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Report No: ICR00005040

IMPLEMENTATION COMPLETION AND RESULTS REPORT

(GEF Trust Fund No. TF016773)

ON A

GRANT

IN THE AMOUNT OF US$ 6.08 MILLION

TO

BELIZE

FOR THE

MANAGEMENT AND PROTECTION OF KEY BIODIVERSITY AREAS IN BELIZE
(P130474)

March 17, 2020

Environment, Natural Resources & The Blue Economy Global Practice
Latin America And Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective: Jun 18, 2014 / Sep 30, 2019)

Currency Unit	=	Belize Dollar
BZD 1.98	=	US$1 (at Appraisal)
BZD 2.02	=	US$1 (at Completion)

FISCAL YEAR
July 1 - June 30

Regional Vice President:	J. Humberto Lopez
Country Director:	Tahseen Sayed
Regional Director:	Anna Wellenstein
Practice Manager:	Valerie Hickey
Task Team Leader(s):	Maja Murisic
ICR Main Contributor:	Nina Rinnerberger

ABBREVIATIONS AND ACRONYMS

AM	Aide Memoire
ATV	All-Terrain Vehicle
CBD	Convention on Biological Diversity
CEO	Chief Executive Officer
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNP	Chiquibul National Park
CPF	Country Partnership Framework
CPR	Cardiopulmonary Resuscitation
CPS	Country Partnership Strategy
CRFR	Columbia River Forest Reserve
DOE	Department of the Environment
EIA	Environmental Impact Assessment
EIS	Environmental Information System
ECP	Environmental Clearance Process
FCFR	Freshwater Creek Forest Reserve
FD	Forest Department
FIS	Forest Information System
FIRRT	Fire Incident Rapid Response Team
FMIS	Forest Management Information System
FRL	Forest Reference Level
FY	Fiscal Year
GA	Grant Agreement
GDP	Gross Domestic Product
GEF	Global Environment Facility
GoB	Government of Belize
ICT	Information and Communications Technology
IRPF	Involuntary Resettlement Policy Framework
ISR	Implementation Status & Results Report
KAP	Knowledge, Attitude and Practices
KBA	Key Biodiversity Area
MAFFESDI	Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development & Immigration Services and Refugees
MLA	Maya Leader's Alliance
MEDPITC	Ministry of Economic Development, Petroleum, Investment, Trade and Commerce
METT	Management Effectiveness Tracking Tool
MFFSD	Ministry of Forestry, Fisheries and Sustainable Development
MMFR	Maya Mountain Forest Reserve
MTR	Mid-Term Review
NEAC	National Environmental Assessment Committee
NGO	Non-Governmental Organization
NPAP	National Protected Areas Policy
NPAS	National Protected Areas Secretariat
NPASP	National Protected Areas System Plan

NTFP	Non-Timber Forest Product
PA	Protected Area
PACT	Protected Areas Conservation Trust
PAD	Project Appraisal Document
PDO	Project Development Objective
PIAG	Project Implementing Agency Group
PPG	Project Preparation Grant
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
RAAP	Resettlement Audit and Action Plan
REDD	Reducing Emissions from Deforestation and Degradation
RF	Results Framework
SCWS	Spanish Creek Wildlife Sanctuary
SFM	Sustainable Forest Management
STEP	Systematic Tracking of Exchanges in Procurement
TAC	Technical Advisory Committee
TOR	Terms of Reference
VFR	Vaca Forest Reserve
WBG	World Bank Group
YCT	Ya'axché Conservation Trust

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P130474	Management and Protection of Key Biodiversity Areas in Belize
Country	**Financing Instrument**
Belize	Investment Project Financing
Original EA Category	**Revised EA Category**
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
Belize	Ministry of Forestry, Fisheries, and Sustainable Development, Protected Areas Conservation Trust

Project Development Objective (PDO)

Original PDO

The Project Development Objective (PDO) is to strengthen natural resource management and biodiversity conservation in Key Biodiversity Areas (KBAs) of Belize.

FINANCING

	Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing			
TF-16773	6,085,600	6,085,600	3,558,939
Total	**6,085,600**	**6,085,600**	**3,558,939**
Non-World Bank Financing			
Borrower/Recipient	3,000,000	3,000,000	2,663,002
Total	**3,000,000**	**3,000,000**	**2,663,002**
Total Project Cost	**9,085,600**	**9,085,600**	**6,221,941**

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
29-Sep-2014	26-Jan-2015	09-Apr-2018	30-Sep-2019	30-Sep-2019

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US$M)	Key Revisions
02-Nov-2017	1.39	Change in Components and Cost Change in Disbursements Arrangements

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Highly Unsatisfactory	Moderately Unsatisfactory	Negligible

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	08-Jun-2015	Satisfactory	Satisfactory	.78
02	29-Dec-2015	Satisfactory	Satisfactory	.78

03	30-Jun-2016	Moderately Satisfactory	Moderately Satisfactory	1.12
04	21-Dec-2016	Moderately Satisfactory	Moderately Satisfactory	1.12
05	29-Jun-2017	Moderately Satisfactory	Moderately Unsatisfactory	1.25
06	27-Dec-2017	Moderately Satisfactory	Moderately Satisfactory	1.67
07	01-Jun-2018	Moderately Unsatisfactory	Moderately Unsatisfactory	1.92
08	30-Nov-2018	Moderately Unsatisfactory	Moderately Unsatisfactory	2.29
09	08-Apr-2019	Moderately Unsatisfactory	Moderately Unsatisfactory	2.56

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Agriculture, Fishing and Forestry	**100**
Public Administration - Agriculture, Fishing & Forestry	21
Forestry	36
Other Agriculture, Fishing and Forestry	43

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Environment and Natural Resource Management	**0**
Climate change	7
Mitigation	7
Renewable Natural Resources Asset Management	86
Biodiversity	86
Environmental policies and institutions	7
Private Sector Development	**100**
Jobs	100

ADM STAFF		
Role	**At Approval**	**At ICR**
Vice President:	Jorge Familiar Calderon	J. Humberto Lopez
Country Director:	Sophie Sirtaine	Tahseen Sayed Khan
Director:	Paula Caballero	Anna Wellenstein
Practice Manager/Manager:	Emilia Battaglini	Valerie Hickey
Project Team Leader:	Enos E. Esikuri	Maja Murisic
ICR Co Author:		Nina Rinnerberger

I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Country Context

1. Since gaining independence in 1981, Belize has experienced a peaceful and democratic transition. Resulting from the first commercial oil discovery in 2005 and the emergency of the tourism industry, the economy transformed away from being traditionally oriented towards agriculture. At the time of appraisal, the service sector had become the largest contributor to GDP, accounting for 54 percent while the agriculture sector accounted for 13 percent of GDP, with exports primarily dominated by the sugar and citrus industries. Fiscal space was limited in Belize and the public debt trajectory was vulnerable to various shocks, including protracted periods of weak growth in advanced economies and declining oil production. In part due to the stagnating economic situation and the impact of natural disasters, poverty had substantially increased. During 2002-2009, the overall poverty rate rose from 34 to 41 percent and extreme poverty increased from 11 to 16 percent. Unemployment levels, which had gradually decline during the early 2000s, drastically increased too from 8 to 16 percent between 2008-2012.

Sectoral and Institutional Context

2. *Belize was facing serious problems that threatened preservation of its forests and biodiversity, while also adversely affecting the forest dependent poorer population and economic growth prospects of the country*. Belize is endowed with rich terrestrial and aquatic biodiversity, including the largest barrier reef in the Americas and pristine tropical forests. Forest cover represented 62 percent (1,366,300 hectares in 2010) of land in Belize, the highest in both Central America and the Caribbean, of which 37 percent were primary forests. Belize had 103 Protected Areas (PAs), covering 35.8 percent of the country's total land area to protect its unique forest and important biodiversity. While PAs were shown to be effective in protecting forests, pressure on PAs was increasing as a result of agricultural expansion and threats from illegal logging, hunting and poaching, sometimes by communities from across the national border. As a result, forest cover had continued to decrease (by around 9,416 hectares per year between 1980 and 2010) and was predicted to decline further due to anthropogenic threats to forests from the expansion of agriculture, housing and tourism.

3. *Considerable vulnerabilities and issues of deforestation and sustainable resource management needed to be addressed in Key Biodiversity Areas[1] (KBAs)*. Between 2010 and 2012, natural disasters such as wildfires and hurricanes damaged an estimated 33,129 hectares, in addition to 25,092 hectares that suffered from land clearing. Climate change posed significant additional risks to Belize and its natural ecosystems, including through more intense and frequent tropical storms and hurricanes, flood damage, and rising sea levels. Hurricane Richard (October 2010; category 1) led to extensive forest destruction, leaving much debris, which accumulated and dried up, causing forest fires during the 2011 dry season.

4. *A key challenge was balancing the drivers of economic growth and the pressures they exert on natural resources and the environmental integrity of the country*. Population growth, particularly a growing rural population,

[1] The concept of KBAs was developed by global practitioners seeking to identify and ultimately ensure that networks of globally important sites are safeguarded. A collaborative effort between the Government of Belize, Belize Tropical Forest Studies, Conservation International, and the Critical Ecosystem Partnership Fund resulted in the definition of KBAs in Belize in 2007, based on which priority areas for biodiversity protection were identified focusing on the presence of globally threatened species (as per the IUCN Red List criteria) and species of national concern (e.g. the scarlet macaw).

placed an undue burden on the country's natural resources. The poorest people and communities in Belize were predominantly rural and their livelihoods depended (and still do) on access to land and natural resources. The highest poverty levels tended to occur in forested areas, including areas with the highest levels of biodiversity, presenting challenges of encroachment and enforcement. Opportunities for income generation and employment that were not destructive to forests were needed. As such, effective and improved management of natural resources for sustainable livelihoods was critical in contributing to shared prosperity and green growth in Belize.

5. *While key policies and legislation related to natural resources in general and PAs in particular were in place, weaknesses arose from different jurisdictions and regulations over their management*. Belize's sector-specific policies and legislation on water resource management, land and coastal zone management were generally comprehensive and robust. The management of PAs, guided by the National Protected Areas Policy (NPAP) and the National Protected Areas System and Plan (NPASP), was administered and regulated by different laws and enforced by different Government agencies (Department of Environment, Forest Department, Fisheries Department, Coastal Zone Management Authority and Institute, Institute of Archaeology, and Lands and Survey Department), leading to overlapping mandates and sometimes inefficiencies. In regard to environmental impact assessments, standardized programs and protocols were lacking. Relevant institutions were understaffed (and often underfunded) with limited capacity to perform basic functions including monitoring and enforcement as well as data collection. Insufficient historical information on the status of biodiversity and natural resources was a limiting factor too.

6. *Rationale for Bank involvement and support from the Global Environment Facility (GEF-5):* The project built on the achievements and lessons learnt from previous work in Belize (including technical assistance on natural resource management and climate resilience) and elsewhere. It also incorporated lessons on Managing Forest Resources for Sustainable Development[2] and recommendations from the Environmental Research Institute (as part of the CITES Scientific committee in Belize) on improving the sustainable forest management regime in Belize. It was designed to contribute to enhancing biodiversity management, carbon stocks and forest resources through GEF-funding. Specifically, the project supported Objectives 1 and 2 of the Biodiversity Strategy, Objective 5 of the Climate Change Strategy, and Objective 1 of the Sustainable Forest Management/REDD+ Strategy. The GEF grant would provide the needed incremental investments and complement counterpart resources by the Government of Belize (GoB) in support of sustainable forest management, biodiversity conservation and climate change mitigation.

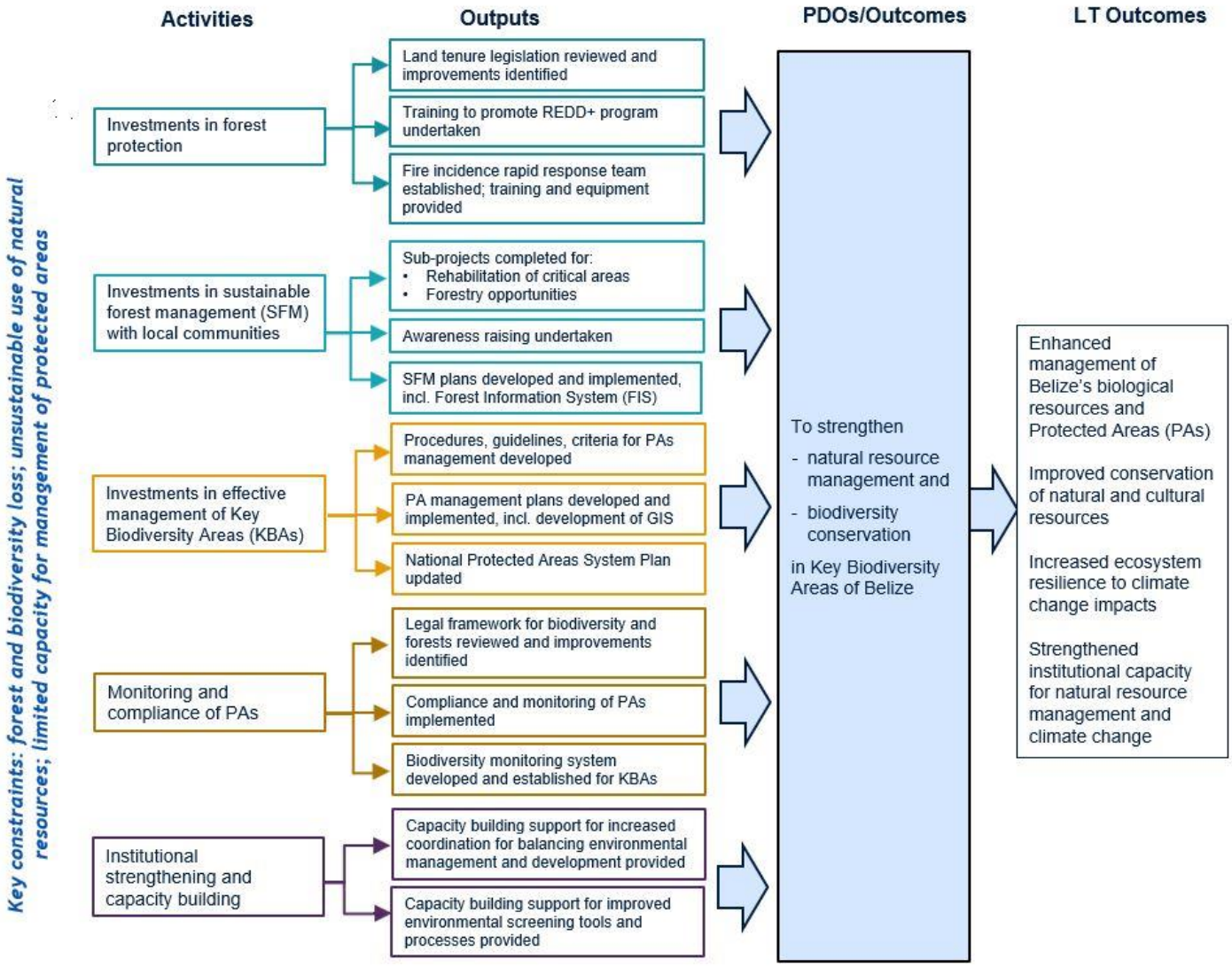
Theory of Change (Results Chain)

7. The project's Theory of Change (ToC) is illustrated in Figure 1 below.[3] The project focused on several areas of support that would strengthen natural resource management and biodiversity conservation in six identified project sites[4] of key biodiversity value. Interventions were designed around (i) forest protection and sustainable forest management, (ii) effective management of KBAs and PAs, and (iii) institutional strengthening and capacity building. Together, these would contribute to safeguarding globally important sites through conservation, as an effective means to reduce biodiversity loss. A key assumption was that conservation of PAs can only be successful by striking a balance between the drivers of economic growth and the pressures they exert on natural resources. The ToC

[2] Independent Evaluation Group, 2013.
[3] Note that Figure 1 only presents the logic behind the results chain as inferred from the PAD. The key project outputs are presented in Annex 1.
[4] Selection was based on prioritization of terrestrial areas (following a 2012 rationalization exercise for the PAs system, commissioned by the GoB) and criteria related to biodiversity, climate change, and sustainable forest management. Target areas were chosen out of thirty-two terrestrial PAs within KBAs following a deliberate and consultative process and covered 215,729 hectares.

builds on the understanding that co-management of PAs by communities and organizations matters for both environmental outcomes and sustainability.

