decisions, there is greater chance for success. Combining the lessons from both projects the SUFAL project will implement AIGAs with communities in the lead, with technical support from NGOs and empowerment from the BFD.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

40. The Ministry of Environment, Forests, and Climate Change (MOEFCC) is the nodal ministry of this project. All the components of this project will be implemented by the BFD through a PMU established for the project. For the livelihoods component, the BFD will engage NGOs for group formation, motivation, consultation, and training. The Project Director (PD) will be responsible for the overall implementation of the project, including managing implementation at all field locations and reporting to the World Bank. The PMU will be equipped with four Deputy PDs to supervise the field activities and a Chief Technical Adviser. The respective Divisional Forest Offices headed by the DFOs will be responsible for project implementation activities in the field. The afforestation and reforestation program will be executed in the field by the Beat Officers, and Range Officers will be responsible for monitoring and reporting to the DFO. For AIGA activities under Component 3, seven NGOs will be hired to mobilize and organize and provide the necessary training to communities to prepare the AIGA plans and support them during implementation.

B. Results Monitoring and Evaluation Arrangements

41. The PMU will have the overall coordinating role of the M&R function and the Project Manager will ensure that data and information from all field offices are produced and collected on time and are of sufficient and necessary quality. The project will form an METG which will be chaired by the PD and will include designated technical focal points of the different entities involved in project implementation. The METG will report to the Project Implementation Committee (PIC). A web-based project management and monitoring platform to integrate the information coming from different sources and levels will be created. A beneficiary feedback loop will be established to strengthen citizen engagement mechanisms. Gender-related indicators have been developed and so have applicable corporate results indicators.

42. Internal monitoring will be carried out by the BFD where the PD will receive monthly progress reports from each division. In addition, the BFD will maintain its internal audit system for reporting on project finances. As for external monitoring, an independent reputable organization with international experience will be contracted at the start of the project to provide third-party monitoring of the forest restoration and plantation activities. This agency will carry out monitoring through the life of the project using both remote sensing and field verification.

²⁵ Rahman, M. M., M. A. Al Mahmud, F. U. Ahmed. 2017. "Restoration of Degraded Forest Ecosystem through Non-forestry Livelihood Supports: Experience from the Chunati Wildlife Sanctuary in Bangladesh." *Forest Sci. Technol.* 13, 109–115.



C. Sustainability

43. The project will generate significant economic returns (see economic analysis below). The key shift to CFM will create the momentum from the ground up which, as experience in other countries shows, is likely to be sustained well beyond the project. AIGAs will have a long-term impact, as communities will have the option of using the funds as revolving funds to refinance and expand their income-generating activities. The GOB is committed to scaling up forest sector investments following recent successes. Two recently closed World Bank projects, the CRPARP (P127015) and the SRCWP Project (P121210) demonstrated the MOEFCC's and BFD's capacity for implementation. By regularizing 80 positions created during the SRCWP Project and enacting the Wildlife and PA Co-management Rules (2017), the GOB has demonstrated its commitment to strengthen the BFD's capacity. The project has strong ownership within the BFD as it directly contributes to the goals under the Seventh Five Year Plan.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

44. **Technical analysis.** The project investments in forest restoration, especially a coastal 'green belt', increase climate resilience and generate significant mitigation benefits (estimated 10.8 tCO₂ per hectare per year and annual greenhouse gas sequestration of 8,38,535 tCO₂eq per year). The project has a sector-wide approach which will (a) address the core technical forestry functions—planning, monitoring, inventory, and improving planting materials; (b) introduce comprehensive collaboration with communities to improve management; and (c) strengthen extension services for the private sector. Improving institutional capacity, including of CFMCs is essential for long-term sustainability of the changes introduced. The project will scale up successful interventions which have been piloted and supported by other development partners and the GOB's own resources. These include PA co-management, SMART patrolling for wildlife management, climate resilient coastal plantations, and AIGAs, all of which have been assessed as technically sound practices. The focus of the project on strengthening institutions and CFM together will ensure long-term success of forest conservation and management in the country.

45. **Economic analysis.** The detailed economic analysis is given in annex 3. Economic analysis was undertaken on quantifiable project benefits, including (a) increased forest production (timber, fuelwood, and non-timber benefits); (b) mitigation of greenhouse gas emissions; (c) increased incomes in forest-dependent communities; and (d) storm damage protection of coastal communities. The analysis compared these to project costs under a variety of scenarios over a 45-year period (5 years for project implementation and 40 years for flow-on costs and benefits). The project is also expected to generate a range of non-quantifiable benefits including, improvement in watershed services; reduction of landslides; improved management of PAs and wildlife; increased tourism revenues; improved skills and capacity; and the overall empowerment of communities, especially women, participating in CFM and AIGAs.

46. Cost-benefit ratios for the whole project are positive, ranging from 2.98 to 1.56,²⁶ with and without a low social value of carbon (US\$38).²⁷ Associated internal rates of return (IRRs) are 29.7 and 12.3

²⁶ All results are based on an 8 percent discount rate, based on twice the long-term (20 year) GDP per capita growth rate for Bangladesh. See World Bank. 2016. Discounting Costs and Benefits in Economic Analysis of World Bank Projects.

²⁷ World Bank, 2017, Guidance note on shadow price of carbon in economic analysis.



respectively, providing net present values of US\$514 million and US\$144 million. The quantifiable benefits are distributed between timber production (approximately 34 percent of the total benefits), carbon (approximately 48 percent), and coastal storm protection (approximately 9 percent) (when carbon is included). Livelihood activities contribute around 9 percent of benefits and in isolation from other project activities have an estimated cost-benefit ratio of 1.58. Coastal reforestation activities in isolation have a cost-benefit ratio of 2.62 (excluding carbon benefits). These results assume that the full project extent is completed as planned, with 80 percent plantation survival before first thinning.

47. Sensitivity analysis shows that the project is economically sound under a range of conditions. Even without carbon benefits, the project has a positive return with a tree survival rate of 45 percent (much lower than that observed in past projects²⁸). Positive returns are also robust to timber prices of up to 67 percent lower (again without carbon) under conditions of real timber price growth (1 percent annually) over time, and robust to prices up to 54 lower under conditions of no real price growth. The project's positive returns are also robust to a range of changes in future management decisions, such as leaving 25 percent of trees unharvested. The full cost of the project (all four components) is supported by the quantified benefits from Components 2 and 3 alone.

B. Fiduciary

48. **Financial management.** From the FM perspective, the project design is complex in terms of multiple cost and accounting centers in dispersed locations across the country, weak fiduciary capacity in cost centers, challenges related to identification of eligible beneficiaries and modality of intervention for AIGAs, and involvement of multiple NGOs during implementation. Risk mitigation measures which the BFD will have to take are outlined in the section on fiduciary risks.

49. **Fund flow and accounting.** IDA funds will be channeled to the Designated Account operated by the BFD for the proposed project. All accounting centers shall maintain a designated operating account to receive funds from the BFD. Cost and accounting centers shall be limited to those offices/divisions that have a direct project implementation responsibility. Transactions of other offices, such as planning, supervision, and audit may be settled from the PMU. Disbursement would initially be made on advances and replenishments based on regular statements of expenditure (SOEs). The same method would be applied between the BFD and accounting centers. After one year of implementation, the World Bank would review the quality of FM performance and may convert the disbursement modality to one based on interim unaudited financial reports (IUFRs) including a six-monthly forecast of fund requirements. The BFD will open and operate separate bank accounts for counterpart financing in the PMU and cost centers. All the records and books of accounts will also be separately identifiable with a standard audit trail for IDA and counterpart financing. For the part of the project implemented by the communities, the BFD will make direct payment from the designated Special Account to the eligible community group's account, based on approved proposals. Expenditure under AIGAs will be recognized only after utilization of first tier activities of income generation. In the case of Subcomponent 1.2, innovation window grants would be recognized after reporting of expenditures by recipients. The internal control of the sub-project FM at community level will be such that the fiduciary risks will be mitigated by community groups themselves with a suitable social accountability framework and social audit. There will also be regular interventions by NGOs on

²⁸ The CRPARP ICR, 2017, showed that project planting undertaken in 2014 and 2015 had 85 percent to 95 percent survival. Planting outside project areas achieved survival rates of 72 percent to 99 percent.



capacity building and risk mitigation measures for AIGAs. The remedial measures for any fiduciary irregularities at sub-project level will be addressed by the community group as per the sub-grant project agreement between the BFD and community group. Detailed remedial measures for fiduciary irregularities will be spelled out in the COM.

50. **Budgeting.** A budget will be maintained for the entire term of the project, and detailed budgets for each fiscal year on each project component and cost category will also be produced to provide a framework for FM purposes. The proposed accounting software would include a budgetary control feature that will enable accurate tracking of actual expenditure on a similar chart of accounts as the budget and the preparation and review of regular budget monitoring reports.

51. **Audit and oversight.** Annual external audits of all project components would be conducted by the Foreign Aided Project Audit Directorate (FAPAD) and would be supplemented by additional risk-based internal audits by an independent audit firm on a yearly basis in the project term. Audited financial statements would be submitted to the World Bank within six months from the end of each fiscal year of project implementation. The PD at the BFD would provide auditors access to project records and would be responsible for follow-up and remedial actions. As per FM records of the World Bank, there is no pending/overdue audit report by the implementing ministry for any ongoing /completed World Bank-financed project.