Figure 1: Theory of Change – Illustrated



Project Development Objectives (PDOs)

8. The overall Project Development Objective (PDO) and Global Environment Objective (GEO) as stated in the GEF Grant Agreement (GA) and the PAD is: to strengthen natural resource management and biodiversity conservation in Key Biodiversity Areas (KBAs) of Belize.

9. The main outcomes captured in the PDO are: (i) to strengthen natural resource management and (ii) to strengthen biodiversity conservation. Together, they addressed the challenges identified in the sector context above.

Key Expected Outcomes and Outcome Indicators

10. The key outcomes and associated outcome indicators used to assess the achievement of the project's PDO are as follows:

PDO Outcome 1: to strengthen natural resource management

- *Outcome indicator 1*, "Forest brought under sustainable forest management plans in targeted area"
- *Outcome indicator 3*, "People in targeted forests and adjacent communities with increased monetary or non-monetary benefits from forests"
- *Outcome indicator 4*, "Government institutions provided with capacity building support to improve management and compliance monitoring of forest resources and environment" (also relevant for outcome 2)

PDO Outcome 2: to strengthen biodiversity conservation

- *Outcome indicator 2*, "Areas brought under enhanced biodiversity protection in the targeted KBAs".

Components

11. **Component 1 – Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas** *(estimated: US$2.18 million, actual: US$0.85 million)*: This component, led by the Forest Department (FD), provided grant financing to support (1.1.) forest protection and (1.2.) sustainable forest management (SFM) to contribute to a reduction of emissions from deforestation and degradation and increase in sequestration of CO_2. Forest protection activities included: (1.1.a) support for the review of Belize's land tenure legislation; (1.1.b) training to promote a REDD+ program; and (1.1.c) support for the development and establishment of a fire incidence rapid response team. Sustainable forest management activities comprised: (1.2.a) rehabilitation of critical areas of high conservation value, incorporating climate change mitigation and resiliency measures, through community-based sub-projects; (1.2.b) implementation of community sub-projects for sustainable harvesting and marketing of non-timber forest products; (1.2.c) support for awareness raising of SFM; and (1.2.d) support for the development and implementation of SFM plans, including the establishment of a forest information system (FIS).

12. **Component 2 – Promoting Effective Management of Key Biodiversity Areas** *(estimated: US$2.59 million, actual: US$1.45 million)*: This component, also led by the FD, comprised two sub-components: (2.1.) improving management of KBAs and (2.2.) monitoring and compliance of PAs. Activities in support of 2.1. included: (2.1.a) development of procedures, guidelines, criteria and regulations for the declaration, re-alignment and de-reservation of PAs in Belize; (2.1.b) support for the development and implementation of PA management plans; (2.1.c) support for updating the National Protected Areas System Plan. The second sub-component included: (2.2.a) reviewing the legal framework for the protection of biodiversity and forests; (2.2.b) monitoring and compliance support for PAs; and (2.2.c) development of a biodiversity monitoring system for KBAs.

13. **Component 3 - Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations** *(estimated: US$1.00 million, actual: US$0.85 million)*: This component, led by the Department of Environment (DOE), comprised two sub-components on supporting (3.1.) increased coordination for balancing environmental management and development (with a focus on improving the Environmental Impact Assessment (EIA) process and strengthening compliance monitoring) and (3.2.) strengthening and improvement of

environmental screening tools and processes (with a focus on EIA protocols, decision-making and training on Strategic Environmental Assessment and Social Impact Assessment).

14. **Component 4 – Project Management, Monitoring and Assessment** *(estimated: US$0.31 million, actual: US$0.40 million)*: This component financed the operating costs of project management functions to be carried out by the Project Implementing Agency Group (PIAG) within the Ministry of Forestry, Fisheries and Sustainable Development (MFFSD[5]). This included coordination, supervision, monitoring, quality control, socio-environmental management, reporting, and fiduciary management of the Project's resources.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

Revised PDOs and Outcome Targets

15. The project was approved by the World Bank (WB) Board of Directors on September 29, 2014 and the GEF Grant Agreement was signed on November 5, 2014. The project became effective on January 26, 2015[6]. The project was restructured to accommodate changes in components and related changes of disbursements categories on November 2, 2017 to accommodate resettlement expenditures (see also para. 18). Neither the PDO nor the Results Framework (RF) and outcome targets were revised at that time, although the project was already facing implementation challenges. By the Mid-Term Review (MTR, April 2018), it had become clear that the project was facing significant implementation challenges and would not be able to meet its PDO.[7] One of the key recommendations was to streamline project activities and prioritize investments that would contribute to the achievement of the PDO. An official request for restructuring was received by the Ministry of Economic Development, Petroleum, Investment, Trade and Commerce on June 18, 2018 to adjust project activities and associated costs, reallocate between expenditure categories, revise the RF, and adjust the implementation schedule including an extension of the project closing date by 18 months (until March 2020). At the same time, developments related to a proposed underground mining activity in one of the project sites (Chiquibul National Park, CNP) raised questions regarding the legality and consistency of this activity with the project PDO, which in turn delayed the decision whether to proceed with the project restructuring.[8] In February 2019, a decision was taken by the Bank that project restructuring, including the extension of the closing date, was not feasible (overall implementation progress was rated Moderately Unsatisfactory at the time).

Revised PDO Indicators

16. None.

Revised Components

17. None, with the exception of adjustments following the decision not to proceed with the second restructuring. This included prioritizing remaining activities and scaling them down in some target areas, including removing CNP from the eligible project sites to respond to the fact that the project would not be able to implement all the remaining

[5] Following the election in November 2015, the Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development & Immigration Services and Refugees was placed in charge.
[6] A project launch workshop was held on March 25, 2015 involving key representatives of Government, beneficiary entities, NGOs and academia.
[7] Progress toward achievement of the PDO was downgraded from Moderately Satisfactory (ISR No. 6, December 2017) to Moderately Unsatisfactory (ISR No. 7, May 2018) based on the findings of the MTR (April 9-13, 2018) and remained MU until project closing.
[8] World Bank letter to the Ministry of Agriculture, Fisheries, Forestry, Sustainable Development, the Environment, Climate Change and Solid Waste Management Authority, dated August 3, 2018.

activities nor meet its development objective within the original timeframe. A prioritized list of activities and related action plan were developed in February 2019. Most of the prioritized activities were implemented, which allowed the project to significantly increase disbursement (from 30 percent at MTR to 58 percent at closing) and progress towards the PDO until the original closing date (on September 30, 2019).

Other Changes

18. As indicated above, the November 2017 restructuring allowed the use of project funds to finance expenditures pertaining to resettlement (Resettlement Expenditures) in the amount of US$30,000. The changes included (a) an amendment to Part 4 of the Project "Project Management, Monitoring and Assessment" to include Resettlement Expenditures, (b) adding a definition of Resettlement Expenditures to be financed under the Project, and (c) changing the cost of the corresponding components. A summary of changes in components and cost is presented in Table 1 below.

Table 1: Changes in Components and Cost

COMPONENTS				
Current Component Name	**Current Cost (US$M)**	**Action**	**Proposed Component Name**	**Proposed Cost (US$M)**
Component 1: Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas	2.18	No Change	Component 1: Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas	2.18
Component 2: Promoting Effective Management of Key Biodiversity Areas	2.59	Revised	Component 2: Promoting Effective Management of Key Biodiversity Areas	2.29
Component 3: Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations	1.00	No Change	Component 3: Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations	1.00
Component 4: Project Management, Monitoring and Assessment	0.31	Revised	Component 4: Project Management, Monitoring and Assessment	0.61
TOTAL	**6.08**			**6.08**

Rationale for Changes and Their Implication on the Original Theory of Change

19. The restructuring responded to a fire incident that occurred in the Columbia River Forest Reserve (CRFR) in mid-February 2017 that impacted two Maya families whose active crops and huts were mistakenly burned by the GoB as part of a security operation. The incident was brought to the Bank's attention in April 2017 and, in line with the project's Safeguards instruments, the Bank determined that resettlement compensation was required. A Resettlement Audit and Action Plan (RAAP) was prepared by the GoB in accordance with the project's Involuntary Resettlement Policy Framework (IRPF), which was consulted with the affected farmer families and the community leaders.[9] The Bank approved the resettlement compensation to the families affected by the fire on September 18, 2017. Project

[9] A RAAP validation meeting was held on September 27, 2017 that included the affected families and representatives of the KBA project, the FD, the Mayan Leaders Alliance, the Toledo Alcaldes Association (TAA), as well as the Alcalde and Council Chairman of the respective villages.

implementation, which had been slow as evidenced by the low disbursement rate (19 percent in June 2017), was impacted further as the PIAG's attention largely shifted to resolving the resettlement case. The ToC was affected in that overall progress towards the PDO stalled, compounding other implementation challenges at the time (such as staff changes in the PIAG, fiduciary deficiencies, and lack of technical leadership and coordination).

II. OUTCOME

A. RELEVANCE OF PDOs

Rating: High.

Assessment of Relevance of PDOs and Rating

20. The project objectives supported the priorities of the GEF-5 for the Focal Areas Climate Change[10] and Biodiversity[11]. The PDO was also aligned with the priorities of the Country Partnership Strategy (CPS) FY2012-FY2015 that focused on supporting the GoB to achieve "Inclusive and Sustainable Natural Resource-Based Growth and Enhanced Climate Resilience" (Report Number 63504).

21. The project objectives remain relevant considering the priorities of the Strategic Country Diagnostic (SCD), which includes sustainable growth and strengthening resilience to climate change and natural disasters. The objectives are also consistent with the Country Partnership Framework (CPF) for the period FY18-22, which highlights the continued relevance of current engagement on climate resilience and environmental sustainability. The CPF stresses the importance of Belize's natural resource base, particularly benefits from extensive areas of pristine tropical forests, vital to limiting soil erosion and runoffs, in addition to providing communities with livelihood opportunities. Protecting these ecosystems continues to be critical for enhancing their ability to provide the associated environmental protection and economic resilience. In addition, the PDO remains relevant for Belize's own policies, programs (including the NPAP, the NPASP, the Environmental Clearance Regulation, National Water Quality Monitoring Program and Protocol, National Biodiversity Strategy Action Plan, the National Climate Change Policy, Strategy and Action Plan, Belize's Growth and Sustainable Development Strategy and other sectoral programs) and international commitments, particularly on climate change, as outlined in its Nationally Determined Contribution (NDC) under the Paris Agreement (which includes sustainable forest management, among the sectoral priorities), as well as in light of continued challenges facing the forest sector.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Rating: Negligible.

22. The overall efficacy is rated as *negligible* given that project outcomes were largely dependent on the implementation of community-based sub-projects, which were not achieved. While the project built some capacity, as also demonstrated in overachievement in related indicators, the outcome indicator on trainings was output based and hence actual uptake of knowledge is difficult to measure.

[10] Specifically, good management practices in Land Use, Land-Use Change and Forestry (LULUCF) adopted both within the forest land and in the wider landscape; restoration and enhancement of carbon stocks in forests and non-forest lands, including peatland; Greenhouse Gas (GHG) emissions avoided and carbon sequestered; and good forest management practices.
[11] Specifically, improved management effectiveness of existing and new protected areas; increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation; and measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks

Assessment of Achievement of Each Objective/Outcome

23. This section is organized around each of the two outcomes included in the PDO (see para 10). Additional details are provided in Annex 1 (Results Framework and Key Outputs).

Outcome 1: to strengthen natural resource management.

24. The project was designed to strengthen forest protection and sustainable forest management through an ambitious approach and combination of softer interventions such as training and capacity building, enhanced management and planning and legislative review, as well as hard investments through planned community-based/livelihoods sub-projects.[12] Progress toward the outcome is limited because the project did not implement community-based activities, which were critical for delivery of outcomes, and forest management planning was not undertaken in all selected priority areas within the closing date. Key results are as follows:

PDO Outcome indicator 1: "Forest brought under sustainable forest management plans in targeted area" (baseline: 0, target: 106,557 hectares, achieved: 16,367 hectares).

25. The project intended to develop four forest management plans (FMPs) for the Vaca Forest Reserve (VFR), Freshwater Creek Forest Reserve (FCFR), Maya Mountain Forest Reserve (MMFR), and Columbia River Forest Reserve (CRFR). In fact, the project developed one FMP for VFR (2017-2022), which covers an area of 16,367 hectares. The management goal identified by the FMP is for the VFR to continue to function as a key buffer for the CNP and contribute to the functioning of the Belize River watershed whilst maintaining its intrinsic natural values and contributing to local development. At the time of project closing, interest had been identified from the FD to further work with Friends for Conservation and Development (a local NGO based in Cayo District, and co-manager of the CNP) to implement the FMP prepared under the project, although limited budget resources going forward were noted as a constraint, along with understaffing. Some of the initial threats identified for the VFR remain, including unsustainable timber logging and extraction of NTFPs, encroachment for farming, and forest fires.

26. The project held initial stakeholder workshops and consultations with local communities and co-management NGOs (e.g. Ya'axché Conservation Trust, YCT) who are crucial for the management of forest reserves and protected areas, which included efforts to establish an engagement and collaboration framework to appropriately involve the Maya indigenous people in the development of management plans. While an inception plan for improved management of the CRFR was developed, it was put on hold until the engagement framework would be better defined; the resettlement case in the CRFR subsequently halted progress in that regard. Similarly, a consultancy for the development of the FMP for the FCFR was initiated, but implementation remained pending as a result of project implementation challenges. At the MTR, the need to develop a FMP for MMFR remained and a recommendation was made for YCT to continue this work.

27. The project successfully supported the development and establishment of a fire incidence rapid response team (FIRRT), including preparation of a work plan for the community fire brigade (consisting of 5-6 local volunteers); basic fire management training (e.g. to increase capacity of community-based organizations, NGOs and the FD on wildland fire management by the Toledo Institute for Development and the Environment); and procurement and provision of equipment (e.g. protective clothing, mobile water tank, water pump and hose) and transportation (1 all-terrain vehicle) for the FD. Beneficiaries included stakeholders from savanna areas in Southern Belize, where forest fires tend to start.

[12] Sub-projects were planned to be around 30-40 percent of the whole budget.

The project also developed and implemented an awareness raising program on SFM and forest fire prevention, which included communications materials (such as infomercials, brochures). A draft communication strategy for sustainable forest management and fire prevention was developed, portions of which are being implemented, although further consultations on the strategy are needed, including mapping of key stakeholders.

28. Some aspects of the enabling environment for better forest management were created through an analysis of information management needs and the design of a Forest Management Information System (FMIS) for the FD as well as the establishment and deployment of a Forest Information System (FIS) for data and information on forests, wildlife and PAs, connecting all FD offices and hosted at Belize's Central Information Technology Office (on a 1-year pilot basis, with uncertainty regarding continued funding beyond project closing). The establishment of Permanent Sample Plots (PSPs) in different forest types and ecosystems, and the re-measurement of existing PSPs has contributed to the ability to collect data on carbon, in addition to traditional parameters (such as tree mortality, regeneration, litter), which has fed into the Forest Reference Level (FRL[13]) for Belize. In this regard, the project collaborated and coordinated with the on-going Bank-supported FCPF REDD Readiness Preparation Project and filled an important gap in the existing Forest Monitoring Network of Belize (FORMNET[14]).

PDO Outcome indicator 3: "People in targeted forests and adjacent communities with increased monetary or non-monetary benefits from forests" (baseline: 0, target: 50 percent, achieved: 0).

29. The PAD envisioned this indicator to measure the extent to which local people see improved livelihood due to the project. A baseline survey was planned to be conducted, as well as periodic surveys as part of the project monitoring plan. Given implementation challenges, no sub-projects were implemented, although underlying assessments on economic opportunities were undertaken, which provide some evidence and a starting point for the potential future implementation of sub-projects (with government or other donor funding) that could increase monetary or non-monetary benefits from forests for local communities.

30. Specifically, the project conducted an "Assessment of the KBAs to Identify Priority Rehabilitation and Resilience Opportunities for Community-Based Sub-Projects", which showed that there is willingness of stakeholders to continue protecting Belize's natural resources, although there is a need for technical support and resources as well as skills related to leadership, negotiation, conflict resolution, project management and fiduciary aspects. Annex 6, Table 1 illustrates the potential sub-projects identified through the assessment, such as restoring forest gaps with native species, promoting eco-tourism in agroforestry plantations, restoring buffer zones, and establishing cacao agroforestry plantations. Additionally, an "Assessment of the KBAs to Identify Opportunities for Sustainable Harvesting and Marketing of Non-Timber Forest Products and other Community-based Forestry Initiatives" was undertaken that identified NTFPs with commercial value. Based on a feasibility study, including a market analysis, a 1-year operational plan (2018-2019) was prepared (but not implemented) to promote conservation and the sustainable use of NTFPs within the KBA focusing on pilot projects for the establishment of agroforestry or multi-cropping systems, plantations and processing plants for NTFPs, as well as animal husbandry. Annex 6, Table 2 provides details on the plan.

[13] FRL is a benchmark for emissions from deforestation and forest degradation and removals from sustainable management of forests and enhancement of forest carbon stocks, all related to REDD+ activities.
[14] Established in 1992, FORMNET is composed of 30 PSPs scattered over Belize's PAs. Since its inception, only a few of the PSPs have been re-measured. A field manual on PSP re-measurement was developed by the FD with donor support (e.g. GIZ) in 2016.

Outcome indicator 4, "Government institutions provided with capacity building support to improve management and compliance monitoring of forest resources and environment" (baseline: 0, target: 4, achieved: 7)[15].

31. The project provided capacity building to national and sub-national institutions including the FD, Belize Defense Force, Police, and the DOE, as well as the responsible Ministry, the National Environmental Assessment Committee (NEAC), as well as the National Protected Areas Secretariat (NPAS). Numerous technical and non-technical trainings enabled project beneficiaries and stakeholders to strengthen their capacity for monitoring, enforcement of environmental regulations and use of key equipment. There is anecdotal evidence that knowledge from these trainings is being taken up and applied in the management of natural resources (e.g. the DOE was able to respond to a severe incident of water contamination and fish kill, due to prolonged drought in Orange Walk Town in 2019, using the water equipment and training provided under the project). Similarly, the FD staff has been trained in the application of SMART (Spatial Monitoring and Reporting Tool) for the collection of field data, and the establishment and measurement of PSPs, including estimation of carbon, results of which will allow for quantification of savings on greenhouse gas emissions. Additional details on trainings provided are included in Annex 1 and Annex 7.

Outcome 2: to strengthen biodiversity conservation.

32. The project was designed to effectively manage KBAs and intended to develop management plans for two National Parks, the Spanish Creek Wildlife Sanctuary (SCWS) and the Chiquibul National Park (CNP)[16], along with providing support for strengthened biodiversity monitoring and enforcement of environmental legislation. Despite limited outcomes, some of the interventions provide parts of the building blocks and necessary skills and capacities to contribute to more effective biodiversity conservation in Belize.

PDO Outcome indicator 2: "Area brought under enhanced biodiversity protection (ha) in the targeted KBAs" (baseline: 0, target: 60, achieved: 20.8).

33. Enhanced biodiversity protection was going to be measured using the GEF Management Effectiveness Tracking Tool (METT)[17] for the targeted PAs (SCWS and CNP) as well as the forest reserves (VFR, FCFR, MMFR, CRFR). The project developed a Management Plan (MP) for SCWS (2016-2021), based on multiple consultations with local communities and NGOs. The identified management goal is "for SCWS to function as a key link within the Central Belize Biological Corridor and be recognized within the Selva Maya region for its intrinsic natural and cultural values, whilst contributing to local development, and enhancing and maintaining its ecological integrity". SCWS is being co-managed by Rancho Dolores Environment and Development Group Ltd. (RDEDG), although the MP recognizes that RDEDG has limited management experience and further capacity building as well as sustained budget resources are needed to achieve any future effort towards a structural and sustainable management of the sanctuary. Importantly, the project succeeded in demarcating the boundaries of SCWS and developing and delivering maps, based on field work of a licensed surveyor, which contribute to identifying land incursion discrepancies. Although the project updated the CNP MP, the matter of the mining activity resulted in the CNP to be excluded from the project areas, and hence this activity did not as such contribute to the outcome indicator.

[15] As the indicator was not focused on outcomes and uptake, actual outcomes are difficult to measure. See also section IV.A. on M&E.
[16] The PAD foresaw the development of six PA management plans (intermediate indicator 2.2.). It was later clarified, though not officially revised, that the indicator covers only SCWS and CNP.
[17] The unit of measure for outcome indicator 2 referred to both hectares and (as specified in the PAD) an increase in percentage in the METT score. This led to confusion on how to appropriately monitor this indicator. See also section IV.A. on M&E and Annex 1.

34. Strides were made to equip and build capacity for biodiversity monitoring during the later phases of the project, which provides elements for future conservation and monitoring efforts to build on. Of note are the procurement and deployment of camera traps and related accessories in the SCWS, VFR, FCFR and MMFR, which are actively in use and being maintained by FD staff. This has started to produce data on neotropical wildlife (e.g. white lipped peccary, tapir, jaguar, puma) and their roaming patterns, which, if integrated with the Environmental Information System (EIS, also developed under the project, see below) can improve capacity for decision-making regarding future conservation efforts. In addition, FD staff, co-management NGOs and local communities were educated and trained on how to collect and use biodiversity data (e.g. monitoring of the Central American River turtle in the Spanish Creek water system). Training was also provided on the safe capture and anaesthetizing of jaguars in the Northern Corridor KBA site of Fresh Water Creek, allowing the deployment of GPS collars. Anecdotal evidence reveals that a shift in awareness of some FD staff has taken place in the sense that the ability for sightings of biodiversity species (such as jaguars, which were found to roam further north than previously believed, and outside of PAs) has been a motivator for FD staff and for engaging communities in conservation efforts.

Outcome indicator 4, "Government institutions provided with capacity building support to improve management and compliance monitoring of forest resources and environment" (baseline: 0, target: 4, achieved: 7).

35. In addition to the achievements noted under Outcome indicator 4 above, the project provided training and equipment to DOE for improved compliance monitoring and environmental management. It specifically developed a National Water Quality Monitoring Program and Protocol with inputs from stakeholders, which is currently being implemented by DOE (with government funding) in New River, contributing to updating the National Water Quality Monitoring Plan. In addition, the project initiated discussions on and completed an assessment of the existing environmental clearance process (ECP) of the DOE that contributed to the amendment of the Environmental Clearance Regulation Act (August 2017). Important work was undertaken to improve the Environmental Impact Assessment (EIA) process, based on a comparison of EIA programs regionally (within Central American and Caribbean countries) that contributed to updating the EIA Manual to establish qualitative and quantitative criteria to standardize the EIA process. The project conducted an analysis of information management needs and designed and fully implemented an EIS for DOE to improve capacity for decision-making in the EIA process. Finally, the project developed a Procedural Manual for the NEAC as well as a National Public Involvement Plan to improve capacity for public consultations.

Justification of Overall Efficacy Rating

36. The overall efficacy with the PDO not achieved is rated as *negligible*. While the project succeeded in initiating and implementing a variety of interventions in support of improved natural resource management and biodiversity conservation, it fell short in terms of achieving expected, measurable outcomes at project closing.

C. EFFICIENCY

Rating: Negligible.

Assessment of Efficiency and Rating

37. *Economic and Financial Analysis*. At Appraisal, an economic and financial analysis was conducted, which should be commended. The project was expected to generate a variety of benefits not all of which would be able to be quantified. Key quantifiable benefits expected included increased areas under sustainable forest management, fire protection, increased areas rehabilitated via community-based activities, and decreased deforestation through regular patrols. Non-quantifiable benefits included improved capacities and knowledge in environmentally sound land

management practices at the PAs level and within forest reserves and also the sustainability of project benefits. At project closing, a classic economic and financial analysis (e.g., cost-benefit (CB) or cost-effectiveness (CE)) could not be conducted, given the project implementation limitations, country conditions, and substantial data constraints. Due to the limited achievements by the project, any quantitative measure to value project benefits (for a CB analysis) or project effectiveness (CE analysis) would likely be unable to show a true benefit, value or cost due to systemic weak capacity, understaffing, and resource limitations.

38. Project design, while well intended, lacked funding from conception affecting further the final outcomes. For instance, the project at design was expected to bring 106,557 hectares under management plans, however it achieved just 15 percent. Considering the optimal level of financial needs to manage protected areas in the Latin America and Caribbean (LAC) region (US$3.54 / ha-year[18,19]), total cost for this component represents nearly US$ 1.89 million, i.e., more than 30 percent of total budget at appraisal.

39. Nevertheless, the project has served as an enabler in some regards for potential, future conservation initiatives in a biodiverse country and has provided limited benefits. According to the World Bank, the wealth study conservatively estimates total natural wealth in Belize at US$8 billion and, per capita at US$25,297 (in 2010 prices). Further, natural capital is the second most important component at 40 percent of total wealth, dominated by the value of its PAs. Belize derives significant benefits from the ecosystem services generated by the coral reefs and mangroves. It has been estimated that the value of ecosystem services (fishing, tourism, shoreline protection) generated by the coral reefs and mangroves contributes between 15 percent and 22 percent of GDP in Belize (in the range of US$395-559 million per year) (Cooper, Burker, and Bood, 2009). Table 1 in Annex 4 presents a comprehensive accounting of KBA project benefits if the project was implemented fully, as well as considering the limited achievements by the project.

40. *Overall project expenditures*. The project total expenditures were around US$3.55 million, compared to the total project cost at Appraisal of around US$6.09 million. At Appraisal, PIAG/PACT project management costs were estimated at 5 percent of total project funding (US$0.31 million, excluding beneficiary contributions), compared to actual costs of US$0.40 million at closing (11 percent of total project expenditures). While this is comparable to similar community-driven projects, the project objectives and community-based sub-projects were not achieved.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

Rating: Highly Unsatisfactory.

41. The overall outcome rating is based on the **high** relevance of the objectives, the **negligible** efficacy rating given the PDO objectives were not achieved and the **negligible** efficiency rating due to existing constraints to conduct a classic economic and financial analysis.

[18] Flores, M. 2010. "Protected Areas." Chapter 10 of The Importance of Biodiversity and Ecosystems in Economic Growth and Equity in Latin America and the Caribbean: An Economic Valuation of Ecosystems, ed. A. Bovarnick, F. Alpizar, and C. Schnell, 203–237. New York: United Nations Development Programme (UNDP).

[19] By comparison, European and North American nations spend about US$28 / ha-year, eight times compared to the optimal number in the LAC region.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

42. The project sought to address gender through mainstreaming gender considerations into community-based activities and by following the Convention on Biological Diversity (CBD) guidance. At the time of Appraisal, Belize enjoyed a very high gender index parity compared to many other countries in the region and the GoB had ratified the Convention on the Elimination of all forms of Discrimination Against Women (May 1990). As part of the project, monitoring data was to be collected on the number of people in targeted forests and adjacent communities with increased monetary and non-monetary benefits from forests, disaggregated by gender and ethnicity (PDO indicator 3). In addition, the project was to track the men and women engaged in sub-projects supporting sustainable harvesting and marketing of NTFPs in target areas (intermediate result indicator 1.4.). Addressing gender aspects meaningfully remained an intention of the project.

Institutional Strengthening

43. The project brought together key government institutions dealing with natural protection and biodiversity conservation and contributed to institutional capacity building and strengthening of the responsible Ministry and its relevant departments (DOE, FD) to some extent. The entire third component was dedicated to providing institutional support, technical advice, training and capacity building to facilitate improved management of natural resources and enforcement of environmental regulations, although achievements were rated Moderately Satisfactory.

Mobilizing Private Sector Financing

44. The project did not directly support greater financing from the private sector although many private stakeholders (i.e. farmers and communities, as well as owners and managers of private lands in the KBAs) were to benefit from the project through the intended implementation of sub-projects and biodiversity-friendly management approaches, including small business development.

Poverty Reduction and Shared Prosperity

45. Poverty reduction was a focus of the project, including through the intended implementation of community sub-projects that were to support livelihood opportunities. In regard to the fire incident in the CRFR, the livelihoods of the affected farmers have been adequately restored in accordance with the requirements of the Bank's Indigenous Peoples and Resettlement Policies (as confirmed by interviews with both families during the ICR mission).

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

46. The project objectives were (and continue to be) highly relevant given the environmental, biodiversity and climate change challenges facing Belize and included multiple outcomes related to these issues. The objectives were aligned with the priorities of GEF-5 as well as the CPS 2012-2015; they also supported the Government's development and biodiversity strategies and plans.

47. *PDO focus and indicators*. The PDO was highly ambitious given institutional capacity constraints of the Government and within the responsible Ministry and could have reflected the project's emphasis on supporting forest protection and sustainable forest management more directly. Some PDO indicators were overly ambitious

and difficult to measure, while others focused more on outputs. Overall, the logical pathways linking activities to outputs/results, outcomes and the PDO were not clearly described. See also section IV.A.

48. *Project Preparation Grant* (PPG). While a PPG in the amount of US$120,000 was used to facilitate preparation of the project, PPG activities advanced slowly and some of the intended activities (e.g. technical studies to establish the project's baselines) were not fully achieved. PPG activities concluded on June 30, 2013.