52. **Procurement arrangement.** All goods, works, non-consulting services, and consulting services required for this project and to be financed out of the proceeds of the IDA financing shall be procured in accordance with the World Bank Procurement Regulations for IPF Borrowers, dated July 1, 2016 (Revised November 2017) referred as Procurement Regulations. The BFD has prepared a Project Procurement Strategy for Development (PPSD). The PPCS is based on the nature of procurement activities, capacity of the procuring organization (PMU and field cost centers), prevailing market conditions, activity-level risks, and so on. It spells out the procurement arrangements for the project (for example, procurement packaging strategy, method, bid evaluation methodology of the major procurement packages, timeline for procurement activities, and contracting arrangements) and includes risk mitigation measures. As an outcome of the PPCS, the procurement plan for the first 18 months has been prepared and the other major high-value procurement packages required in the project are also identified. The PPCS is a live document and will be updated when required during project implementation.

C. Safeguards

53. **Environmental safeguards.** The World Bank safeguard policies triggered by the project include Environment Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), and Pest Management (OP/BP 4.09). The SUFAL Project is classified as Category B, since some of the potential project impacts, while potentially significant, are expected to be spatially limited, site specific, and largely mitigatable and reversible. The project is expected to support multiple small-scale infrastructure investments, the cumulative impact of which may be significant. As the specific locations of these investments will be defined during project implementation, the project has developed a detailed Environmental and Social Management Framework (ESMF). Detailed environmental and social screening will be carried out in accordance with OP 4.01 for activities with potentially significant impacts and if found necessary full Environmental and Social Impact Analysis (ESIA) will be carried out in accordance with the ESIA activity guidelines included in the ESMF. The BFD, the project's implementing agency, has also



prepared a Pest Management Plan to comply with OP/BP 4.09. The BFD has acquired some capacity from previous World Bank-financed projects to address environmental safeguards provisions during preparation and implementation. However, the SUFAL Project's size and decentralized implementation architecture necessitate the integration of capacity-building activities on environmental safeguards. Specific implementation requirements and capacity-building measures are outlined in the ESMF.

54. **Social safeguards.** The social safeguard policies triggered by the project include both Indigenous Peoples (OP/BP 4.10) and Involuntary Resettlement (OP/BP 4.12). OP 4.10 is triggered due to the strong possibility that CFM, forest restoration, improved PA and wildlife management, and other project-supported activities will take place on lands that are customarily owned or occupied by indigenous/tribal peoples.²⁹ This is especially true in the plains and hills regions, although there is a smattering of such peoples in coastal areas as well.³⁰ Because the exact indigenous communities to be implicated will not be determined by appraisal, a Small Ethnic Communities Development Framework (SECDF) has been prepared and adopted by the BFD. Preparation of the SECDF has been shaped by dedicated consultations with indigenous representatives in the forest divisions of Mymensingh, Dhaka (encompassing Tangail), and Cox's Bazar, and, among other things, the framework outlines the procedure by which indigenous communities in these and other areas will be engaged in a process of free, prior, and informed consultation before the implementation of any activities involving them.

55. Although physical investments/infrastructure construction requiring land acquisition will not be supported by the SUFAL Project, a Resettlement Policy Framework has been prepared on a precautionary basis. The much more likely possibility is that the temporary involuntary restriction of local people's access to publicly owned forest lands will result in adverse impacts on the livelihoods of those affected; in such cases, viable income-generating alternatives need to be pursued and, in fact, Subcomponent 3.2 of the project is designed to do just this. Because the exact communities to be involved will not be determined by appraisal, a Process Framework has been prepared and adopted by the BFD, to ensure that (a) the identification, design, and implementation of such alternatives is done with an appropriate level of attention to the unique circumstances of indigenous peoples, women, and those who are otherwise vulnerable and disadvantaged; and (b) any communities that are subject to access restrictions as a result of activities under Subcomponent 2.3 (which deals with PA management and wildlife law enforcement, among other things) have a chance to participate in the way those restrictions are imposed and to access alternative livelihoods opportunities.

56. **Citizen engagement.** The project explicitly seeks to support engagement of people living in and deriving their livelihood from forests and TOF, that is, target beneficiaries, supporting demand-side social accountability. Feedback mechanisms will be developed to ensure transparency, accountability, and learning as well as a continuous dialogue with target beneficiaries and other stakeholders. The framework for citizen engagement includes (a) engagement of local communities in CFM and in AIGAs; (b) community engagement in site-specific planning for afforestation and PA management; (c) support to a feedback mechanism from target beneficiaries through social audits and satisfaction surveys; (d) building the BFD's capacity for meaningful engagement with target beneficiaries; and (e) third-party monitoring of project

²⁹ There are a number of ways to refer to indigenous or tribal peoples in the Bangladeshi context, but most Government authorities tend to favor the use of 'ethnic communities'.

³⁰ Although the BFD organized and held two dedicated consultations with indigenous representatives in the Chittagong Hill Tracts (CHT) region, the SUFAL Project will not be supporting any activities in the CHT (for example, Bandarban).



activities. The protocol and mechanisms for elements of this citizen engagement framework will be detailed in the Project Implementation Plan and the COM. A PDO-level indicator, 'Share of targeted forest-dependent people with rating 'Satisfied' or above on project interventions (livelihoods, forest management, other) (% , disaggregated by gender and ethnic group)' captures beneficiary satisfaction and feedback on the project.

57. The BFD will establish a grievance redress mechanism (GRM) for the SUFAL Project to address any complaints or grievances that arise in connection with the implementation of project-supported activities. Although the mechanism will have multiple tiers, it will hinge on the establishment and maintenance of local-level Grievance Redress Committees (GRCs) that will be made up of village representatives, together with other relevant stakeholders, including BFD staff. The GRCs will carry out their functions in a transparent manner, with full disclosure of relevant information to the stakeholders, in languages that complainants can understand. If complainants do not receive an adequate solution at the local level, they can appeal to parallel bodies at the divisional or regional levels, and finally they may seek redress at the central level, in the PMU. This project-specific mechanism is not intended to supplant other like mechanisms, including those that exist at higher levels within the World Bank (see below), and in all cases the aggrieved persons will have the option of seeking redress in the Bangladeshi legal system.

58. **Gender.** The project's design has benefited from a gender analysis intended to identify gender gaps and inform project activities to close the gaps. The analysis found that women in forest-dependent communities are very vulnerable—their access to resources and livelihood and employment opportunities is limited compared to men. There are wide gender gaps in forest-related education and technical skills that undermine women's livelihood and employment opportunities in the sector. Forestry is viewed as a male profession and thus is male-dominated. Women are also underrepresented in forest governance and local-level decision making (only 5 percent of forest-dependent women are involved in local committees). While many of these factors conspire to slow the pace of useful and desirable changes, the project aims to close some of the more obvious gender gaps by (a) creating opportunities for women to benefit directly from the shift to CFM and as beneficiaries of AIGAs; (b) ensure reasonably balanced representation of women in bodies created and/or maintained by the SUFAL Project at various levels, such as the PMU and CFMCs; and (c) building the knowledge and skills of women in both informal and formal institutions, through their participation in training and capacity-building activities. An important component is the application of a behavior lens to program design and implementation (similar to interventions in Mexico) to maximize program uptake among women. This involves mitigating scarcity scenarios (financial, time, and aspirational) to encourage women to enroll in the programs. Progress on closing the gender gap will be monitored through several indicators in the Results Framework.

59. The BFD has adopted a draft 'Guidelines on Gender Equity' that addresses these and related issues. A Gender Action Plan will be prepared for implementation during the project and actions will be reflected in the COM, the design of training programs for Beat and Range Officers and DFOs, the organization of GRCs and Social Audit Committees, and in the ToR of the social mobilization NGOs to support AIGAs.

60. **Other safeguards.** No other safeguard policies are triggered by the project.



Grievance Redress Mechanism

61. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

V. KEY RISKS

62. The overall risk for the project is Substantial.

63. **Political and governance (Substantial).** Governance risks mainly relate to the use of political influence in public service delivery. The use of consultative and transparent processes and the careful design of rules and mechanisms related to beneficiary selection will help mitigate these risks. Governance and accountability risks due to highly decentralized transactions from multiple cost centers will be mitigated through independent third-party monitoring of all afforestation activities. The project will implement CFM with local communities in synchrony with local-level site-specific planning for forestry interventions. Community involvement through these committees will increase the transparency of decision making regarding the afforestation activities. The PMU will transfer the AIGA funds to community accounts to be managed by more than two signatories from within the community. Selection of participants for the AIGAs, training programs, and other forestry activities will be made by the community in the presence of the NGO partners, and all decisions will be documented and displayed by the CFM committees. Community members will carry out social audits according to a process to be explained in the COM.

64. **Institutional capacity for implementation and sustainability (Substantial).** Institutional capacity risk is substantial as the BFD needs to deliver on community collaboration and AIGAs, which are areas in which it has limited experience and staff training. This constraint will be addressed through Component 1 (site-specific planning with communities and training and reorienting tasks with technologies where feasible). A significant change in the BFD's relationship with communities and the public's perception of the organization will be achieved through the institutionalization of CFM with communities and through AIGAs for communities, under Components 2 and 3 respectively. A system of performance incentives for BFD staff will be explored to reward good collaboration with communities.

65. **Fiduciary (High).** A detailed integrated fiduciary assessment was carried out in BFD headquarters and five cost centers during July 22–26, 2018, to identify the weak links and mitigation measures. From the fiduciary perspective, the project design is complex in terms of multiple cost and accounting centers



in dispersed locations across the country, weak fiduciary capacity in cost centers, identification of beneficiaries and modality of intervention for AIGAs, and involvement of multiple NGOs during implementation. Specific actions to improve capacity and internal controls and thereby mitigate FM risks will need to be taken by the BFD after effectiveness. These include (a) the appointment of experienced FM consultants at the PMU (with ToR acceptable to the World Bank) along with adequate staff to support such functions in cost centers and regular training for consultants and staff with fiduciary duties; (b) risk-based internal audit with ToR acceptable to the World Bank; (c) development and use of web-based computerized systems for all accounting and record-keeping functions in the PMU and cost centers with real-time accounting entries to facilitate easy and timely access to financial information, data processing, consolidation, and report generation. The risk mitigation measures of Component 3 at community level will be such that (a) they will empower communities to exercise fiduciary control over the resources; (b) no individual beneficiary will be able to initiate, authorize, execute, or record a transaction without the active involvement of the group; (c) risks of loss, leakage, fraud, inaccuracy, or mistake will be identified at all levels, carefully assessed, and measures put in place to eliminate or minimize them through social audit; and (d) local language shall be used to record all information on activities and funds received and spent, community records, communication to the next higher level, and in election of subproject management committees, and it shall be ensured that all information is in the public domain in open meetings, and salient information is posted in public places.