49. *Project design*. Overall, project design was well intended but failed to be sufficiently tailored to the country context. Selection of project sites was based on sound criteria and agreed upon collaboratively between the FD, NPAS and PSC, and engagement of stakeholders (although involvement of indigenous peoples during project design could have been stronger). While the main design elements remain valid, the design was overly complex and could have benefitted from a narrower scope of activities[20]. Particularly in regard to the envisioned community sub-projects (under sub-components 1.2.a and 1.2.b), the project failed to take into account that implementation would require considerable local capacity and know-how. Additionally, activities under components 1 and 2 (led by the FD) were overlapping to some extent as they were both focused on effective management of natural resources. Component 3 (led by the DoE) appeared somewhat disjointed given its focus on environmental compliance and considering the overall amount of grant financing was rather small. The initial, planned sequencing of tasks and timing was appropriate (though was not followed during implementation) in that it focused on contracting consulting services (firms) to initiate assessments for the development of sub-projects, legal review and analysis (land tenure legislation, PAs legislation, Forest Act), equipment for compliance and monitoring, as well as training and capacity building.

50. *Risk assessment*. Overall, the project underestimated risks (particularly the high-risk social environment) and potential impacts of external factors that would ultimately impact successful project implementation. Just one *high* risk was identified in the PAD: the possibility that the proposed development of management plans for the targeted PAs would inadvertently affect the security of Mayan communities' land tenure. The risk that "community-based activities may take time to actually start implementation on the ground due to low capacity" (rated as moderate) was significantly underrated. In fact, many of the challenges facing the project stemmed from weak implementation capacity and limited commitment to achieving project results. For instance, the underlying assessments for the development of sub-projects were not completed until 2018 and the project failed to implement any sub-projects over its lifetime. The PAD also did not foresee the possible risks from mining activities in national parks, which were inconsistent with the objectives of the project, in the event of them being pursued. Risks related to the implementation arrangements, particularly decision-making processes involving the PSC and Technical Advisory Committee (TAC), which were cumbersome at times, were also not captured in the PAD.

B. KEY FACTORS DURING IMPLEMENTATION

Factors subject to government and/or implementing entities control, include:

51. *Commitment and leadership*: The project came about following a country-wide stocktaking and mapping exercise of NRM and climate resilience projects/activities in Belize (2012) as well as involvement of all departments and agencies in the design of project activities. Inception missions (in 2012 and 2013) indicate that the PSC, FD and

[20] The project's interventions covered wide-ranging areas such as sustainable forest management, biodiversity, ecosystem services, protected areas management, environmental policy, community-based development, small business development, marketing, risk management, carbon financing, ICT, communications, and knowledge management.

NPAS were engaged in defining priority areas for biodiversity conservation and it is clear that the project was timely and critically needed to enhance the country's capacity to manage its natural resources more sustainably. Signing of the GA took place around five weeks after Board approval of the project and the PIAG worked swiftly toward effectiveness (January 26, 2015). While the GoB supplemented the GEF grant with in-kind financing (*estimated: US$3.00 million, actual: US$2.66 million, including direct counterpart funding*), contribution from the technical departments was limited and overall commitment to project results could have been stronger. Commitment with respect to monitoring, project functions related to reporting and coordination across implementing agencies in regard to decision-making was generally modest. This can largely be attributed to frequent turn-over of project staff/consultants during the early stages of the project, each requiring a learning curve before fully getting familiar with the project, as well as limited capacity for project management, supervision and monitoring.

52. *Implementation structure.* The PAD established the PSC to provide strategic guidance and project oversight, as well as the TAC to provide technical guidance, which demonstrated committed participation of multiple agencies, including government and non-government. At the same time, this structure required first the TAC, and then the PSC to physically convene and review technical details such as terms of reference (TOR) and selection of consultants, leading to lengthy project related processes and transactions.[21] Efforts were made during the MTR to adopt rapid decision-making procedures and empower the PIAG, particularly the Project Manager, appropriately for day-to-day decisions. While this proved effective, the project was unable to catch up on the accumulated delays.

53. *Human resources and organizational capacity*: While activities for the first year of implementation were on track, the cascading effects of the election in November 2015 significantly impacted project activities and delayed implementation as there was a lack of technical staff and clarity regarding portfolio responsibilities. The new Ministry in charge of project implementation did not have all the necessary resources (staff, equipment, etc.) in place to cover project management costs[22]. In addition, the project manager had to be replaced in December 2015[23] (based on poor performance), at a time critical for advancing sub-projects, and then again in March 2017 when the Director of the National Protected Areas Secretariat (NPAS) assumed the position (first as Acting Project Manager and then permanently). In addition, capacity for fiduciary, environmental, and social aspects were constrained, and monitoring and evaluation proved to be inadequate (see discussion in section IV).

Factors subject to World Bank control, include:

54. The Bank team used US$0.27 million for preparation and US$0.32 million for supervision of this project, including travel and consultant costs. Implementation support was adequate in terms of regular missions, including some field visits (though attention to social safeguard risks could have been stronger from the outset) as well as fiduciary oversight. Detailed Implementation Status & Results Reports (ISRs) and Aide Memoires (AMs) were prepared and shared with the GoB and WB management, although internal project ratings were too optimistic at times and, as such, were not accompanied by adequate mitigation measures. Opportunities to build and sustain

[21] The PAD called for quarterly meetings of the PSC and meetings once every two months for the TAC. Special meetings would be convened on an as needed basis. Initially, the PSC and TAC met regularly to review TORs for planned activities and provide guidance on project implementation. CEO-level approval was required for some day-to-day decisions (e.g. purchase orders).
[22] The responsible Ministry repeatedly expressed concerns around the shortage of funds for project management (beyond the cap of five percent of the total grant set by the GEF), specifically to hire technical coordinators for the FD and DoE in lieu of their staff contributing as part of the PIU. This remained a constraint throughout the project lifetime. Based on experience with similarly complex projects in low capacity environments, it should be noted that project management costs commonly exceed 5 percent.
[23] The Technical Officer within the PIAG filled the position, initially in an acting capacity, and then through appointment in June 2016.

government ownership should have been identified. Instead, during the early stages, supervision focused on compliance with financial reporting, addressing institutional changes, and safeguard training. M&E requirements were reviewed (but results not actively used for decision-making) as part of the regular supervision missions, and other issues continued to dominate. Team composition could have reflected the high-risk social environment better. The Task Team Leader (TTL) of the project changed twice (once in June 2017 after a period of co-TTL-ship beginning in December 2015 and subsequently in September 2018 when a detailed hand over mission was conducted).

Factors outside of the control of government and/or implementing entities, including:

55. During implementation, the responsible Ministry changed from the Ministry of Forestry, Fisheries, and Sustainable Development to the Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development (MAFFESD) following the general election in November 2015 to reflect a government-wide reorganization of responsibilities for environmental protection. These shifts caused significant implementation delays in that portfolio responsibilities within the MAFFESD were only clarified in April 2016 and the PSC had to be re-constituted. Weak capacity in the technical departments as well as limited coordination by the responsible Ministry added to these delays.

56. The project came about following the Mayan land case tried in 2015 by the Caribbean Court of Justice, which reaffirmed that communities of southern Belize have rights to lands they customarily used and occupied. In the context of this historic decision, the fire incident in the CRFR (February 2017), which was unrelated to the project but nevertheless impacted project beneficiaries, consumed most of the PIAG's time and resources at a time critical for advancing project activities. Together, these factors seriously hindered the success of the project and compounded existing capacity challenges, limiting progress toward the PDO.

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

Rating: Negligible.

M&E Design

57. The set of PDO and Intermediate Results Indicators was aligned with the operational objectives and the GEF expected outcome "areas brought under enhanced biodiversity protection (hectares) in the targeted KBAs" (as measured by the GEF METT), as well as the relevant World Bank Core Sector Indicators (CSIs).[24] The PDO statement was organized around two interlinked outcomes. Part of the PDO could have been worded more concisely, i.e. to focus on improved forest protection and sustainable forest management rather than the broader "*strengthening natural resource management*". The RF was not particularly robust and did not include an appropriate and measurable set of indicators. It included four PDO level indicators and twelve intermediate results indicators (six linked to Component 1, four linked to Component 2, and two linked to Component 3), including the GEF Management Effectiveness Tracking Tool (METT). However, baseline values were not established (e.g. for "increase in management effectiveness of targeted KBAs" and "increase in local people with increased benefits from forests"). Moreover, some PDO indicators were output focused rather than measuring quality and uptake of results (e.g. number of "government institutions provided with capacity building"). A Grievance Redress Mechanism (GRM) was

[24] All four PDO indicators were "Core" indicators as per the World Bank's CSIs applicable at the time of Appraisal.

included to reflect the Bank's approach to strengthening grievance capacity but received little attention from the PIAG, although efforts were made to improve systematization and dissemination following the fire incident. Although the instruments were adequate, in principle, to report on project outcomes, weak capacity and limited attention to the M&E system proved to be severe constraints.

58. Shortcomings in the design, including weak linkage between some intermediate results and PDO outcomes, were not formally recognized until the MTR. Specifically, some indicators could have been more focused and concise ("forest management plans developed and implemented in the targeted forests" and "PA management plans developed and implemented in targeted areas"[25]), while others overlapped (e.g. "men and women engaged in sub-projects supporting sustainable harvesting and marketing of NTFPs in target areas" and "people in forest & adjacent community with monetary/non-monetary benefit from forest"; "government institutions provided with capacity building to improve management of forest resources", which was both a PDO-level indicator and intermediate indicator, albeit with different end targets). Some intermediate indicators ("increased sightings of target indicator species") could have been more qualitative to measure the improved quality of biodiversity (e.g. habitat health). In addition, there were discrepancies in indicator wording between the PAD and ISRs. Overall, there was a mismatch between the RF design and the ability of the project to monitor and report on the progress.

M&E Implementation

59. The PIAG's limited experience with Bank projects and environmental monitoring contributed to weak performance in reporting and analysis, data collection, and measuring of PDO indicators. Initially, the PIAG was compiling indicator data to be included in progress reports, however, limited capacity in project management, turn-over of PIAG staff, and the November 2015 election shifted attention elsewhere. Subsequent quarterly reports were delayed, and reporting remained sporadic at best.[26] While implementation support missions were carried out (and assessed progress against the RF), reporting on indicators could have been more consistent.[27]

60. The need to strengthen the M&E system and hire an M&E consultant to support the PIAG[28] was not fully recognized by the Bank until the MTR. At that point, efforts were made to revise the indicators and targets in line with the proposed adjustments to project activities and with a view toward streamlining and reducing the number of intermediate results indicators, but again Safeguard issues related to the mining activity took precedent. While the intention to address the M&E shortcomings is laudable, efforts were late and the project closed with the RF unchanged (however, the PIAG used the revised, but not formally restructured, RF for monitoring until project closing). Overall, M&E efforts of the project were not sufficient to properly collect data and consistently and accurately report progress on the RF and toward achievement of the PDO.

[25] Specifically, the project worked in two PAs (SCWS, CNP) for which a PA management plan was applicable, while the other four project sites were forest reserves (VFR, FCFR, MMFR, CRFR) that required a forest management plan (FMP). The RF end targets for the respective indicators referred to four FMPs and six PA management plans.
[26] During the project lifetime, an Annual Progress Report was submitted in April 2019 for 2018; a Final Project Implementation Report was received on January 30, 2020; and the GEF tracking tools were updated once, at project completion.
[27] E.g. the June 2016 ISR notes that the management plans for SCWF and VFR were completed, while the subsequent ISR notes that the management plan for VFR is underway. Similarly, "reforms in forest policy, legislation or other regulations supported" was marked as completed (Yes), based on approval of the NPAS and PACT Act by the Cabinet in November 2015, although the indicator referred to the review of the Land Tenure Act, which in fact was not completed. Results for "areas brought under enhanced biodiversity protection" were initially recorded based on hectares (number) rather than a percentage increase (based on the GEF METT).
[28] An international biodiversity monitoring specialist was hired in June 2018 to support implementation of activities related to biodiversity conservation.

M&E Utilization

61. M&E data were not adequately used to inform project management and decision-making. For instance, by the end of the first year of implementation, no M&E data was reflected in the ISR, and the M&E ratings did not fully reflect actual performance (e.g. the rating remained Satisfactory until June 2016 even though weaknesses in the existing M&E system had become clear). Up until December 2016, the ISR recorded that the project is still in the early stages of implementation despite being close to mid-term. Even following the MTR in April 2018, and despite findings of shortcomings, the rating for M&E remained Moderately Satisfactory and was only downgraded to Moderately Unsatisfactory in November 2018. Overall, the inadequacy of M&E efforts to properly report progress should have prompted a MTR sooner to reassess project design and activities based on available data (although it is recognized that the fire incident focused attention on safeguard issues).

Justification of Overall Rating of Quality of M&E

62. The overall rating for the quality of the M&E system is *negligible*. There were severe shortcomings in the design, implementation and utilization, including an underestimation of resource needs for M&E, a lack of capacity at the PIAG to fulfill M&E functions, and limited uptake of the M&E system for decision-making. Likewise, inconsistencies in the reporting of data existed at various levels. These weaknesses are making it difficult to assess the achievements of the stated objectives.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

63. **Overall Safeguard compliance** was rated Moderately Satisfactory throughout project implementation (based on moderately satisfactory ratings for the two social safeguards operational policies) except for a period in 2017 when the Overall Safeguards Rating was downgraded to Unsatisfactory due to non-compliance with the project's IRPF following the fire incident. The subsequent diligent handling of the resettlement case by the PIAG is to be commended. Although the fire incident affected project performance, the livelihoods of both families have been adequately restored in accordance with the RAAP and Bank policies. Following the fire incident, the Grievance Redress Mechanism (GRM), which had not been effective especially for persons in remote areas, was strengthened to ensure the PIAG is accessible by email, phone, and in-person.[29] Environmental safeguards ratings were Satisfactory throughout project implementation. The project was classified as environmental category B and triggered the following safeguards policies: Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), Pest Management (OP/BP 4.09), and Physical and Cultural Resources (OP/BP 4.11). An overall EMF was prepared and served as a guide for environmental management during project design and implementation. All sub-project investments were to be screened for environmental and social issues. Social Safeguard policies included: Indigenous Peoples (OP/BP 4.10), Involuntary Resettlement (OP/BP 4.12) and Projects under Disputed Areas (OP/BP 7.60). An Indigenous Peoples Framework, Involuntary Resettlement Policy Framework, and Livelihood Restoration Process Framework were prepared to address social risks. Mission findings were recorded in the Aide Memoires and support by the Bank's Environmental and Social Safeguard Specialists was provided remotely (during the initial project phase) and field visits (starting relatively late, in July 2017). An Environmental and Social Safeguards workshop was conducted from July 10-11, 2017 that offered a forum for discussion on long-term engagement with Maya, ongoing implementation of social safeguards, and the RAAP.

[29] The complaint from the Maya groups in the vicinity of the CRFR was not received through the project's GRM.

64. **Financial Management** was rated Moderately Satisfactory for most of project implementation, except for the initial rating of Satisfactory (between Approval and November 2015) and a period between December 2016 and November 2017 when the rating was Moderately Unsatisfactory. This was the result of initial challenges and delays related to the timely and accurate preparation of Interim Financial Reports (IFRs), in compliance with the Bank's requirements. While PACT[30] had a financial management system in place by December 2016, there continued to be issues related to proper establishment of the project's chart of accounts, adequate reviews and approvals of transactions posted to project accounts, timely reconciliation and addressing discrepancies between PACT records and Bank records on expenditures. An action plan was agreed with the Bank to address fiduciary challenges. The subsequent FM support missions (Nov 28-29, 2017 and April 3-5, 2018) confirmed that all recommendations of the action plan were efficiently addressed due to the efforts and good work performed by PACT's FM team. All outstanding IFRs were submitted and the audited financial statement for the FY ending March 31, 2017 was deemed satisfactory. While FM performance continued to be rated as Moderately Satisfactory for the remainder of the project, the final project audit for September 30, 2019 resulted in an unmodified (clean) opinion on the project financial statements, which is evidence of the built capacity of PACT.