66. **Procurement risks.** Technical, infrastructure, and management set up for electronic government procurement (e-GP) and the lack of training related to the World Bank's Procurement Regulations (Public Procurement Rules - 2008) and e-GP are the weaknesses of the BFD for procurement implementation. To mitigate these risks (a) procurement consultants at the PMU and six junior procurement consultants at the regional level to support procurement at field cost centers will be hired; (b) support will be provided by the BFD's computer wing (RIMS) and a consultant for IT-related procurement, and by the design and supervision firm for civil construction contract management, to meet quality, cost, and time; (c) the Systematic Tracking of Exchanges in Procurement (STEP) system will be used to monitor and track procurement progress; (d) project PMU staff will be trained on the World Bank's Procurement Regulations, contract management, and fiduciary due diligence; (e) e-GP will be adopted for all national market approached procurement; (f) individual consultants and consultancy firms will be hired for technical inputs and to ensure the right specifications and ToR in the bidding process; (g) in concurrence with the World Bank, bid/proposal evaluation committees (BECs/PECs) will be formed for the project's procurement activities irrespective of national and international procurement; and (h) for communities' procurement capacity enhancement the BFD will hire NGOs to train the communities and monitor community procurement.

67. **Technical design of the project (Substantial).** The project is led by the BFD which has a long history of departmental protocols and procedures for enforcement functions. The introduction at scale of CFM, which is not in practice in the country, adds to the project's technical complexity. The BFD, NGOs, and communities will have to work together to develop the institutional framework for collaboration, and this may face hurdles due to the traditional orientation of the BFD and local power dynamics. The project also includes an organizational review and site-specific planning for forestry interventions, which will require training of field staff and opportunities for local-level decision making. These risks will be mitigated by intradepartmental consultations to build ownership and performance incentives for early adopters and joint training and exposure visits with communities.



68. **Environmental and social (Substantial).** The proper implementation of many project activities—for example CFM or the utilization of AIGAs to take the pressure off the resource base in and around forested areas—are expected to have a positive environmental and social impact overall. However, many activities carry an inherent amount of social risk, particularly if their implementation is less than optimal. For example, the shift to a CFM model of working with forest-dependent communities in areas where the social forestry model had previously been widely implemented, could lead to unhappiness among community members used to faster income-generation results and/or unease at having to collaborate with a public sector entity they may not entirely trust or understand. There is also the possibility that disadvantaged or otherwise vulnerable groups, such as women-headed households or ethnic minorities, will be excluded from participating in the project or receiving project-related benefits, either because of incomplete or improper screening at the local level; limitations in the BFD's ability to implement mandatory safeguard measures; resistance from community members for historical or ideological reasons; or a combination of these. The project will mitigate these risks by ensuring that the PMU has dedicated social and gender specialists who will be responsible for (a) participation and consultations with and among communities, with a special focus on women to encourage inclusive and transparent selection of beneficiaries for all activities; (b) the NGO partners in Component 3 carrying out extensive awareness raising and communication on the project and the COM to bring all participants to the same level of information; and (c) ensuring access to the GRM.

69. **Stakeholders (Substantial).** Land is a scarce resource in the country and the lack of clear forest boundaries makes forests vulnerable to contestation in courts and could affect project implementation. Restricting access to forests or institution of use regulations could be objectionable to some communities or impact some users more than others. The selection of beneficiaries for AIGAs may come under political influence and elite capture. To mitigate these risks the project will not be implemented in areas under dispute or litigation. Stakeholder consultations have been carried out by the BFD in at least eight locations in the country with forest communities, civil society, local governments, and others. Criteria and the process for beneficiary selection and other project information will be elaborated in the COM and made available at the local government and beat offices. A system of social audit³¹ will be in place to increase transparency at the community level. Information on the project GRM will be made widely available to help address grievances at their point of origin.

70. **Other risks: risks of implementation in Rohingya-affected Cox's Bazar district (Substantial).** The project is likely to face implementation risks due to the placement of nearly 750,000 Rohingya displaced from Myanmar, in the forests of Cox's Bazar district. The large refugee camps housing these communities have affected 13,000–14,000 ha of forest and elephant corridors in the southern part of the district. The intense pressure of such a large population in the area has affected the forests. Poverty among host communities in this area is high and the intense pressure on common resources due to the influx of Rohingyas is leading to social tensions. The humanitarian crisis is being addressed through an IDA Emergency Crisis Response Project for the Rohingyas within the camps. The SUFAL Project will direct its activities to the host communities, focusing on areas outside the camps with a reasonable buffer to avoid conflict between the communities. All other areas of Cox's Bazar not affected by the camps will have project interventions as planned.

³¹ The social audit will aim to review records and determine whether reported expenditures reflect the actual money spent on the ground, with involvement of civil society organizations, CFMCs, and community representatives.



VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Bangladesh

Sustainable Forests & Livelihoods (SUFAL) Project

Project Development Objectives(s)

To improve collaborative forest management and increase benefits for forest dependent communities in targeted sites.

Project Development Objective Indicators

Indicator Name	DLI	Baseline 2019	End Target 2024
Improve collaborative forest management in targeted sites			
Forest areas at targeted sites managed according to site specific collaborative management plans (Hectare(Ha))		0.00	78,930.00
Increase benefits for forest dependent communities in targeted sites			
Share of targeted forest-dependent people with access to alternative income generating activities (Percentage)		0.00	70.00
disaggregated by ethnic group (Percentage)		0.00	70.00
disaggregated by gender (Percentage)		0.00	70.00
Collaborative Forest Management Committees with increased monetary or non-monetary benefits from forests (Percentage)		0.00	90.00
Share of targeted forest-dependent people with rating 'Satisfied' or above on project interventions (livelihoods, forest management, other) (Percentage)		0.00	75.00



Indicator Name	DLI	Baseline 2019	End Target 2024
disaggregated by ethnic group (Percentage)		0.00	75.00
disaggregated by gender (Percentage)		0.00	75.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline 2019	End Target 2024
Strengthening Institutions, Information Systems and Training			
Organizational, functional and gender review of BFD undertaken (Number)		0.00	1.00
Digital site-specific management planning system established and operational (Yes/No)		No	Yes
Number of staff trained (Number)		0.00	1,236.00
Strengthening Collaborative Forest and Protected Area Management			
Area restored or re/afforested in accordance with site-specific collaborative management plans (Hectare(Ha))		0.00	78,930.00
Assisted Natural Regeneration (Hectare(Ha))		0.00	2,890.00
Enrichment planting (Hectare(Ha))		0.00	11,870.00
Mixed plantation with indigenous fast-growing species (Hectare(Ha))		0.00	14,650.00
Mixed plantation with indigenous slow growing species (Hectare(Ha))		0.00	6,160.00
Mangrove Afforestation (Plantation raising on new land formations) and in coastal districts (Hectare(Ha))		0.00	21,080.00
Other types of plantations (habitat and mangrove		0.00	22,208.00



Indicator Name	DLI	Baseline 2019	End Target 2024
improvement, Sal coppice, etc.) (Hectare(Ha))			
Protected areas brought under enhanced management (Number)		0.00	10.00
Forest area brought under management plans (CRI, Hectare(Ha))		0.00	78,930.00
Increasing access to Alternative Income Generating Activities & Extension for Trees outside Forest			
Collaborative Forest Management Committees operational with own bank account and operating fund (Number)		0.00	600.00
Households in targeted communities with programs for alternative income generating activities supported by the project (Number)		0.00	40,000.00
Collaborative Forest Management Committees with at least 33 % female office bearers (Number)		0.00	150.00
Share of households with improved cookstoves (Percentage)		10.00	30.00
A market information system for Trees Outside Forest established and operational (Number)		0.00	1.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Forest areas at targeted sites managed according to site specific collaborative management plans	This indicator measures the forest area in hectares, managed according to site specific collaborative management plans, in terms of forestry parameters,	Annual	FMIS standard reports, Site Specific Collaborative Management	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which targeted sites are	PMU M&E Function



	<p>communities' inputs, and benefits sharing.</p> <p>Collaborative Forest Management (CFM) is a newly proposed forest management practice, with the aim to give forest dependent communities a stake in the management and preservation of the quality of forests over the long term and to foster local stewardship of forests. In terms of capturing long-term outcomes, the indicator belongs to PPI clusters 2. Resilience (increased canopy cover, species diversity and multi-layered stand structure to increase absorptive capacity) 3. Wood supply (improved stocking, increased plantation area) and 4. Biodiversity (use of indigenous species, protection of habitats). Annual targets.</p>		Plan, Field survey data from DFO offices, and third-party monitoring report	managed to the criteria established in the plans and the areas. NGOs.	
Share of targeted forest-dependent people with access to alternative income generating activities	The indicator measures the percentage of targeted forest dependent people/households who	Annual	Fund flow and accounting reports of	Review and analysis of accounts, reports from NGOs and third-party monitoring data to	PMU M&E Function



	have access to alternative income generating activities. This indicator is linked with Collaborative Forest Management (CFM), as communities begin to participate in CFM, AIGAs will help diversify livelihood opportunities, increase incomes and reduce unsustainable extraction of forest products and will enhance the coping capabilities for climate resilience. These activities will follow a Community Driven Development (CDD) approach and be implemented in up to 600 forest dependent villages. Priority for access to AIGA funds will be given to members of CFMCs who are (a) among the poorest in the village; (b) women-headed households; (c) landless and lack year-round employment; or, (d) belong to ethnic minority communities. This indicator will be used to also measure improvements in women's		AIGA sub-committee of CFMC; NGO's Quarterly Reports; Third-Party Monitoring, census data	number of people accessing the activities to establish the numerator and using census data to establish the denominator.	
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	access to income generating activities and other services provided by the AIGAs. Implementation will be assisted by NGOs that will mobilize, organize, and provide the necessary training to communities to prepare the AIGA plans, and support them during implementation. Examples of activities include agro-forestry and homestead NTFP production, nurseries for timber, fruit, vegetable, flower, fuel wood, fodder, medicine and other NTFPs bearing species, sustainable fisheries, service providers/ technicians for veterinary, improved cook stoves, biogas and small electronics, cottage industries and handicrafts including those based on bamboo and cane products, small wood processing/artisanal furniture workshop, among others.				
disaggregated by ethnic group					
disaggregated by gender					



Collaborative Forest Management Committees with increased monetary or non-monetary benefits from forests	Non-monetary benefits include subsistence benefits that will be allocated to individual households. In terms of capturing long-term outcomes, the indicator belongs to PPI clusters 1. Household income (increased level of monetary and non-monetary income) 2. Resilience (new and diversified sources of income will improve the transformative capacity in resilience). Annual targets. Calculation: Number of Committees with increased benefits DIVIDED by total number of Collaborative Forest Management Committees supported by the project.	Annual	Site specific management plans; Minutes of CFM Committee meetings; CFM Committee accounts and fundflow data; field survey; NGO annual reports	Based on the site specific management plans, the potential benefits will be established and any increase in these will emanate from the review of the minutes and account data.	PMU M&E Function
Share of targeted forest-dependent people with rating 'Satisfied' or above on project interventions (livelihoods, forest management, other)	Satisfaction will be measured through a sample-based field survey using a semi-structured interview. Focus in perception survey will be on: forest management and governance, including	Annual	Perception survey	Review and validation survey results	PMU M&E Function



	collaborative management and livelihoods aspects. Rating scale: 1. Highly Satisfied 2. Satisfied 3. Moderately Satisfied 4. Moderately Unsatisfied 5. Unsatisfied 6. Highly Unsatisfied, and 1. and 2. will count for the indicator as 'Satisfaction'. Annual targets.				
disaggregated by ethnic group					
disaggregated by gender					

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Organizational, functional and gender review of BFD undertaken	Score (number): 1 - review completed; 2- action plan agreed; 3 - action plan is under implementation. Review of the BFD and follow-up actions will they the foundation for improved management as per the PDO. In terms of PPI clusters, the indicator relates to 1. Household income (increased	Annual	ToR for review; Review report; Action Plan; minutes of BFD meetings (tbd)	Assessment of the progress in the review and action plan based on review of the relevant documents as above	PMU M&E Function



	involvement by communities through collaborative forest management) 2. Resilience (improved extension and engagement with communities will increase adaptive, absorptive and transformative capacity in resilience). Cumulative targets.				
Digital site-specific management planning system established and operational	Digital site-specific management planning system is established and adequately resourced with trained staff. FMIS would be integral part of the Development Planning Unit, Monitoring Unit and Three Management Plan Divisions with necessary hardware, software, and human resources to plan, manage and monitor forest resources of the country. In terms of PPI clusters, the indicator relates to 2. Resilience (improved coverage of data and information system includes signals and warnings). Annual targets.	Annual	Standard and custom-made reports; Data quality assurance mechanism assessment	Review of reports and data quality assessment	PMU M&E function



Number of staff trained	The indicator counts the number of Forest Department staff (disaggregated by women staff) who received skill development training from the project. The project has proposed various types of training from long-term academic courses to short-term on-job field training. Cumulative targets.	Annual	PMU, progress reports	Review and analysis	PMU M&E function
Area restored or re/afforested in accordance with site-specific collaborative management plans	The indicator measures the area in hectares which has been restored through re/afforestation following the prescription of site-specific collaborative management plans. Total restored area will be the cumulative value of ANR, enrichment plantation, Mixed plantation with indigenous fast-growing species, mixed plantation with indigenous slow growing species, Mangrove Afforestation (Plantation raising on new land formations) and in coastal districts and plantation for habitat restoration in the	Annual	FMIS standard reports, Site Specific Collaborative Management Plans, Field survey data from DFO offices, plantation journals, and third-party monitoring report	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which which targeted sites are restored and re/afforested according to the criteria established in the plans and the areas at 70% survival level 3 years after planting. NGOs.	PMU, M&E function, RIMS



	protected areas.				
Assisted Natural Regeneration		Annual	FMIS standard reports, Site Specific Collaborative Management Plans, Field survey data from DFO offices, plantation journals, and third-party monitoring report	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which which targeted sites are restored and re/afforested according to the criteria established in the plans and the areas at 70% survival level 3 years after planting. NGOs.	PMU, M&E function, RIMS
Enrichment planting		Annual	FMIS standard reports, Site Specific Collaborative Management Plans, Field survey data from DFO offices, plantation journals, and third-party monitoring	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which which targeted sites are restored and re/afforested according to the criteria established in the plans and the areas at 70% survival level 3 years after planting. NGOs.	PMU, M&E function, RIMS



			report		
Mixed plantation with indigenous fast-growing species		Annual	FMIS standard reports, Site Specific Collaborative Management Plans, Field survey data from DFO offices, plantation journals, and third-party monitoring report	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which which targeted sites are restored and re/afforested according to the criteria established in the plans and the areas at 70% survival level 3 years after planting. NGOs.	PMU, M&E function, RIMS
Mixed plantation with indigenous slow growing species		Annual	FMIS standard reports, Site Specific Collaborative Management Plans, Field survey data from DFO offices, plantation journals, and third-party monitoring	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which which targeted sites are restored and re/afforested according to the criteria established in the plans and the areas at 70% survival level 3 years after planting. NGOs.	PMU, M&E function, RIMS



			report		
Mangrove Afforestation (Plantation raising on new land formations) and in coastal districts		Annual	FMIS standard reports, Site Specific Collaborative Management Plans, Field survey data from DFO offices, plantation journals, and third-party monitoring report	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which which targeted sites are restored and re/afforested according to the criteria established in the plans and the areas at 70% survival level 3 years after planting. NGOs.	PMU, M&E function, RIMS
Other types of plantations (habitat and mangrove improvement, Sal coppice, etc.)		Annual	FMIS standard reports, Site Specific Collaborative Management Plans, Field survey data from DFO offices, plantation journals, and third-party monitoring	Review and analysis of the plans, FMIS reports, survey data and third-party reports to assess the extent to which which targeted sites are restored and re/afforested according to the criteria established in the plans and the areas at 70% survival level 3 years after planting. NGOs.	PMU, M&E function, RIMS



			report		
Protected areas brought under enhanced management	Indicator measures the number of Protected Areas for which management plan has been implemented. Bangladesh has more than 40 different types of PAs, around 20 of them have approved management plans. The long term vision of these PA management plans are to protect and restore forest biodiversity and that is actively supported and protected by local communities through co-management committee and enterprises who benefit from tourism, non-timber forest products, and soil and water conservation, and who adopt sustainable land management adapted to future climate changes in the landscape. The plan focuses on the rehabilitation, protection and conservation of forests and constituent biodiversity, sustainable use of landscape areas to achieve	Annual	Field survey	Assessment through survey by third-party	PMU M&E function



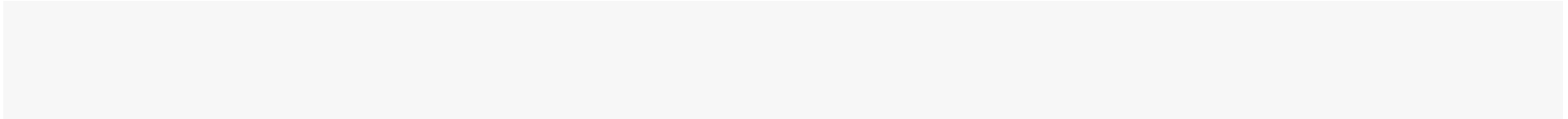
	conservation on a broader scale with the involvement of local people and other key stakeholders in co-management, resilience to climate change, sustainable ecotourism activities and livelihood diversification. The indicator relates to the PPI cluster 4. Biodiversity. Annual targets.				
Forest area brought under management plans		Annual	Field survey	Assessment through survey by third-party. The indicator is part of all four PPI clusters through improved planning and application of landscape practices. Cumulative targets.	PMU M&E function
Collaborative Forest Management Committees operational with own bank account and operating fund	The indicator counts the number of FMCs who has an active bank account. 600 (3 per beat, 200 beats). The indicator captures strengthening of local institutions in forest management and to PPI clusters 1. Household income (increased involvement by	Annual	Bank accounts statements; Fund flow data	Review of accounts and fund flow data	PMU M&E function



	communities through collaborative forest management) 2. Resilience (improved extension and engagement with communities will increase adaptive, absorptive and transformative capacity in resilience) . Cumulative targets.				
Households in targeted communities with programs for alternative income generating activities supported by the project	The indicator counts the number of households that have received support for AIGA. It relates to PPI cluster on 1. Household income and 2. Resilience as described for the relevant PDO indicator. Cumulative targets.	Annual	Reports of AIGA sub-committee of CFMC; NGO's Quarterly Reports; Third-Party Monitoring	Review and analysis reports from NGOs and third-party monitoring data	PMU M&E Function
Collaborative Forest Management Committees with at least 33 % female office bearers	Gender indicator. Count of Committees where female members consist at least 33% of the total membership	Annual	Reports of AIGA sub-committee of CFMC; NGO's Quarterly Reports; Third-Party Monitoring, census data	Review and analysis of reports from NGOs and third-party monitoring data to number of people accessing the activities to establish the numerator and using census data to establish the denominator.	PMU M&E Function
Share of households with improved cookstoves	The indicator measures the 'Percentage' of targeted	Annual	Reports of AIGA sub-	Review and analysis of reports from NGOs and	PMU M&E Function