65. **Procurement** was rated Moderately Satisfactory, beginning in June 2016 for the duration of the project (downgraded from an initial Satisfactory rating). Procurement processes were implemented based on the applicable guidelines at the time of project appraisal.[31] A dedicated Procurement Officer joined PACT in August 2014 and functioned as the fiduciary agent for preparing and implementing the Procurement Plan. While procurement support was provided remotely by the Bank, supervision missions and training could have been more frequent from the outset (an initial visit took place on August 19, 2015 and fiduciary training was provided in May 2016, and then again in May 2018) given limited prior experience of the PIAG and PACT with Bank procurement. Processing of selections and managing contracts proved to be challenging. In addition, the project faced low participation of bidders and consultants in some procurement/selection processes that contributed to implementation delays. In late 2016, thresholds for prior review were adjusted so that most procurement items were subject to post review, although significant support was still needed by the PIAG. During 2017-2018, the project transitioned into the Bank's new Procurement Framework, including preparation of a Project Procurement Strategy for Development (PPSD), and PACT received training on the Bank's Systematic Tracking of Exchanges in Procurement (STEP) in January 2018. Following the MTR, an updated procurement plan was prepared to focus on implementation of key activities for the remainder of the project. The last post review was conducted on June 26, 2019 and found that activities were carried out in compliance with arrangements agreed in the Project and Legal Agreement as well as the Bank procurement guidelines. There were no relevant issues on the reviewed contracts and capacity of PACT's procurement specialists was adequate, again showing evidence of built capacity.[32]

C. BANK PERFORMANCE

Rating: Moderately Unsatisfactory.

66. Overall Bank performance is rated moderately unsatisfactory reflecting significant shortcomings in Quality at Entry and Supervision. Specifically, the project design was overly ambitious given the available amount of funding

[30] The Protected Areas Conservation Trust (PACT), as part of the PIAG, was responsible for fiduciary management of the project.
[31] "Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers" (dated January 2011, revised July 2014) and "Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers" (dated January 2011).
[32] Since the beginning of the project until June 20, 2019, 38 contracts were reported by PACT being subject to post-review by the Bank.

and failed to fully recognize the local context and related capacity constraints (some of which was signaled by the slow implementation of the PPG). Implementation challenges were compounded by external events and social challenges that were not adequately captured in the project risk ratings. During implementation, there was a lost opportunity to more effectively use adaptive project management in response to evolving circumstances of the country (as evidenced by the late MTR). Finally, there was a disconnect between some of the ISR ratings and limited progress on disbursement.

Quality at Entry

67. The project built on technical assistance to provide a platform for coordinating and prioritizing NRM and climate resilience interventions in Belize, as per a request by the GoB and was one of several projects part of Belize's portfolio at the time, including external financing from the JSDF, the Adaptation Fund and the European Union. The project was strategically relevant, addressing significant shortcomings in the management of natural resources in Belize as well as capacity constraints (relevant within the context of the CPS). Preparation was lengthy, taking over 28 months from the Concept Review (May 2012) to Board Approval (September 2014).[33] The project's comprehensive approach – a combination of forest fire response, PAs management, EIA process and capacity building – while based on sound ecological analysis and stakeholder consultations, was ambitious and too complex given the project scope, available funding, and government capacity. While the Bank mobilized a team with adequate skills for project appraisal, the design could have benefited from a forestry specialist to ensure forest fire interventions would be focused on the most effective approaches.[34] There were shortcomings in the M&E design, as discussed earlier. Support for mitigating social risks was underestimated and there could have been more attention on social safeguards from the project outset.[35]

Quality of Supervision

68. While the Bank regularly supervised project implementation through support missions (nine missions over the lifetime of the project to review progress and identify key issues including those that needed management attention), the approach was largely reactive. However, fiduciary supervision included strong support initially to ensure IFRs complied with Bank requirements. There was a recognition (not until June 2016) that Bank supervision on social safeguards would need to be strengthened and attention was paid to enhancing safeguards capacity and reporting of the PIAG, particularly in relation to the KBA activities (for community mobilization, social assessment, and application of social safeguard documents). Bank supervision in response to the fire incident was adequate, as evidenced by the subsequent assessment of damages and resettlement restructuring.

69. At the same time, initial project ratings of overall Implementation Progress (IP) and progress toward achievement of the GEO remained "satisfactory" despite limited progress and disbursements in the initial years (16 percent by June 2016, when IP and GEO ratings were downgraded to "moderately satisfactory"). While the MTR was thorough, it did not take place until the fourth year of implementation when bottlenecks and delays had further accumulated. A more proactive approach (e.g. a comprehensive restructuring of project design, results, and objectives at the time of the first restructuring and a greater focus on activities that would not only create some aspects of the enabling environment but also contribute to overall outcomes), particularly in response to slow

[33] The GA for the PPG was signed on October 24, 2012 and closed on December 4, 2013.
[34] Bank experience has shown that a focus on prevention activities (e.g. awareness raising, early warning and fire danger rating systems, communications systems, and working with communities to respond to fires) is critical for effective forest fire management.
[35] The Implementation Support Plan in the PAD foresaw only 1 staff week and 1 trip for social development per year.

disbursement, could have mitigated implementation delays and limited progress earlier. Overall, project ratings could have been more candid to reflect the limited progress and numerous challenges facing the project prior to the MTR[36]. The subsequent decision not to proceed with restructuring and to close the project was justified given the "moderately unsatisfactory" project rating and the emerging mining issue, which further stalled implementation. The team is to be commended for developing an action plan that prioritized completion of activities that would maximize project achievements.

Justification of Overall Rating of Bank Performance

70. Based on the Quality at Entry and Supervision, the overall Bank performance is rated *moderately unsatisfactory* reflecting significant shortcomings as described above.

D. RISK TO DEVELOPMENT OUTCOME

71. It is recognized by the GoB and the Bank that the project did not achieve its development objectives. The project experienced significant challenges related to technical capacity, fiduciary aspects, safeguard compliance, M&E and project management (including insufficient budget allocated for the PIAG), which were compounded by the inherent complexity of project design for NRM and community-driven approaches and a lack of experience of the PIAG with Bank projects. Despite these shortcomings, there is evidence that in some regards, the project has contributed to creating the enabling environment for improved natural resource management and biodiversity conservation (e.g. creation of FIRTTs to improve forest fire response; deployment of a FMIS and EIS to improve capacity for decision-making; increased knowledge on biodiversity (e.g. jaguars) through procurement of monitoring equipment; assessments to identify opportunities for community-based livelihood sub-projects). As with all development projects, there is a risk related to uncertain financing after project closure to maintain and build on the achievements. Sustainability will also depend on future institutional strengthening of the FD, DOE, PACT and other relevant institutions. Some of the project interventions (e.g. providing training on REDD+ and carbon estimation to the FD) are being implemented as part of the Bank-supported FCPF REDD Readiness Preparation Project.

72. Insecure land tenure and land acquisition rights present challenges and risks to development outcomes. Project activities related to examining existing requirements for land clearing within the legal structure were not addressed given political sensitivities. In this context, the importance of re-engaging with indigenous communities to sustain results and ensure management plans are jointly prepared with buy-in from local communities remains critical (the REDD+ Project is continuing some of these efforts). Until the land tenure system, legislation and actual registration of boundaries is clarified, sustainability in managing and supervising the implementation of management plans will continue to be difficult to achieve.

73. Overall, there is commitment by the GoB more broadly to the objectives of the project as evidenced by the on-going Marine Conservation and Climate Adaptation project (aimed at implementing priority ecosystem-based marine conservation and climate adaptation measures to strengthen the climate resilience of the Belize Barrier Reef System) and the REDD+ Project (aimed at assisting Belize in carrying out a participatory and inclusive process in order to strengthen their capacity to participate in future REDD+ carbon payment transactions).

[36] E.g. the *Political and Governance* risk category remained "low" and the risks from the resulting institutional changes were considered minimal; *Institutional Capacity for Implementation and Sustainability* was rated "moderate" despite weak capacity of the PIAG, and downgraded only in December 2017; the rating for *Monitoring and Evaluation* only changed to "moderately unsatisfactory" in November 2018, despite earlier indications of insufficient efforts to properly report progress on the RF.

V. LESSONS AND RECOMMENDATIONS

Operational

74. **Adequate technical support and adaptive project management are critical for successful project design and implementation.** Project team composition should match the technical substance and project design as well as the risk portfolio. Noting the complexity, scope and risks of the project, additional expertise (in particular related to forestry and social issues) would have benefited the project design and strengthened implementation support. In addition, a more adaptive approach to project management (e.g. close monitoring of disbursement rates; utilization of the M&E system) would have allowed for timely changes to project design and objectives in response to evolving circumstances of the country. While a comprehensive mid-term evaluation was conducted that provided sensible recommendations on a way forward in light of the challenges faced by the project, there was a missed opportunity given the late timing of the MTR.

75. **Appropriate capacity at the PIU and sufficient project management funding need to be ensured throughout the project lifetime.** Project management (including supervision and M&E capacity) and technical capacity are linked but separate skill sets, both of which need to be adequately staffed to ensure delivery of expected outputs and outcomes. In addition, sufficient resources and time should be identified and subsequently allocated for project management functions, along with a streamlined decision and review process, to maximize the extent to which project objectives can be achieved. Noting the shortcomings in available project management funding and/or capacity constraints, proactive measures should be taken including, but not limited to, additional capacity development efforts and appropriate levels of counterpart co-financing that could help overcome challenges. At the project portfolio level, addressing systemic capacity issues (e.g. through the creation of a Implementation Support Team across Bank-supported projects) could allow for greater implementation readiness.

Technical

76. **The ambition in terms of project design and objectives need to be aligned with implementation readiness and the level of funding.** Strengthening NRM and biodiversity conservation is complex and takes time, while direct investment support to communities can be effective but requires considerable capacity from local stakeholders. Though the project design was well intended, the level of ambition was not commensurate with the country context or level of funding available. Particularly in regard to community-based sub-projects, project design needs to be tailored to local circumstances and accompanied with extensive capacity building efforts, especially during the preparation and start-up phases of the project. Furthermore, a chronological mapping of the project's critical path for the entire implementation period could have been helpful to visualize the sequence of activities and potential implementation bottlenecks to ensure timely delivery of multiple results and outcomes. Likewise, baseline mapping and analytical work to identify sub-project opportunities should be prioritized along with adequate monitoring and reporting systems, including a set of measurable indicators need to be in place from the outset, to assess progress in achieving the intended project outcomes.

77. **Strong safeguard instruments, including a functioning grievance redress mechanism, can provide effective and transparent means for mitigating unforeseen environmental and social impacts.** The application of the safeguard policies, especially social safeguards related to the fire incident, proved effective and elevated the importance of adhering to Indigenous Peoples and Resettlement policies in Belize. While the incident itself was unrelated to the project activities, the GoB launched a serious effort to restore the livelihoods of the two affected

Maya families and engaged with the village leaders, the Maya Leader's Alliance (MLA) and the Toledo Alcaldes Association (TAA), which contributed to a strengthening of relationships. While the resettlement and compensation process compounded other challenges facing the project, it also prompted improvements in the project GRM to ensure that future complaints would reach the PIAG.

Governance

78. **Effective and continuous stakeholder engagement and consultations are critical for the success of sustainable natural resource management.** The outcomes of the project were largely linked to effective stakeholder involvement (e.g. implementation of community-based sub-projects; adequate participation of indigenous groups in the preparation and implementation of management plans). This was also linked to the need to re-establish the relationship with the Maya communities and build the necessary consensus on the way forward. Some stakeholders were unaware of the KBAs project and expressed unwillingness to participate in the assessment of priority rehabilitation and resilience opportunities. While the project produced impressive public awareness materials on SFM, it could have more fully engaged co-managers of PAs in the KBAs. Future efforts should focus on participatory approaches and ensuring continuous and meaningful stakeholder consultations, which would in turn help build ownership and also improve the project's resilience to external factors that may impact implementation.

79. **Government ownership of project processes at all levels is indispensable and should be balanced with the need for timely delivery of project results and outcomes.** Identifying, building and sustaining strong commitment and ownership of government is a process that requires continued attention, including from the Bank's side. Political and institutional support by key ministries and government departments, as well as ownership by technical and project management staff is needed for successful implementation. The role of the PSC and TAC in the project is evidence of institutionalized decision-making, drawing in expertise from across the government. This structure also contributed to quality assurance, although its rigorousness contributed to delays in the implementation as well. Streamlining and prioritizing sustainable forest management and biodiversity conservation in national government programs can, in the long-term, better position relevant ministries and government institutions to receive budgeted and sustained funding for planning, implementation, monitoring and enforcement activities.

ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Strengthen natural resource management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Forest area brought under management plans	Hectare(Ha)	0.00 29-Sep-2014	106557.00 29-Sep-2014		16366.70 30-Sep-2019

Comments (achievements against targets):
Partially achieved (15%). This indicator relates to PDO outcome (1) strengthen natural resource management. It measures the forest land area brought under management plans through the project and covers the finalization of the Vaca Forest Reserve (VFR) Management Plan (16,366.70 hectares). Data source: Project documentation and VFR Management Plan, delivered and verified by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
People in forest&adjacent community with monetary/non-monetary	Percentage	0.00 29-Sep-2014	50.00 29-Sep-2014	0.00	0.00 30-Sep-2019

benefit from forest					
People in forest and adjacent community with benefits from forest-female	Percentage	0.00 29-Sep-2014	0.00 29-Sep-2014		0.00 30-Sep-2019
People in forest&adj. commy with benefit from forest-Ethnic minority/indigenous	Percentage	0.00 29-Sep-2014	0.00 29-Sep-2014		0.00 30-Sep-2019

Comments (achievements against targets):
Not achieved (0%). This indicator relates to PDO outcome (1) strengthen natural resource management. It measures the extent to which local people see improved livelihood due to the project. However, the implementation of community-based sub-projects was deferred by the PSC in 2016 to await the results of two essential consultancies: the "Assessment of the Key Biodiversity Areas to Identify Opportunities for Sustainable Harvesting and Marketing of Non-Timber Forest Products and other Community-based forestry Initiatives" and the "Assessment of the Key Biodiversity Areas to Identify Priority Rehabilitation and Resilience Opportunities for Community-Based Sub-Projects" (both completed in September 2018). No baseline survey was conducted. The end target values for disaggregated data (by gender and ethnicity) were not defined in the RF and hence no values are entered under the original target. No sub-projects were launched during the project lifetime. Data source: Project progress report, and final reports of the consultancies, delivered by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Govt institutions provided w/ capacity buildg to improve mgt of forest resources	Number	0.00 29-Sep-2014	4.00 29-Sep-2014		7.00 30-Sep-2019

Comments (achievements against targets):
Achieved (175%). This indicator relates to PDO outcomes (1) strengthen natural resource management and (2) strengthen biodiversity conservation. It was part of the Core Sector Indicators at the time of Appraisal. Capacity building was provided to the following institutions: Forest Department, Belize Defense Force, Police, Department of the Environment, as well as the responsible Ministry, the National Environmental Assessment Committee and the National Protected Areas Secretariat. Data source: PIAG, progress reports, ISRs.