	<p>forest dependent households in CFM committees that use improved (defined as models certified / promoted by IDCOL in Bangladesh) cook stoves purchased with project subsidy provided as an incentive to the CFMC members.</p> <p>Calculation: Number of households with improved cookstoves supported by the project DIVIDED by total number of households targeted in the 600 selected villages. The indicators relates to PPI cluster 2. Resilience (reduction in firewood use).</p>		<p>committee of CFMC; NGO's Quarterly Reports; Third-Party Monitoring; census data</p>	<p>third-party monitoring data to number of people accessing the activities to establish the numerator and using census data to establish the denominator.</p>	
<p>A market information system for Trees Outside Forest established and operational</p>	<p>BFD will develop a survey based database on the demand and supply and forecast for tree species that is available to nursery owners and farmers and public either online or as a report. Data will be updated annually.</p>	<p>Annual</p>	<p>Assessment through survey by third-party.</p>	<p>Review and analysis of the survey</p>	<p>PMU M&E Function</p>



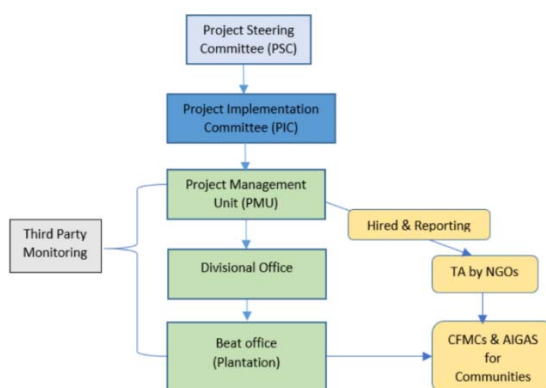


ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Bangladesh Sustainable Forests & Livelihoods (SUFAL) Project

1. The MOEFCC is the nodal ministry of this project. All the components of this project will be implemented by the BFD. For the livelihoods component, the BFD will engage NGOs for group formation, motivation, consultation, training, and so on. A PMU will be established in BFD headquarters.

Figure 1.1. Project Institutional Arrangements



2. To provide oversight the following committees will be set up:

- (a) A Project Steering Committee (PSC) for project oversight and policy direction
- (b) A PIC for endorsement of project performance

3. A PSC will be established by the MOEFCC with the Secretary as the Chair and will include representatives from relevant ministries, government departments/agencies. The PSC will meet at least once a year or whenever it is needed and will:

- provide oversight and policy guidance and approve the project's Annual Work Plan and Budget;
- facilitate interagency coordination to ensure compliance and adherence to the project's development objectives;
- resolve disputes or conflicts related to the project, if any;
- approve any policy, regulatory, and institutional recommendations from the project; and
- approve changes in the project implementation arrangements, if required.

4. A PIC will be chaired by the Chief Conservator of Forests (CCF) and may co-opt members, if required. The PIC will review the progress of the project on a quarterly basis and shall provide proper implementation and improvement suggestions. In case of serious events, the committee may visit the field to assist the successful implementation of the project. The PIC will comprise of:

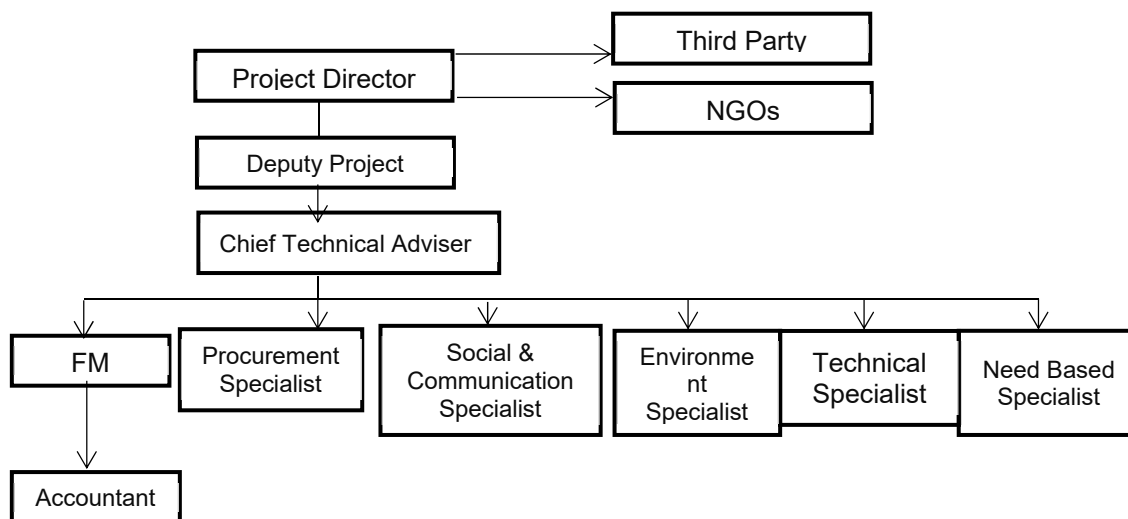
- (a) CCF, BFD: Chairman



- (b) Deputy CCF, Planning Wing, BFD: Member
- (c) Deputy CCF, Education and Training Wing, BFD: Member
- (d) Conservator of Forests, Central, Chittagong, Barisal, Wildlife Circle, Jessore Circle: Members
- (e) Deputy Chief, MOEFCC: Member
- (f) Representative from Planning Commission (Agriculture, Rural Development and Research Sector): Member
- (g) Representative from Implementation Monitoring and Evaluation Division (IMED): Member
- (h) PD, SUFAL Project: Member Secretary.

5. **PMU.** At the central level, a PMU headed by a PD (Deputy CCF or above) will be established within the BFD. The PMU will be equipped with relevant qualified specialists (FM Specialist, Accounts Specialist, Procurement Specialist, Social and Communication Specialist, and Environmental Specialist), compensated at market value. Four Deputy PDs (Deputy Conservator of Forest) will be dedicated to supervise the day-to-day field activities at the assigned zones (the coastal zone, hill forest zone [excluding CHTs], and plain land forest zone) and provide technical guidance and input for different components. A Chief Technical Adviser will be hired to coordinate the day-to-day managerial activities and provide technical guidance and input for the different components. The project will have provision for need-based consultants to provide technical input and review different reports produced by the consultants. BFD officials will work closely with the specialists and will receive appropriate on-the-job training to develop individual and institutional capacity to design and implement large-scale projects. The central level PMU structure is presented in figure 1.2.

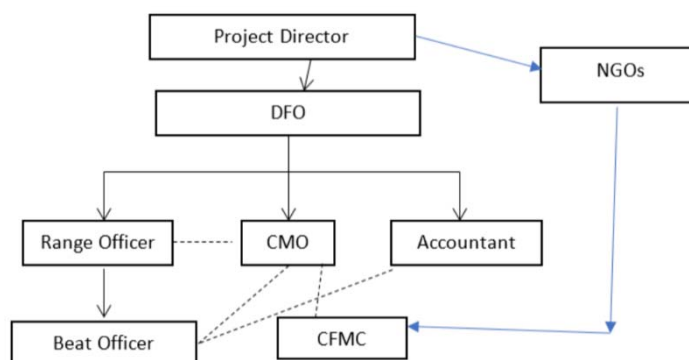
Figure 1.2. Central-level PMU Structure



6. At the divisional level, the BFD's 26 Divisional Forest Offices headed by the forest officers and will be responsible for implementation activities on the ground. Each DFO will be supported by one Community Mobilization Officer (CMO) (Junior Consultant) and one Accounts Officer /Junior Consultant. The afforestation and reforestation program will be executed in the field by Beat Officers. Range Officers will be responsible for monitoring and reporting to the DFO. A procurement consultant pool of six procurement specialists will provide support at all the divisional offices.



Figure 1.3.



7. **CFM.** The project will support strengthening of the existing and formation of the new CFMCs. The Beat Officer will be a member of the CFMC. The CMO will play an active role in collaboration between the community and BFD. The CMO will be responsible to:

- Support the DFO in implementation of the participatory afforestation and reforestation program
- Facilitate the beneficiary selection process through open public meetings
- Liaise with the community for CFM
- Liaise with NGOs for alternative livelihoods activities
- Coordinate with union parishad and field-level forest offices
- Work closely with and monitor the community training and awareness campaign program
- Support environmental and social screening and monitoring
- Work under supervision of the DFO and Chief Technical Adviser.

8. Seven NGOs will be hired to mobilize and organize and provide the necessary training to communities to prepare the AIGA plans, and support them during implementation. NGOs will be selected through a national competitive process, and the contracts will be subject to the World Bank's procurement prior review based on the estimated value. Only NGOs with relevant experience and manpower for working with forest-dependent communities on livelihoods activities will be selected. Each NGO will work in a cluster of districts/upazilas. The NGOs will provide technical assistance throughout the implementation of the activities and help with the forward links to markets and banking and credit facilities where required. Funding will be channeled from the PMU directly to community accounts. Each community will have two accounts: (a) a CFMC account for a village development fund of US\$5000 per village for carrying out priority development activities that benefit the village as a whole; and (b) a livelihoods fund for starting up AIGAs with matching savings from eligible members. The NGOs will:

- Mobilize necessary technical support and material inputs from relevant resource organizations (public, private, and NGOs) to promote alternative livelihoods development of the forest-dependent communities



- Provide backstopping support in implementation of training program
- Provide backstopping support in preparing the annual plan of operation of NGOs
- Prepare various technical reports of the project as instructed by the PD
- Document success stories and identify weakness and potential areas for improvement
- Prepare quarterly and annual progress reports and report to the PD
- Work closely with the CMO and DFO

9. **M&E** is based on the Results Framework. The aim is to ensure accountability of the use of project funds and progress toward collaborative management of forests and biodiversity, TOF, and coastal resilience and increased access to AIGAs in selected sites in the country. The PMU will have the overall coordinating role of the M&R function and the Chief Technical Adviser will ensure that data and information from all field offices are produced and collected on time and is of the necessary quality. The Project will form a METG. It will be chaired by the PD and will include the designated technical focal points of the different entities participating in project implementation. Its main role will include, among other activities, (a) analyzing project implementation from a technical, financial, and programmatic perspective; (b) coordinating data collection, reporting, and communication arrangements at all levels; (c) preparing quarterly technical progress reports as well as biannual reports to provide an overview of the status of achievements and the overall project performance to the PIC and PSC; and (d) developing an ongoing plan for strengthening the project's M&E function.

10. A web-based project management and monitoring platform will be created to integrate the information coming from different sources. An M&E capacity-needs assessment and capacity-building plan will be prepared. Based on this assessment, the PMU will include M&E training in the overall training plan of the project.

11. As part of the social safeguards, a beneficiary feedback loop will be established to strengthen citizen engagement mechanisms. Gender-related indicators have been included and so have applicable corporate results indicators. For all indicators in the Results Framework, the link to the higher-level objectives has been established through the use of theory-based predictive proxy indicators (PPIs). The PPIs have been clustered in four groups: (a) household income, (b) resilience, (c) wood supply, and (d) biodiversity. Resilience is understood broadly as the capacity of social, economic, and environmental systems to cope with a hazardous event or disturbance, responding or reorganizing in ways that maintain essential functions, identity, and structures, while also maintaining the capacity for adaptation, learning, and transformation. Consequently, indicators will capture three dimensions of capacity for resilience:

- **Absorptive capacity.** The ability of people, assets, and systems to prepare for, mitigate, or prevent negative impacts of hazards to preserve and restore essential basic structures and functions, for example, through protection, robustness, preparedness, and/or recovery.
- **Adaptive capacity.** The ability of people, assets, and systems to adjust, modify, or change characteristics and actions to moderate potential future impacts from hazards to continue to function without major qualitative changes, for example, through diversity, redundancy, integration, connectedness, and/or flexibility.
- **Transformative capacity.** The ability to create a fundamentally new system to avoid negative impacts from hazards.



12. Internal monitoring will be carried out by the BFD where the PD will receive monthly progress reports from each division. In addition, the BFD will maintain its internal audit system for reporting on project finances. The PMU will prepare the monthly expenditure and the progress, for the CCF, MOEFCC, and the World Bank. The PMU will prepare the quarterly progress reports of the project to be presented to the PIC, CCF, MOEFCC, and the World Bank. The PMU will prepare the Annual Procurement Plan and quarterly procurement plans as well.

13. **External monitoring.** An independent reputable organization with international experience will be contracted at the start of the project to provide continuous third-party monitoring of the forest restoration and plantation activities. This agency will carry out monitoring out through the life of the project using both remote sensing and field verification.

Financial Management

14. The PD will have the overall responsibility of maintaining the FM system of the project and ensuring that these functions are carried out in accordance with the project's legal agreements. These activities will include (a) adequate annual budgetary provision and effective utilization; (b) sufficient and timely flow of funds for project activities, including for community-led programs; (c) maintenance of adequate and competent FM staff; (d) appropriate accounting of project expenditures; (e) oversight on project funds spent by all cost centers and communities; (f) control over assets created under the project; (g) preparation and timely submission of IFRs; and (h) timely submission of audit reports and project financial statements to the World Bank. The arrangements that will govern the project's FM are detailed in the following paragraphs.

15. **Fund flow and accounting.** IDA funds will be channeled to the Designated Account operated by the BFD for the proposed project. All accounting centers shall maintain a designated operating account to receive funds from the BFD. Cost and accounting centers shall be limited to those offices/divisions that have a direct project implementation responsibility. Transactions of other offices, such as planning, supervision, and audit may be settled from the PMU. Disbursement would initially be made on advances and replenishments based on regular SOEs. The same method would be applied between the BFD and accounting centers. After one year of implementation, the World Bank would review the quality of FM performance and may convert the disbursement modality to one based on IUFRs including a six-monthly forecast of fund requirements. All project-related transactions would be accounted for separately following double-entry book keeping principles and on a cash basis. The key project accounting functions for which the BFD would be responsible are as follows: (a) budget preparation and monitoring; (b) payments for eligible project expenditure to third parties; (c) disbursement of project funds to community groups for AIGA as per approved work plan; (d) maintenance of books and bank accounts; (e) cash flow management; (f) financial reporting to Economic Relations Division, IMED, National Board of Revenue, and other stakeholders; (g) preparation of withdrawal application to claim funds from the World Bank; and (h) assistance to external auditor and ensuring appropriate follow-up of audit.

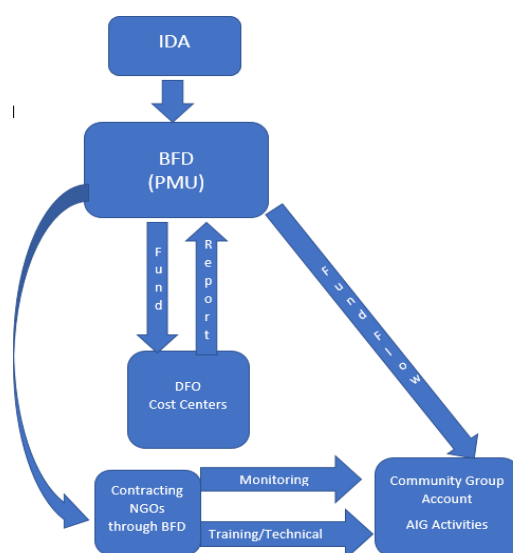
16. For the part of the project implemented by the communities, the BFD will make direct payment from the designated Special Account to the eligible community group's account, based on approved proposals. Expenditure under AIGAs will be recognized only after utilization of first tier activities of income generation. In case of Subcomponent 1.2, innovation window grants would be recognized after reporting of expenditures by recipients. The internal control of the sub-project FM at community level will be such



that the fiduciary risks will be mitigated by community groups themselves with a suitable social accountability framework and social audit. There will also be regular interventions of NGOs on capacity building and risk mitigation measures for AIGAs. The remedial measures for any fiduciary irregularities at sub-project level will be addressed by the community group as per the sub-grant agreement between the BFD and community group. Detailed remedial measures for fiduciary irregularities will be spelled out in the COM.

17. Counterpart funding of US\$3.9million will be added on a parallel basis. This will be utilized for the costs that are not covered in the existing Country Financing Parameters but required for the project such as vehicles, fuel, workshop allowances, sitting allowances, cash per diems and honoraria. The BFD will open and operate separate bank accounts for counterpart financing in the PMU and cost centers. All the records and books of accounts will also be identifiably separate with a standard audit trail for IDA and counterpart financing.

Figure 1 4. Flow of Funds and Reporting



18. **Budgeting.** A budget will be maintained for the entire term of the project, and detailed budgets for each fiscal year on each project component and cost category will also be produced to provide a framework for FM purposes. The annual budget will be prepared based on the procurement plan and any other relevant annual work plans. These budgets will be monitored periodically to ensure actual expenditures are in line with the budgets and to provide input for necessary revisions. The proposed accounting software would include a budgetary control feature that will enable accurate tracking of actual expenditure on a similar chart of accounts as the budget and the preparation and review of regular budget monitoring reports.

19. **Audit and oversight.** Annual external audits of all project components would be conducted by the FAPAD, and would be supplemented by additional risk-based internal audits by an independent audit firm on a yearly basis in the project term. Audited financial statements would be submitted to the World Bank within six months from the end of each fiscal year of project implementation. The PD at the BFD would provide auditors access to project records and would be responsible for follow-up and remedial actions.



As per FM records of the World Bank, there is no pending/overdue audit report by the implementing ministry for any ongoing /completed World Bank-financed project.

20. **Procurement arrangement.** All goods, works, non-consulting services, and consulting services required for this project and to be financed out of the proceeds of the IDA financing shall be procured in accordance with the World Bank Procurement Regulations for Investment Project Financing Borrowers, dated July 1, 2016 (Revised November 2017) referred as Procurement Regulations.

21. **Procurement risk mitigation measures.** All procurement under the project will follow the World Bank's procurement regulations. Some of the key risk mitigation measures that will be put in place to mitigate procurement risks are (a) hiring of two procurement consultants at the PMU and six junior procurement consultants at the regional level to support procurement at field cost centers; (b) engaging the BFD's own computer wings (RIMS) and individual consultant in IT-related procurement and a design and supervision consulting firm for the civil construction contract management process to implement contracts to meet quality, cost, and time as (c) using the STEP system of the World Bank to monitor and track procurement progress; (d) training the relevant project officials/dedicated PMU staffs on the World Bank's Procurement Regulations, contract management, and fiduciary due diligence; (e) adopting e-GP for all national market approached procurement; (f) hiring of various individual consultants and consultancy firms for technical inputs and to ensure the right specifications and ToR in the bidding process; and (g) forming, in concurrence with the World Bank, BECs/PECs for the project's procurement activities irrespective of national and international procurement.