Objective/Outcome: Strengthen biodiversity conservation

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Areas brought under enhanced biodiversity protection (ha)	Percentage	0.00 29-Sep-2014	60.00 29-Sep-2014		20.80 30-Sep-2019

Comments (achievements against targets):
Partially achieved (35%). This indicator relates to PDO outcome (2) strengthen biodiversity conservation. It measures establishment and/or improving existing management systems for targeted PAs, using the GEF Management Effectiveness Tracking Tool (METT). Specifically it captures the percentage increase in METT score, which show the following results for: Freshwater Creek Forest Reserve (initial score: 22 / final score: 81); Spanish Creek Wildlife Sanctuary (initial score: 22 / final score: 37); Vaca Forest Reserve (initial score: 26 / final score: 30); Maya Mountain Forest Reserve (initial score: 22 / final score: 55); and Columbia River Forest Reserve (initial score: 44 / final score: 37). For Chiquibul National Park, which was excluded from the project areas following the mining incident, the final score was 71, compared to the initial score of 27. Overall, the results of the METT show that the average increase (not including Chiquibul National Park) is 20.8 percent. Data source: GEF Tracking Tool for Biodiversity Projects / METT Scores calculated and delivered by the project's Biodiversity Monitoring Coordinator (international consultant) based on records and status of PAs and Forest Reserves.

A.2 Intermediate Results Indicators

Component: Component 1: Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Reforms in forest policy, legislation or other regulations supported	Yes/No	N 29-Sep-2014	Y 29-Sep-2014		N 30-Sep-2019

Comments (achievements against targets):
Not achieved (0%). This indicator relates to PDO outcome (1) strengthen natural resource management. Specifically, it pertains to a review of the land tenure legislation that requires to clear forested land and the submission of the final draft amendment. The project decided not to pursue this activity and the Annual Plan of Operation (APO) for 2018 reallocated some funds to be used for fire protection activities instead. However, this activity is being supported under the REDD+ project, which includes a national land tenure assessment (based on the review of existing data and information) with a focus on the Toledo District. Data source: project documentation, Project Implementation Final Report, provided by the PIAG, Mid-Term Evaluation Report.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
At least 50 people trained and equipped in enforcement and forest fire reduction techniques	Number	0.00 29-Sep-2014	50.00 29-Sep-2014		136.00 30-Sep-2019

Comments (achievements against targets):
Achieved (272%). This indicator relates to PDO outcome (1) strengthen natural resource management. Estimating the number of people trained was difficult to forecast during project preparation - hence the underestimation of actual number of people trained. In total, 136 staff of the Forest Department and other stakeholders (including community forest groups) received training which covered: basic fire management and fire behavior, basic first aid and CPR, sustainable forest management, permanent sample plot establishment and measurement, and utilization of salvageable forest material. Data source: Meeting minutes and Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Forest Management Plans developed and implemented in the targeted forests	Number	0.00 29-Sep-2014	4.00 29-Sep-2014		1.00 30-Sep-2019

Comments (achievements against targets):
Partially achieved (25%). This indicator relates to PDO outcome (1) strengthen natural resource management. It pertains to the four forest reserves (VFR, FCFR, MMFR, CRFR) that required a forest management plan. The actual achieved value refers to the VFR Management Plan developed under the project. Data source: VFR Managment Plan, Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Area restored or	Hectare(Ha)	0.00	3425.00		0.00

re/afforested		29-Sep-2014	29-Sep-2014		30-Sep-2019

Comments (achievements against targets):
Not achieved (0%). This indicator relates to PDO outcome (1) strengthen natural resource management. It was linked to implementation of sub-projects by communities who would have rehabilitated areas of high conservation value through community-based activities. No sub-projects were implemented as part of the project. Data source: project documentation, Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Men and women engaged in Sub-projects supporting sustainable harvesting and marketing of NTFPs in target areas	Percentage	0.00 29-Sep-2014	50.00 29-Sep-2014		0.00 30-Sep-2019

Comments (achievements against targets):
Not achieved (0%). This indicator relates to PDO outcome (1) strengthen natural resource management. It would have counted the number of men and women engaged in sub-projects supporting sustainable harvesting and marketing of NTFPs in target areas. Only the underlying assessment, but not the actual sub-projects were undertaken during the project lifetime. Data source: project documentation, Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised	Actual Achieved at

				Target	Completion
2.5 M mt CO2e due to avoided emissions and/or increased sequestration	Metric ton	0.00 29-Sep-2014	2500000.00 29-Sep-2014		0.00 30-Sep-2019

Comments (achievements against targets):
Not achieved (0%). This indicator relates to PDO outcome (1) strengthen natural resource management. It refers to on-the-ground verification using 28 Permanent Sample Plots. While the project supported the establishment of 10 new PSPs and the re-measurement of 10 existing PSPs, on-the-ground verification was pending at the time of project closing and no verified value (or baseline) has been provided. Data source: ICR mission, project documentation, Project Implementation Final Report, provided by the PIAG.

Component: Component 2: Promoting Effective Management of Key Biodiversity Areas

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Establishment of clear procedures and criteria for the declaration, re-alignment and de-reservation of PAs	Yes/No	N 29-Sep-2014	Y 29-Sep-2014		N 30-Sep-2019

Comments (achievements against targets):
Not achieved (0%). This indicator relates to PDO outcome (2) strengthen biodiversity conservation. The activity was initially delayed and subsequently not implemented. Data source: Project Mid-Term Evaluation, Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Six (6) PA management plans developed and implemented in the targeted areas	Number	0.00 29-Sep-2014	6.00 29-Sep-2014		1.00 30-Sep-2019

Comments (achievements against targets):

Partially achieved (33%). This indicator relates to PDO outcome (2) strengthen biodiversity conservation. It pertains to the number of management plans developed and implemented in the six target areas. The MTR determined that the end target for this indicator should have been two (2) as there are only two Protected Areas (SCWS, CNP) to which a PA management plan is applicable. The actual achieved end value refers to the Management Plan for SCWS (2016-2021) that was developed under the project. Although the project updated the CNP MP, the matter of the mining activity resulted in the CNP to be excluded from the project areas, and hence this activity did not as such contribute to the outcome indicator. Data source: Project Mid-Term Evaluation, project documentation, Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
The 2005 National Protected Areas System Plan (NPASP) updated to incorporate climate change mitigation and resiliency measures	Yes/No	N 29-Sep-2014	Y 29-Sep-2014		N 30-Sep-2019

Comments (achievements against targets):

Not achieved (0%). The indicator refers to submission for endorsement of the updated NPASP to relevant authorities. While the project supported the updating and awareness raising of the NPASP, climate mitigation and resilience considerations have not been incorporated as part of this project. Source: Mid-Term Evaluation, project documentation, Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Increased sightings of target indicator species	Percentage	0.00 29-Sep-2014	20.00 29-Sep-2014		0.00 30-Sep-2019

Comments (achievements against targets):
Not achieved (0%). This indicator refers to the percentage of increased sightings of target species (white-lipped peccary in FCFR, VFR, MMFR and CRFR; Central American River Turtle in SCWS; and scarlet macaw in CNP). There is no baseline or quantitative measure of the outcome. While biodiversity information was gathered towards the end of the project (via camera trap surveys within 4 of the project sites), not enough data has been collected during the project lifetime to determine the status of wildlife populations. Data Source: ICR mission, project documentation, Project Implementation Final Report, provided by the PIAG.

Component: Component 3: Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
The EIA Program revised and	Yes/No	N	Y		Y

the EIA Manual updated and endorsed		29-Sep-2014	29-Sep-2014		30-Sep-2019

Comments (achievements against targets):
Achieved (100%). This indicator refers to the EIA Program being revised and the EIA Manual being updated and endorsed. The project supported revising the EIA process and updating the EIA Manual to establish qualitative and quantitative criteria to standardize who can conduct EIAs, including guidelines and methodologies to measure impacts, mitigation measures, and monitoring across EIA reports. It also defined roles and responsibilities of the NEAC and other key agencies in the EIA process and reviewed and developed amendments to Belize's Environmental Impact Assessment Regulations to include other environmental tools and processes. Data source: ICR mission, Mid-Term Evaluation, Project Implementation Final Report, provided by the PIAG.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Govt institutions provided w/ capacity buildg to improve mgt of forest resources	Number	0.00 29-Sep-2014	20.00 29-Sep-2014		25.00 30-Sep-2019

Comments (achievements against targets):
Achieved (125%). This indicator refers to 20 staff in key agencies (DOE) trained and equipped with better assessment and compliance monitoring tools and capacities. DOE staff received training in topics including environmental compliance monitoring (ISO14001 and ISO17020 standards), prosecutorial and court processes, trial preparation and advocacy. Data source: Project Implementation Final Report, provided by the PIAG.

B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1: to strengthen natural resource management	
Outcome Indicators	#1 Forest brought under sustainable forest management plans in targeted area #3 People in targeted forests and adjacent communities with increased monetary or non-monetary benefits from forests #4 Government institutions provided with capacity building support to improve management and compliance monitoring of forest resources and environment
Intermediate Results Indicators	– Reforms in forest policy, legislation or other regulations supported – Review of the land tenure legislation that requires to clear forested land – At least 50 people trained and equipped in monitoring, compliance and forest fire reduction techniques – High conservation value areas rehabilitated via community-based activities – Men and women engaged in Sub-projects supporting sustainable harvesting and marketing of NTFPs in target areas – Four (4) forest management plans developed and implemented in the targeted forests – 2.5M Mg CO2e due to avoided emissions and/or increased sequestration – 20 staff in key agencies trained and equipped with better assessment and compliance monitoring tools and capacities
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	**Component 1 – Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas:** – Prepared work plan for one (1) National Fire Incidence Rapid Response Team (FIRRT) / community fire brigade (comprised of 5-6 community volunteers) in Southern Belize to address forest fires, surrounding the MMFR and CRFR – Purchased firefighting equipment and tools (1 mobile 100-gallon water tank; 1 water pump and 1 hose with 2-inch diameter; 1 ATV) and protective gear for FIRRT – Trained 49 persons (including representatives of DOE, FD, Agriculture department, Ya'axché Conservation Trust, Ranger Unit Belize) in enforcement and basic fire management and fire behavior (May 2016) (including field portion at the Doulgas D'Silva Forest Station in Mountain Pine Ridge, Cayo District); 18 FD personnel and employees from 2 resident lodges in Mountain Pine Ridge in basic fire management (February 2017); 11 staff

	of the Douglas D'Silva Forest Station in basic first aid and CPR (February 2017); 11 community members, NGO (Belize Audubon Society) and FD personnel in basic fire management (March 2019) – Conducted "Assessment of the Key Biodiversity Areas to Identify Priority Rehabilitation and Resilience Opportunities for Community-Based Sub-Projects" with a focus on sustainability and economic opportunities (providing the evidence base and foundation for the potential implementation of sub-projects) – Conducted "Assessment of the Key Biodiversity Areas to Identify Opportunities for Sustainable Harvesting and Marketing of Non-Timber Forest Products and other Community-based forestry initiatives" in the six KBAs (providing the evidence base and foundation for the potential implementation of sub-projects and feeding into the process for the development of the National Agroforestry Policy) – Developed Resettlement Audit and Compensation Plan (RACP) and compensated CRFR farmers (affected by the fire incidence) as per the validated RACP – Carried out Knowledge, Attitude and Practices (KAP) survey on awareness on sustainable forest management (2016) – Prepared draft Forest Fires Communication Strategy and presented for review to FD and other key stakeholders – Prepared and nationally launched Sustainable Forest Management Communication Strategy and Implementation Plan (January 2018) – Completed analysis of information management needs and design of Forest Management Information System (FMIS) for the FD (December 2016) – Deployed Forest Information System (FIS) for data and information on forests, wildlife and PAs, hosted at Belize's Central Information Technology Office (CITO) on a 1-year pilot basis and connecting all FD offices – Developed 5-year Forest Management Plan (FMP) for Vaca Forest Reserve to facilitate improved management of the reserve (identified interest from Friends for Conservation and Development and farmers to co-manage the reserve) – Established 10 new Permanent Sample Plots (PSPs) in different forest types and ecosystems, expanding plots into PAs to collect data, which has fed into FRL for Belize – Provided training to 18 FD personnel on establishment and re-measurement of PSPs (June 2018) as well as on Annual Plan of Operation (APO) preparation and on SFM to 29 forestry officials including stakeholders from a community forest group – Re-measured 10 existing PSPs (2018 and 2019) **Component 3 – Institutional Strengthening & Capacity Building for Enhanced Enforcement of Environmental Regulations** – Provided training to 15 DOE staff (including hydrology unit as well as Bureau of Standards)

	to strengthen compliance monitoring capacity on ISO14001 and ISO17020 standards (environmental management courses) – Purchased equipment to monitor water quality (sample bottles, calibrating reagents, GPSs, cameras, range finders, ice coolers, water quality field testing device, boat) that facilitated improved response by DOE to severe drought incident in Orange Walk in 2019 – Developed a National Water Quality Monitoring Program and Protocol with input from stakeholders, currently being implemented by DOE in New River and contributing to updating the National Water Quality Monitoring Plan – Developed guidelines on how to develop a pilot project to strengthen water quality monitoring in KBAs – Completed assessment of Environmental Clearance Process (ECP) that contributed to amendment of the Environmental Clearance Regulation (August 2017) – Purchased equipment to strengthen ECP (4 pick-up trucks, 1 van for DOE) – Identified methodologies to gather data for use in EIAs and Limited Level Environmental Studies to support establishment of standardized and improved EIA process and enhance quality and comparability of EIAs – Conducted analysis of information management needs and designed and fully implemented Environmental Information System (EIS) for DOE to improve capacity for decision-making in the EIA process – Developed Procedural Manual for the NEAC as well as National Public Involvement Plan to improve capacity for public consultations
Objective/Outcome 2: to strengthen biodiversity conservation	
Outcome Indicators	#2 Area brought under enhanced biodiversity protection (ha) in the targeted KBAs #4 Government institutions provided with capacity building support to improve management and compliance monitoring of forest resources and environment
Intermediate Results Indicators	– Establishment of clear procedures and criteria for the declaration, re-alignment and de-reservation of PAs – Six (6) PA management plans developed and implemented in the targeted areas – The 2005 NPASP updated to incorporate climate change mitigation and resiliency measures – Increased sightings of target indicator species – 20 staff in key agencies trained and equipped with better assessment and compliance monitoring tools and capacities – The EIA Program revised and the EIA Manual updated and endorsed
Key Outputs by Component	**Component 2 – Promoting Effective Management of Key Biodiversity Areas (KBAs)**

(linked to the achievement of the Objective/Outcome 2)	While evaluation of NRM projects is inherently complex, the following project interventions provided the building blocks and evidence base for promoting effective management of KBAs – Developed management plan for Spanish Creek Wildlife Sanctuary (SCWS) and demarcated boundary lines for SCWS (including preparation of maps) – Updated Chiquibul National Park (CNP) Management Plan and conducted conservation target viability assessment workshop for CNP (removed from project activities after the mining incident) – Procured hardware and software for the full implementation of the FIS and EIS, providing the basis for the development of a PA GIS database – Developed and broadcast advertisement on major radio and television stations to create greater public awareness of the National Protected Areas System Plan (NPASP), including 300 hard copies of the NPASP for distribution – Partially updated the Forest Act to improve effectiveness and compliance and enforcement and completed assessment of forestry standards – Finalized Compliance Monitoring Strategy for the FD (March 2017) – Procured 3 pick-ups, 1 vehicle and 1 four-wheel drive vehicle to support compliance and monitoring activities of FD – Established Compliance and Monitoring Unit under FD, which is fully functioning with 1 coordinator and 4 rangers, contributing to prevention of illegal activities in Pas – Trainings conducted on a wide range of issues, including green laws (85 participants), SMART (34 FD personnel), prosecutorial and court processes (25 staff from DOE and FD), trial preparation and advocacy (6 staff from DOE and FD); 54 rangers trained and sworn in as Special Constables – Completed Institutional, Technical and Capacity Needs assessment for a National Wildlife Monitoring Data Warehouse Solution – Purchased and distributed field equipment among key stakeholders to assist with biodiversity monitoring within targeted KBAs (FCFR, SCWS, VRF, MMFR), including camera traps that have led to knowledge gathering and data, particularly on jaguars – Biodiversity monitoring surveys undertaken in targeted KBA, including monitoring training for the Central American River turtle in the Spanish Creek Water System; information incorporated into FIS – Training provided to FD staff for the safe capture of jaguars, pumas, tapirs, and white lipped peccary, including safe deployment of GPS collars for improved biodiversity monitoring **Component 3 – Institutional Strengthening & Capacity Building for Enhanced Enforcement of Environmental Regulations**

	– See above under Objective/Outcome 1. Many of the activities under component 3 (support of strengthening compliance monitoring capacity of the DOE staff and other key agencies as well as improving the EIA process) also provide the building blocks and necessary skills and capacities to contribute to strengthened biodiversity conservation.