22. **Implementation support plan.** The strategy for implementation support will include formal supervision visits, including field visits to the targeted afforestation sites and division headquarters and providing support to the implementing agency. Special focus will be placed on the following:

- (a) Supporting the strengthening of CFMCs and the implementing agency, that is, the BFD, and monitoring their performance
- (b) Carrying out proper assessments of project activities and results and possibly engaging experts in the areas of forest, governance, information communication, climate-change adaptation, community forest enterprises, procurement and FM, communication, outreach, knowledge-sharing strategies, and participatory M&E
- (c) Ensuring that service providers effectively deliver the content of technical assistance to recipients of sub-project funding
- (d) Reviewing the process and results of capacity-building activities and technical assistance activities, including the effectiveness of service providers;
- (e) Monitoring overall project implementation and performance, including its results indicators.

23. **Environmental and social safeguards.** Implementation support will include supervision of social and environmental safeguards management at the village, block, district, and state levels, including implementation of the ESMF and the Process Framework, and provision of training and guidance to the BFD, stakeholders, NGO service providers, and project beneficiaries. As part of regular implementation support missions, audits and reviews will be undertaken to assess how the project manages social and environmental concerns, including through adequate staffing and monitoring. The project will prepare a communication and public consultation action plan and will support the development of an adjusted



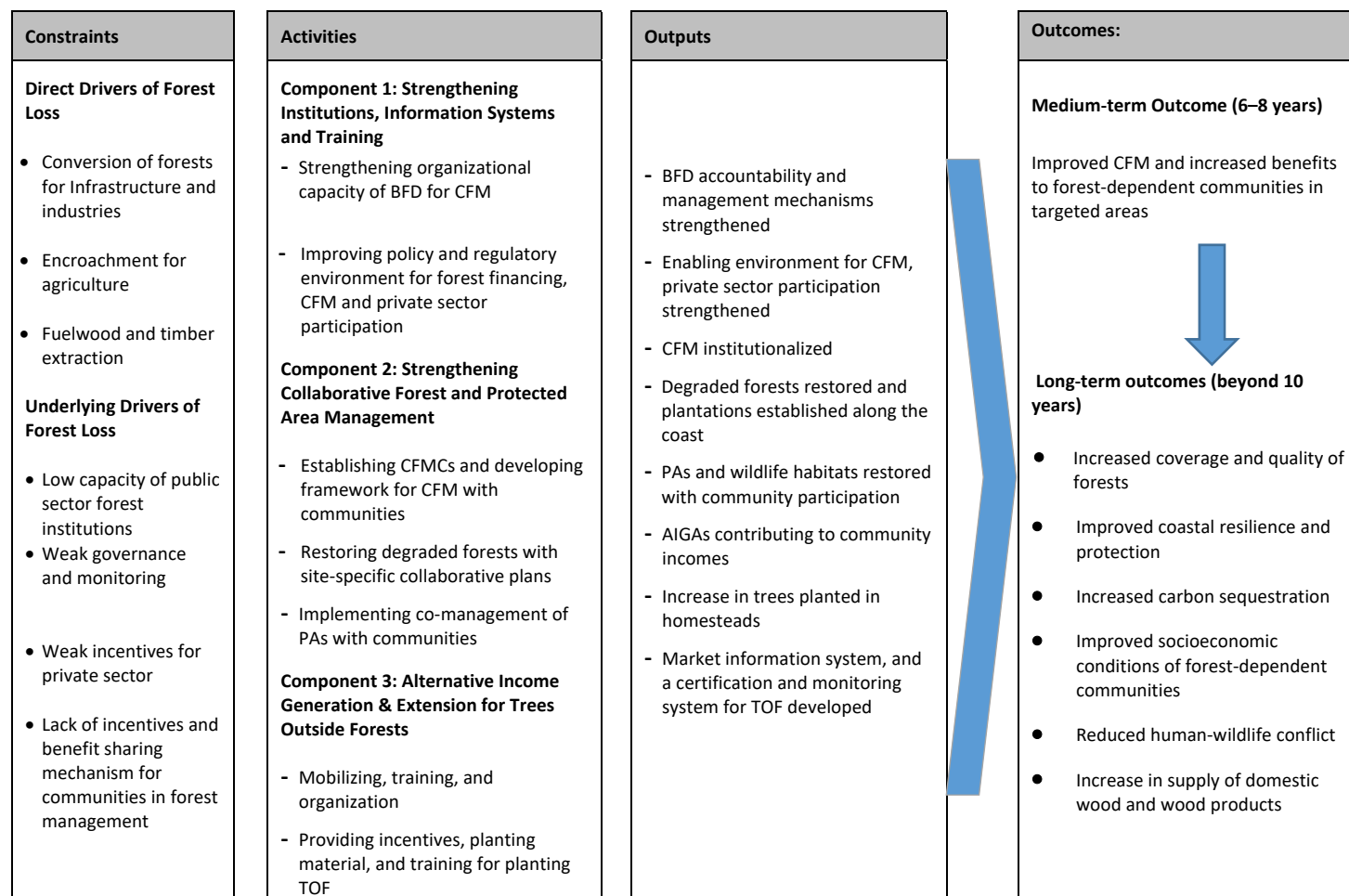
GRM. This will also primarily focus and involve engagement with stakeholders. The COM will detail procedures, management plans, and checklists to further support environmental and social safeguard implementation requirements. Adequate staffing for environmental and social safeguards management will be ensured in the project.

24. **The FM and Procurement Implementation Support Plan** will be based on the FM and procurement risk identified during the project preparation phase. The FM Specialist will participate in the implementation support missions to review the project's FM arrangements agreed with the BFD on accounting, financial reporting, audit, and internal controls practiced in the PMU, cost centers, and participating committees and provide requisite professional advice to improve these areas. Other fiduciary activities will include review of financial monitoring reports, audit reports, and financial statements to ensure that the project funds provided are used for the intended purposes. Procurement implementation support will include (a) reviewing procurement documents and providing timely response/no-objection, (b) providing detailed guidance on the World Bank's Procurement Regulations to the project staff, (c) monitoring procurement progress against the detailed Procurement Plan, (d) conducting review of contract management activities, and (e) identifying the capacity-building/training needs for project staff on procurement processing and providing training, if required.



ANNEX 2: Results Chain

COUNTRY: Bangladesh Sustainable Forests & Livelihoods (SUFAL) Project





ANNEX 3: Economic and Financial Analysis

COUNTRY: Bangladesh Sustainable Forests & Livelihoods (SUFAL) Project

1. The project will generate a number of quantifiable and non-quantifiable benefits, including (a) increased forest production (timber, fuelwood, and non-timber benefits); (b) mitigation of greenhouse gas emissions; (c) increased incomes in forest-dependent communities; (d) storm damage protection of coastal communities; (e) improvement in watershed services in the areas surrounding the forests due to increase in forest and tree cover, which will positively impact agricultural production in the surrounding areas; (f) reduction of landslides and loss of life and property; (g) improved protection and management of PAs and wildlife; and (h) increased tourism revenues. Economic analysis has been undertaken on the quantifiable benefits (items (a) to (d) above), but the non-quantifiable items will contribute significantly to the overall economic impact of the project. Other non-quantified benefits will include the improvement in skills and capacity and the overall empowerment of communities participating in CFM and AIGA activities that will benefit the wider community (beyond just recipient households).
2. The analysis compared the quantifiable costs and benefits under a variety of scenarios. The benefits accruing from Components 1 and 4, consisting of institutional reforms, monitoring and management are not quantified, although their cost is included unless otherwise specified. The period of analysis comprises five years for project implementation and an additional 40 years for flow-on costs and benefits. All calculations are relative to a 'without project' scenario. A discount rate of 8 percent is used for the primary analysis.³²
3. Cost-benefit ratios for the whole project are positive, ranging from 2.98 to 1.56, with and without a low social value of carbon (US\$38 at project commencement).³³ This assumes that the full project extent is completed as planned, with 80 percent plantation survival before first thinning. Associated IRRs are 29.7 and 12.3 respectively, providing net present values of US\$514 million and US\$144 million.
4. Sensitivity analysis demonstrated that the project is economically robust under a range of conditions. Even without carbon benefits, the project has a positive return with a survival rate of 45 percent. Experience under the CRPARP showed that overall survival rates of 85 percent to 95 percent³⁴ are realistic. With increased experience and improved technology to be developed during the SUFAL Project, this is expected to be met or exceeded. Positive returns are also robust to timber prices up to 67 percent lower (again without carbon) under conditions of real timber price growth (1 percent annually), and robust to prices up to 54 percent lower under conditions of no real price growth. Price falls are unlikely due to increasing demand (both locally and internationally), population growth, and increasing timber processing in country. Positive returns are similarly robust to a range of changes in future harvest decisions. If instead of harvesting all the remaining timber standing at the end of the rotation period (30 or 40 years), future managers decide to leave a proportion for biodiversity or ecosystem services (which

³² Eight percent is approximately twice the long-term (20 year) GDP per capita growth rate for Bangladesh. See World Bank. 2016. Discounting Costs and Benefits in Economic Analysis of World Bank Projects.

³³ World Bank, 2017, Guidance note on shadow price of carbon in economic analysis.

³⁴ The CRPARP ICR, 2017, showed that project planting undertaken in 2014 and 2015 had 85 percent to 95 percent survival. Planting outside project areas achieved survival rates of 72 percent to 99 percent.

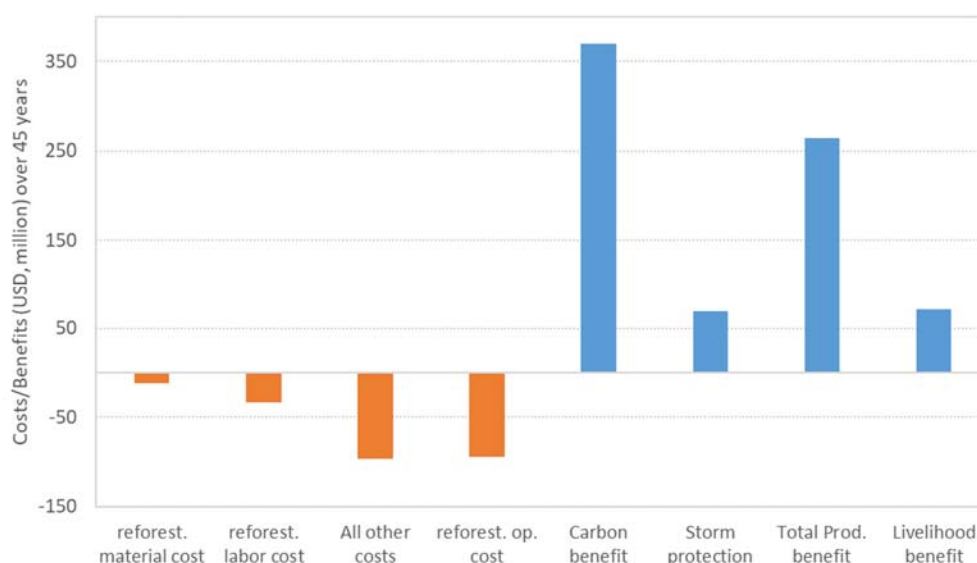


generates value in themselves), market economic returns remain positive if 25 percent of initial surviving trees are left in both short-rotation and long-rotation types, all else equal. Similarly, the project remains positive if a smaller proportion (25 percent instead of 50 percent) of fast growing species are used in the short-rotation plantation types.

5. The quantifiable benefits are distributed between timber production (approximately 34 percent of the total benefits), carbon (approximately 48 percent), coastal storm protection (approximately 9 percent) and livelihoods (approximately 9 percent). A key assumption is the short-rotation timber yield: the analysis assumes yields equal to their observed average for Bangladesh³⁵ and is based on a model where plantations are established in mixtures of both fast- and slow-growing species. Fast-growing species, such as acacia, support rapid canopy closure (to prevent inundation by weed species), provide some early economic returns when removed, and allow the slower-growing trees left to create a permanent forest cover. The non-quantifiable benefits provided by the permanent tree cover are therefore considered to be more important than the revenue forgone from not planting the areas solely with fast-growing species (which would provide a fast and reliable income stream).

6. Livelihood activities in isolation from other project activities, have an estimated cost-benefit ratio of 1.58. Coastal reforestation activities in isolation have a cost-benefit ratio of 2.62 (excluding carbon benefits).

Figure 3.1



³⁵ Price and yield data from Newaz, S., and M. Millat-E-Mustafa. 2004. "Growth and Yield Prediction Models for Acacia mangium Grown in the Plantations of the Central Region of Bangladesh." *New Forests*, 27: 81–88; and Islam, S., M. S. Islam, M. A. T. Hossain, and Z. Alam.. 2013. "Optimal Rotation Interval of Akashmoni (*Acacia auriculiformis*) Plantations in Bangladesh." *Kasetsart J. Soc. Sci* 34: 181–90.



7. The categories of costs and benefits that are quantified are shown in table 3.1.

Table 3.1.

Benefit Categories		Per hectare NPV over 45 years (US\$) (8% discounting)	Summary of Calculations and Key Assumptions
Marketable Forest Products	Timber	11,832 to 36,878	Net initial values of US\$439 per m ³ (Teak or Sal timber), US\$220 per m ³ (Acacia timber), US\$11 per m ³ (fuelwood), and US\$2 per pole. Timber prices are assumed to grow by 1 percent annually, although results robust to no real increase. Yields assumptions range from 11.65 m ³ per ha per year (slow growing teak and Sal, 40-year rotation) to 16.16 m ³ per ha per year (fast growing acacia, 12-year rotation). ³⁶ Net value US\$2.2 per pole. Assumed yield of 1,600 poles per ha per year. Based on reported incomes (revenues and costs) of small-holder growers in Bagerhat district. ³⁷
	Fuelwood	852 to 1,579	
	Poles	485 to 1,129	
	Bamboo	29,037	
	Golpata	4,630	
Carbon sequestration		0–8,229	0–697 tons CO ₂ e per ha; US\$38 per ton. Based on zone 2 tropical deciduous forest cover on low-activity clay soils. Adjusted for fuelwood use. Half benefits allocated for forest enrichment activities. Sequestration is lower for reforestation activities, higher for plantation activities as per the Food and Agriculture Organization of the United Nations (FAO) EX-ACT model. ³⁸ Not all activities attract carbon benefits. Carbon is priced conservatively at the lower bound recommended for 2018 (growing at 2.25 percent annually for the the 45-year period). ³⁹
Hills and plains NTFPs		978	Based on reported incomes (revenues and costs) of harvesters in CHT forest. ⁴⁰ Applies to reforestation activities in hills and plains, with half benefits allocated for forest enrichment activities.

³⁶ Price and yield data from Newaz, S., and M. Millat-E-Mustafa. 2004. "Growth and Yield Prediction Models for Acacia mangium Grown in the Plantations of the Central Region of Bangladesh." *New Forests* 27: 81–88; and Islam, S., M. S. Islam, M. A. T. Hossain, and Z. Alam. 2013. "Optimal Rotation Interval of Akashmoni (*Acacia auriculiformis*) Plantations in Bangladesh." *Kasetsart J. Soc. Sci* 34: 181–90.

³⁷ Miah, M. Danesh, and Romel Ahmed. 2003. "Indigenous Management Practices of Golpata (*Nypa fruticans*) in Local Plantations in Southern Bangladesh." *PALMS*, 47(4): 185–190. See table 10.

³⁸ FAO, 2018, EX-ACT: Ex-Ante Carbon-balance Tool.

³⁹ World Bank, 2017, Guidance note on shadow price of carbon in economic analysis.

⁴⁰ Kar, S. 2010. *Non-timber Forest Product Utilization and Livelihood Development in Bangladesh*. Ph.D. Thesis, Penn state University. See table 4.2.



Benefit Categories	Per hectare NPV over 45 years (US\$) (8% discounting)	Summary of Calculations and Key Assumptions
Mangrove NTFPs	580	Based on reported incomes (revenues and costs) of harvesters in Sundarbans Reserve Forest. ⁴¹ Applies to mangrove reforestation activities, with half benefits allocated for mangrove enrichment activities. Includes golpata, grass, and honey only.
Storm Protection	5,036	Based on expected statistical value of lives saved, hospital and medical center cost reductions, reconstruction of houses, and loss of household assets. Statistical lives saved estimated at 0.035 per ha per super cyclone. ⁴² Value of a statistical life estimated at US\$90,585. ⁴³ Accounts for expected proportion of population covered by storm shelters, growth in population (1 percent), and growth in proportion of brick houses. Storm impact assumed to scale exponentially with storm size, with frequency of storms greater for smaller storm categories. Applies to mangrove activities, with half benefits allocated for mangrove enrichment activities. Eight year growing period (with lesser benefits before maturity) assumed.
Livelihoods	n.a.	Expected returns to livelihood activities are based on observed returns to similar activities under CRPRP. Before-after household income comparisons between participants and non-participants (difference-in-differences panel regressions with household fixed effects ⁴⁴) showed an annual income increase of 20.8–27.6 percent. This treatment effect is scaled by the size (US\$850) and number (40,000) of grants planned under the SUFAL Project and modelled with conservative benefit-flow assumptions (benefits over five years, peaking at above increase in third year).
Plantation Cost Categories		
Labor	226–2,091	Varies by plantation activity, covers planting and establishment as per BFD estimates. Assumed 75 percent opportunity cost of labor (that is, 25 percent of labor costs are economic transfers).
Materials	43–397	Varies by plantation activity, covers planting and establishment as per BFD estimates

⁴¹ Islam. 2010. *Integrated Protected Area Co-Management: A study of the principal marketed value chains derived from the Sundarbans Reserve Forest*. Consultant report to the United States Agency for International Development. See tables 5.30, 5.13, 4.8, and 5.1.

⁴² Based on population density-adjusted coefficient from: Das, S., J. R. Vincent. 2009. "Mangroves Protected Villages and Reduced Death Toll during Indian Super Cyclone." *Proc. Natl. Acad. Sci.* 106, 7357–7360.

⁴³ Narain, U., and C. Sall. 2016. "Methodology for Valuing the Health Impacts of Air Pollution: Discussion of Challenges and Proposed Solutions." World Bank Working Paper.

⁴⁴ Income data for both participating and non-participating households (N = 1060 in total) was collected by Arannayk Foundation in 2013 and 2016 and made available for this analysis.



Benefit Categories	Per hectare NPV over 45 years (US\$) (8% discounting)	Summary of Calculations and Key Assumptions
Opportunity costs	2,178	Assumes degraded forest land otherwise used for fodder production with value determined by total non-poultry livestock production. Determined from value of total livestock production, scaled by average non-crop feed proportion, divided by non-crop, fodder producing land in Bangladesh (including 50 percent of public forest land). ⁴⁵
Other costs	n.a.	Costs from Components 1, 4, and non-plantation activities under Component 2 are considered facilitating activities and thus included. Additional annual operations costs of US\$2.48 million (to be sourced from general revenues) are also included.

⁴⁵ Huque, K., and N. Sarker. 2014. "Feed and Feeding of Livestock in Bangladesh: Performance, Constraints, and Options." *Bangladesh Journal of Animal Science* 43(1); BBS. 2017. "Livestock Economy at a Glance." Bangladesh Bureau of Statistics.



ANNEX 4: Map of Project Area

COUNTRY: Bangladesh
Sustainable Forests & Livelihoods (SUFAL) Project