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Enos E. Esikuri	Task Team Leader(s)
Yingwei Wu	Procurement Specialist(s)
Anjali Acharya	Social Specialist
Kimberly Vilar	Social Specialist
Tuuli Johanna Bernardini	Social Specialist
Victor Bundi Mosoti	Social Specialist
Supervision/ICR	
Maja Murisic	Task Team Leader(s)
Enos E. Esikuri	Task Team Leader(s)
Keiko Ashida Tao	Task Team Leader(s)
Joao Guilherme Morais de Queiroz	Procurement Specialist(s)
Moad M. Alrubaidi	Financial Management Specialist
Ruth Jo Goorman	Team Member
Nyaneba E. Nkrumah	Environmental Specialist
Patricia Rodrigues de Melo	Team Member
Tatiana Cristina O. de Abreu Souza	Team Member
Jacqueline Beatriz Veloz Lockward	Counsel
Christopher Mays Johnson	Social Specialist
Nina Rinnerberger	ICR Contributing Author
Juan Jose Miranda Montero	ICR Contributing Co-Author

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US$ (including travel and consultant costs)
Preparation		
FY12	8.500	35,261.02
FY13	23.472	102,047.14
FY14	21.185	85,654.40
FY15	12.195	46,689.89
Total	**65.35**	**269,652.45**
Supervision/ICR		
FY15	11.020	43,144.76
FY16	6.982	31,190.79
FY17	22.680	102,640.70
FY18	13.378	72,442.04
FY19	11.158	67,666.33
FY20	13.775	86,571.07
Total	**78.99**	**403,655.69**

ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US$M)	Actual at Project Closing (US$M)	Percentage of Approval (US$M)
Component 1: Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas	2.18	0.85	39%
Component 2: Promoting Effective Management of Key Biodiversity Areas	2.59	1.45	56%
Component 3: Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations	1.00	0.85	85%
Component 4: Project Management, Monitoring and Assessment	0.31	.40	129%
Total	**6.08**	**3.55**	**58%**

ANNEX 4. EFFICIENCY ANALYSIS

Project Context: The Management and Protection of Key Biodiversity Areas in Belize (KBA) Project was identified and designed to assist Belize to address challenges in protecting its forest cover and unique biodiversity amid increasing levels of economic hardships, natural disasters and rising deforestation.

A classic economic and financial analyses (e.g., cost-benefit or cost-effectiveness) was not conducted at closing, given the project implementation limitations, country conditions, and substantial data constraints. While at appraisal a cost-benefit analysis was conducted, the benefit streams considered (decreased deforestation and illegal wildlife harvesting, protection of KBA forest resources through fire protection, and restoration of degraded sites through reforestation) are inappropriate at closing since important activities were not carried out during project implementation. For instance, the Project only brought 15 percent of has of forest under sustainable management, and local people did not benefit from the project since no sub-projects were implemented.

Project Performance Analysis:

Overall project expenditures: The PAD estimated a total project cost at appraisal of around US$6.09 million, however, the KBA project total expenditures were around 58 percent of initial allocation (US$3.55 million), and actual administrative costs were estimated at 11 percent of total project funding (US$0.40 million). More importantly, the envisioned sub-project under component 1 were not initiated, limiting important benefits of the project.

Cost-Benefit (CB) Analysis: In the case of CB analysis, it is highly unlikely that the limited benefits derived from the actual activities could be valued. For example, it is difficult to associate an economic value to the Project as enabler for conservation initiatives or rapid response training for fire management. Without the project financing, however, it is more likely that areas intended for conservation would have experienced higher degradation, particularly for the Vaca Forest Reserve, and a subsequent loss of opportunities for sustainable coastal and forest management. Likewise, it is also challenging to provide a value regarding the Project's role in keeping the protected area system up/running under weak capacity, understaffed, and resource limitations.

Cost-Effectiveness (CE) Analysis: In the case of CE analysis, under constrained budgetary situation, any analysis might indicate substantial results when compared to comparable projects from other small island countries with similar conservation objectives, due to the budget constraints as in the Belize case. Yet, despite this situation, and the size of the GEF Grant, the Project partially achieved its objectives. Taking into account the project background/context, a Cost/Effectiveness analysis would require a set of heroic assumptions since it would be virtually impossible to measure all the elements necessary for such analysis.

Conclusion: Nevertheless, the project has served as an enabler in some regards for potential, future conservation initiatives in a biodiverse country. According to the World Bank, the wealth study conservatively estimates total natural wealth in Belize at US$ 8 billion and, per capita at US$25,297 (in 2010 prices). Further, natural capital is the second most important component at 40% of total wealth, dominated by the value of its protected areas. Belize derives significant benefits from the ecosystem services generated by the coral reefs and mangroves. It has been estimated that the value of ecosystem services (fishing, tourism, shoreline

protection) generated by the coral reefs and mangroves contributes between 15% and 22% of GDP in Belize (in the range of US$395-559 million per year) (Cooper, Burker, and Bood, 2009).

Even though the Project did not achieve its original results, still it has provided limited benefits. Table 1 presents a comprehensive accounting of KBA Project benefits if the Project was implemented fully, as well as the limited achievements by the Project.

Annex 4, Table 1: Project Characteristics, Identified Benefits and Achievements

Project Components	Objective	Main Activities	Identified Direct / Indirect Benefits	Achievements by KBA
<u>Component 1:</u> Supporting Forest Protection and Sustainable Forest Management Activities in Key Biodiversity Areas (GEF US$ 2.1819 million)	Forest Protection and Sustainable forest management, contributing to reduction of emissions from deforestation and degradation and increase in sequestration of CO2.	(a) Conduct an examination of the existing requirements for land clearing within the current legal structure. (b) Develop the draft amendments to the tax disincentive legislation to reduce deforestation and the requirements to clear / develop the land (c) Support government in the process to approve amendments	Support provided to amend tax disincentive legislation to address the requirement to develop / clear forested land	**The project has served as enabler for future conservation initiatives**. Forest Protection via providing firefighting equipment and protective gear were procured for the establishment of community fire brigades in Belize. Likewise, Basic Fire Management Training was conducted for community members. **Belize's natural capital is dependent on sustainable forest management**. The identification and implementation of activities raising awareness on sustainability were developed by consultancies to assess priority NTFPs opportunities in the 6 KBA sites. The result of this assessment would have fed into the implementation of community-based subprojects. A Communication Officer's worked for both the KBA and REDD+ projects during FY2018-19. Besides, an analysis of forest information management needs and design of management information system were completed in December 2016 (phase 1).
		(a) Provide training on REDD+ including carbon estimation by the Forest Department and local communities and the use of methodologies, applicable to future REDD+ activities	Support training required to promote a REDD+ program	
		(a) Prepare work plan for rapid response team(s) for resource protection including local communities. (b) Support for implementation of training identified in the work plan of 2016 AOP. (c) Procure and provide equipment and transportation for rapid response team(s). (d) Based on need, construct fire lookout towers in strategic locations within Project sites.	Support for the development and establishment of fire incidence rapid response team (FIIRT)	
		(a) Support for the identification and implementation of community-based rehabilitation sub-projects. (b) Identify and develop scope and methodologies for community-based rehab activities such as prescribed burning, thinning, monitoring for insect damage and removing trees where pest outbreaks are detected, and where necessary reforestation and enrichment planting. (c) Support for the implementation of community sub-projects. (d) Compensation to CRFR farmers as per validated RAAP.	Rehabilitation of critical areas of high conservation values through identification, development and implementation of community-based Sub-projects	
		(a) Support for the identification and implementation of community-based NTFP sub-projects. (b) Provide necessary training for product and business development. (c) Support for market analysis, product development, business plan development. (d) Invest in sub-projects approved according to the process and criteria set in the Project Operational Manual and related	Support for sub-projects for sustainable harvesting and marketing of NTFPs and other community-based forestry opportunities	

Project Components	Objective	Main Activities	Identified Direct / Indirect Benefits	Achievements by KBA
		Livelihood Restoration Process Framework.		
		(a) Communications Officer (to identify and develop an awareness raising program on sustainable forest management and forest fire prevention. (b) Implement a sustainable forest management and forest fire prevention awareness campaign at the national level.	Support for identification and implementation of activities raising awareness on sustainable forest management	
		(a) Assessment of existing forestry standards for monitoring and evaluation, existing tools and programs to reduce illegal logging. (b) Develop and implement Management Plan for FCFR, Vaca FR, MMFR and CRFR. (c) Establish forest information system (pilot phase) change in forest cover, degradation, fire, sustainable forest management, REDD, data sharing protocol with EIAs. (d) Establish an additional 16 PSPs in different forest types that occur in the select Project sites (Chiquibul NP, Spanish Creek WS, Maya Mountain FR, and Vaca FR) and that are not represented in the existing PSPs. (e) Support and training of FD staff in the establishment of PSPs and estimation of carbon capture. (f) Hire a Sustainable Forest Management Specialist	Support for the development and implementation of sustainable forest management plans	
<u>Component 2:</u> Promoting Effective Management of Key Biodiversity Areas	Provide support to remove central government's ability to de-reserve areas without a formal process Increase patrol of monitoring and compliance unit in the target PAs, clearer delineation of PA boundaries, and community-based activities through reforestation and NTFPs in Component	(a) Support establishing procedures / guidelines, criteria, and corresponding regulations for the declaration, re-alignment and de-reservation of PAs. (b) Operationalize the new Protected Areas Legislation including developing standard procedures for corresponding regulations and support the administrative structure and coordination mechanism.	Support for the Implementation of recommendations set forth in the PA Rationalization Exercise	**The project has provided important management tools and strengthened national institutions**. Development and Effective implementation of PA management were presented in the targeted areas. For instance, the Spanish Creek Wildfire Sanctuary (SCWS) Management plan was finalized in December 2015; Conservation Target Viability Assessment Workshop for the Chiquibul National Park was held on September 2017 to work on goal setting and management constraints/limitations; among others.
		(a) Identify the management need of the target sites including a needs assessment for institutional strengthening of co-management organizations. (b) Prepare PAs management plans (Columbia River FR, Vaca FR) and update the existing management plans (Freshwater Creek FR and Chiquibul NP) and its implementation in selected sites. (c) Develop a protected areas GIS database and application for data management and analysis that will contribute to the FIS Provide natural resource management training and mentoring by	Support for the development and effective implementation of PA Management Plans I the targeted areas	

Project Components	Objective	Main Activities	Identified Direct / Indirect Benefits	Achievements by KBA
	1.	MAFFESD staff and / or co-management organizations, including funds accounting, technical reporting, and proposal writing. (d) Increase awareness and engagement in Protected Areas Management.		**Belize's institutions supported to improve the legal framework on climate change mitigation and resilience**. With the assistance of National Protected Areas Secretariat Communication Officer, an advertisement was prepared and aired on major radio and television stations to create greater public awareness of the NPASP in 2015. The revision of the Forests Act was partially completed. **Strengthened monitoring capacity and compliance in project sites, contributed to efforts to improve biodiversity**. Monitoring trainings were developed and completed during the project: Compliance Management Strategy for the Forest Department, Green Laws, SMART training, Compliance and Monitoring Unit (CMU), National Wildlife Monitoring Data Warehouse Solution, training in the safe capture of jaguars, pumas, tapirs and white lipped peccary including the deployment of GPS collar, etc.
		(a) Conduct an assessment to incorporate climate change mitigation and resilience considerations into the NPASP in line with the measures identified in the Second National Communication of UNFCCC and the National Climate Change Policy, Strategy and Action Plan. (b) Provide technical assistance for endorsement of the draft by the relevant authority.	Support for updating the NPASP to take into account considerations of climate change mitigation and resilience	
		(a) Analyze and update the Forest Act to improve the effectiveness of compliance and enforcement of such Act. (b) Analyze and draft the legislation for improved wildlife management including, research, monitoring, wildlife rehabilitation, reintroduction to the wild.	Support for reviewing and improving legal frameworks for the protection of biodiversity and forests	
		(a) Demarcate boundaries of selected target PAs (Vaca FR, Chiquibul NP, Maya Mountain FR, and Columbia River FR) to identify land incursion discrepancies. (b) Establish a Compliance and Monitoring Uni within the FD (Contract 4 Foresters) and develop and implement an operational plan for PA compliance and prevention of illegal activities in the target Project sites. (c) Provide training including special constable training, search and rescue, navigation, to the Compliance and Monitoring Unit, including co-managers. (d) Provide equipment and transportation as necessary – such as communications, uniforms, camping gear, GPS, cameras, first aid kits.	Support for implementation of monitoring and compliance in the Project Sites	
		(a) Support implementation of the NBMP in six target areas. (b) Incorporate biodiversity information into FIS for 6 priority areas. (c) Develop a biodiversity monitoring guidelines / protocols. (d) Develop priority research topics for the KBAs. (e) Provide training for the Forest Department, co-managers. Local communities, and education/ research institutions on data collection and the use of biodiversity monitoring protocols under the NBMP. (f) Identify biodiversity monitoring field crew and equip with	Support for the development and establishment of a biodiversity monitoring system for KBAs and for increasing biodiversity monitoring capacity	

Project Components	Objective	Main Activities	Identified Direct / Indirect Benefits	Achievements by KBA
		monitoring tools. (e) Hire a Biodiversity Monitoring Coordinator.		
<u>Component 3:</u> Institutional Strengthening and Capacity Building for Enhanced Enforcement of Environmental Regulations.	Finding ways to better coordinate different levels of government in activities relevant to protection of KBAs Updating various plans and environmental certification programs for expected enhanced compliance.	(a) Conduct an assessment to develop inter-sectoral mechanisms that will promote a balance between environmental management and development. (This could include the establishment of a Departmental Steering Committee or expanding the responsibilities of the NEAC, including the development of a procedural manual). (b) Implement the recommended option from the assessment, including the development of procedural manual to guide the committee.	Support for the establishment of a departmental committee devoted to balancing environmental management and development.	**The project has strengthened institutional capacity and environmental regulation of the identified key biodiversity areas**. The provided equipment and training on 4 ISO Standards were delivered to the DOE and other stakeholders; standardized Environmental Impact Assessment (EIA) Process were established, the Environmental Information System (EIS) has been fully implemented, and other environmental management tools, instruments and concepts to enhance the environment screening and clearance processes were accomplished.
		(a) Strengthen institutional capacity of the Environmental Compliance Monitoring and Enforcement Unit, through revision of its roles and responsibilities to complement in the management of the identified key biodiversity area. (b) Prioritize and conduct training of DOE staff and other key public agencies on topic related to monitoring enforcement and use of key equipment. (c) Prioritize and support the purchase of necessary equipment such as sample bottles, calibrating reagents GPSs, cameras, range finders, ice coolers, water quality field testing device, etc. to improve ability to mobilize and conduct compliance monitoring. (d) Develop and implement a Water Quality Monitoring Program in one of the six target areas to assess possible aquatic threats to the selected site in view of replicating this program in other KBAs in the future by the DOE. This will contribute to updating the National Water	Strengthening compliance monitoring capacity including provision of equipment and training for DOE staff and other key agencies.	
		(a) Compare and contrast existing EIA program regionally (within Central American and Caribbean Countries) in order to improve the EIA process nationally. (b) Revise the EIA (PROCESS) and updating the EIA Manual to establish qualitative and quantitative criteria to standardize who can conduct EIAs, structure, grammar, referencing, guidelines and methodologies to measure impacts, mitigation measures, and monitoring across EIA reports. (c) Mainstreaming of EIA process into government entities other than the Department of the Environment. Train 20 people from permitting agencies to determine when a project should be deferred for environmental clearance as per Schedules of EIA	Support for the establishment of a standardized Environmental Impact Assessment (EIA) Process, and a Protocol for enhanced environmental screening and scoping.	

Project Components	Objective	Main Activities	Identified Direct / Indirect Benefits	Achievements by KBA
		regulations. (d) Procurement of 2 pickup trucks.		
		(a) Development and implement information management system for EIAs. (b) Define roles and responsibilities of the NEAC and other key agencies in the EIA process and increase participation of these key agencies and the NEAC at site inspections and public consultations. (c) Assess and improve the EIA process with a focus on stakeholder involvement, with the goal of improving public participation in decision-making. (d) Review and develop amendment(s) to Belize's Environmental Impact Assessment Regulations to include other environmental tools and processes	Improve the capacity for decision-making in the Environmental Impact Assessment process.	
		(a) Train staff of key agencies including the NEAC on Strategic Environmental Assessment (SEA). The trainings will be geared towards policies, strategies and sector plans that could have significant negative impacts on the environment and natural resources of Belize. (b) Train or sensitize staff of the Department of the Environment and key agencies including the NEAC on the Social Impact Assessment methodology. (c) Purchase of skiff and outboard engine to facilitate water quality monitoring. (d) Hiring of an Institutional Development Specialist.	Training on other environmental management tools, instruments and concepts to enhance the environmental screening and clearance processes.	

ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

The Bank team shared the draft ICR with the Client in March 2020 following the Bank's Quality Enhancement Review Meeting.

The Client acknowledged receipt of the draft ICR in an email dated March 12, 2020 and found the ICR acceptable without further comments.

ANNEX 6. PROJECT ASSESSMENT OUTPUTS

Annex 6, Table 1: Execution Plan for Implementation of Potential Community-Based Sub-Projects in KBAs

Projects	Objective	Activities	Timeframe									
			Short Term			Medium Term			Long Term			
			1	2	3	4	5	6	7	8	9	10
Programs for Reforestation of Forest Gaps in Previous Pineapple Plantations in Freshwater Creek Forest Reserve and other KBA.	Restore Forest Gap with Native Hardwoods (Mahogany, Ramon, Cedar, Malerio, etc.)	-Develop a Seed Collection Program/ Seed Tree Selection	■	■	■							
		-Propagation of Seeds in the Nursery	■	■	■							
		-Strengthening Institutional Capacity of the Organization	■	■	■	■	■	■	■	■	■	■
		-Identification and Preparation of Site for Rehabilitation	■									
		-Planting of Seedlings	■	■	■							
		-Management of Plantation (Monitor Insects and Disease Damage,Weed Competition, Forest Fires)					■	■	■	■	■	■
	Build a Program of Ownership by Stakeholders through Awareness and Education	-Develop A Public Awareness Campaign about the Importance and Environmental Benefits of the FCFR	■	■	■	■						
	Promote Climate Smart Agriculture through the Use of Organic Bagasse to Maintain/ Conserve Soil Humidity, Fertility and Protect Crops from Pest Infestation	-Provide Workshops and Training to Farmers	■	■	■	■	■	■				
Programs for Restoration of the Vaca Forest Reserve and other KBA.	Restore Agriculture Impacted Areas	-Establishment of Ramon (Breadnut) Plantations	■	■	■							
		-Establishment of Pacaya Palm Plantations	■	■	■							
	Promote Smart Agriculture and Integrated Farming Practices through the Use of Animal Manure and Plant Compost As Organic Fertilizer	-Provide Workshops and Training to Small Scale Farmers	■	■								
	Promote Eco-Tourism in Agroforestry Plantations (Ramon & Pacaya)	-Provide Tour Guide Training to Beneficiaries	■									
		-Formalization of Tourism Product: Horseback Riding, Hiking, Birding, Cave Exploration, etc.				■	■	■	■			
Programs for the Restoration of Farm Degraded Areas in Maya Mountain North Forest Reserve and other KBA.	Restore Buffer Zone	-Establishment of a Seed Collection Program	■	■	■							
		-Establishment of a Nursery for the Propagation of Seeds	■	■	■	■						
		-Replant Native Timber Trees	■	■	■	■						
		-Replant Bayleaf palms	■	■	■	■						
		-Management of Plantation (Monitor, Insects and Disease Damage, Weed Competition, Forest Fires)	■	■	■	■	■	■	■	■	■	■
	Restore Farmlands through Inga Alley Cropping thereby Curbing Deforestation through	-Propagation of Plants in Nursery	■	■	■							
		-Identification and Preparation of Degraded	■	■	■							

	and Restoring Soil Fertility through the Nitrogen Fixing Mechanism of Leguminous Trees	Site (3 acres) for Rehabilitation										
		-Planting of Seedlings in Rows										
		-Pruning One Acre of Inga Cropping Per Year to Release Plant Stored Nitrogen Into the Soil										
		-Conduct Rotational Farming of Corn in One Acre of Inga Cropping Per year										
	Establish Cacao Agroforestry Plantations in Agriculture Impacted Areas	-Establishment of Nursery										
		-Planting of Shade Trees: Native Hardwoods, Fruit Trees and Short Cycle Crops										
		-Planting of Cacao Seedlings										
		-Implementing Continuous Plot Maintenance to Remove Underbrush Vegetation, Prune New Branch Sprouts from Tree Trunks and Thinning of Canopy Cover to Maintain Adequate Sunlight										
		-Harvesting of Cacao Pods in Year 3										
	Establish a Cacao Drying Facility	-Strengthening Institutional Capacity of Beneficiaries										
		-Provide Capacity Building in Cacao Harvesting, Fermentation and Storage										
		-Provide Training and Workshops for the Elaboration of Cacao Based Products										
	Promote Eco-tourism within Agroforestry Concession	-Formalization of the Eco-tourism Product and Management of Activities within Concession										
		-Provide Tour Guide Training to Farmers/ Beneficiaries										
		-Strengthen Institutional Capacity of Beneficiaries										

Programs for Restoration of Columbia River Forest Reserve and other KBA.	Reforest Riparian Zones and Areas Degraded by Farming	--Planting of Hardwood Trees Near Riverbanks										
		-Establishment of Inga Alley Cropping to Restore Soil Fertility of Farmlands										
		-Establishment of Mucuna Plantations in Farmlands to Restore Soil Fertility of Farmlands										
		-Establishment of Cacao Agroforestry Plantations in Areas Impacted by Agriculture										
	Create Community Conservation Areas to Promote a Culture of Ownership of the Reserve	-Establishing Co-Management of Areas Designated for Community Conservation										
		-Assessment of Legal Framework to Institute Legal Mandate for Enforcement of Forest Laws										
		-Strengthening Institutional Capacity of the Committee										
		-Provide Capacity Building for Park Rangers and Foresters at the Community Level										
	Promote Eco-Tourism in Areas Designated for Community Conservation	-Establishment of Medicinal Trails										
		-Formalization of Eco- Tour Packages (Hikes, Sinkholes, Caves, Waterfalls, etc.)										
		-Provide Training in Tour Guiding to Beneficiaries										
		-Promoting Education and Awareness at the Community Level to Foster Water Protection, Biodiversity Conservation and Forest Fire Management through the Integration of Watershed Management and Wildlife Conservation into School Curriculum										
	Establish A Community Forest Fire Brigade in Communities Adjacent to the CRFR	-Provide Training in Forest Fire Management										
		-Provide Fire Fighting Equipment Necessary to Prevent or Suppress Wildfires										
		-Creating a Pilot Project to Promote Education and Awareness about the Risk of Fire to Human Life and Biodiversity										

Annex 6, Table 2: Operational Plan for NTFPs

To promote conservation and the Sustainable use of NTFP within the KBA							
Measurable Objective	To increase the economic potential of stakeholders of the KBA and decrease illegal extraction from the forest thereby sustaining and protecting biodiversity within the KBA.						
Strategy	- Build a Program of Ownership by Stakeholders through Awareness and Education - Provide financial support to the KBA stakeholders						
Project 1. Establishment of pacaya and or jippy-jappa farm.							
Activity	**Sub-Activity**	**Achievements / Indicator**	**Responsible**	**Start date**	**End date**	**Monitoring & Evaluation**	**Budget Bze $**
Pilot project for the establishment of pacaya and jippy-jappa farms in agroforestry or multi-cropping systems.	Stakeholders plan and develop their proposal and submit for financial support	-Stakeholders receive grant -Bank account opened for funds transfer -Record keeping instrument in place -two meetings with stakeholders -Documentation of the process (photographs, list of participants, minutes)	Stakeholder and KBA	Oct 2018	Nov 2018	Technical monitoring	
	-Strengthening Institutional Capacity of the Organization *trainings on record keeping *project management	-meetings with stakeholders - Documentation of the process (photographs, list of participants, minutes)	KBA, FD, instructor, stakeholder	Nov 2018	Dec 2018	Technical monitoring	5,000
	- Develop a capacity building program for the cultivation and care of pacaya and jippy-jappa - Stakeholders introduced to agroecology -Promote agroecology concepts through the Use of Organic Bagasse to Maintain/ Conserve Soil Humidity, Fertility and Protect Crops from Pest Infestation.	-Instructor / Trainer identified - training needs identified -stakeholders trained in agroecology; the development of organic pest control, fertilizers, composting, mulching etc. -elaboration of input (organic fertilizer, biological pest control, compost, mulch etc.) -Documentation of the process (photographs, minutes, list of participants)				Technical monitoring	5,000
	Promote Eco-Tourism in Agroforestry Plantations (Pacaya/ jippy-jappa)	Trained tour guides to take tours within the farms	BTIA, Tourism department	Nov 2018	Oct 2019		
	-Site for establishment of farm Identified and Prepared -Stakeholder established a jippy-jappa and or a pacaya plantation -Stakeholders trained and able to manage farm -Provision of technical support to farmers involved in the cultivation of pacaya and jippy jappa	-Seed Collection Program in place -Seed Tree Selection -Planting of Seedlings -Management of Plantation (Monitor Weed Competition, Insects and Disease Damage, Forest Fires) - Organic pest control, organic fertilizers, composting, mulching completed and in use on farms -Regular visits and discussions with the stakeholders to guide the establishment of the farms -Documentation of the process (photographs, minutes, list of participants)	Stakeholder, KBA, FD and AD	Jan 2019	June 2019	Agriculture and Forest Department and Instructor do Compliance monitoring	5,000
						Total	15,000

Project 2.	Establishment of Processing Plant for Pacaya and or Jippy-Jappa						
Activity	**Sub-Activity**	**Achievement / indicator**	**Responsible**	**Start**	**End**	**Monitoring & Evaluation**	**Budget**
	Stakeholders plan and develop their proposal and submit for	-Stakeholders receive grant	Stakeholders and KBA	Oct 2018	Dec 2018	Technical monitoring	
Pilot project for the establishment of pacaya and or jippy-jappa processing plant	financial support	-Bank account opened for funds transfer -Record keeping instrument in place -two meetings with stakeholders -Documentation of the process (photographs, list of participants, minutes)					
	-NTFP to be processed identified -Through consultation workshops, develop and institutionalize protocols for the collection of NTFPs	-protocols for NTFP collection established - consultations with stakeholders -Documentation of the process (photographs, list of participants, minutes)	FD, AD and stakeholders	Oct 2018	Dec 2018	Technical monitoring	5,000
	-To provide technical support in the agro-processing of pacaya inflorescences and jippy jappa shoots	Regular visits and discussions with the stakeholders to guide the establishment of the processing unit -Documentation of the process (photographs, list of participants, minutes)	AD agro-processing unit, consultant; KBA	Nov 2018	Mar 2019	Technical monitoring	5,000
	-Baseline Data Collection to measure increase of income over time	- Survey done and report developed - Documentation of the process (photographs, minutes, list of participants)	KBA and stakeholders	Oct 2018	Dec 2018	Baseline monitoring	3,000
	To promote food safety and quality control To comply with good sanitary practices to prevent contamination of food products To comply with Food Handler's Regulation to prevent and control the transmission of human diseases	-quarterly meetings with stakeholders -capacity building completed -Documentation of the process (photographs, minutes, list of participants)	BAHA/Agriculture Department	Nov 2018	Dec 2018	Compliance monitoring	5,000
	To provide support in the packaging and labeling of products	-Training provided -Documentation of the process (photographs, minutes, list of participants)	BELTRAIDE and stakeholders	Jan 2019	Feb 2019	Technical monitoring	5,000
	To promote pacaya and jippy jappa products locally and internationally	-promote product via radio, TV and brochures (tourism outlets) -Documentation of the process (photographs, minutes, list of participants)		Feb 2019	June 2019	Compliance monitoring	3,000
	To comply with established protocols for NTFPs To comply with health standards to ensure the provision of safe products to its customers To monitor the day to day operation of the agro-processing facility To monitor implementation and operation of the project To ensure the sustainable harvesting of NTFPs To ensure the long- term success of the project	-meetings with stakeholders (as per needed) Documentation of the process -financial reports, progress reports (photographs, minutes, list of participants	Village Council, KBA, FD and stakeholders	Oct 2018	Oct 2019	Compliance monitoring/ Progress monitoring Compliance monitoring Internal compliance monitoring Process/ Progress monitoring	5,000
						Material	45,000
						Total (estimated)	76,000

Project 3	**Establishment of Bayleaf farm**						
Activity	**Sub-Activity**	**Achievement/Indicator**	**Responsible**	**Start**	**End**	**Monitoring & Evaluation**	**Budget**
Pilot Project for establishment of Bayleaf plantation	Stakeholders plan and develop their proposal and submit for financial support	-Stakeholders receive grant -Bank account opened for funds transfer -Record keeping instrument in place -two meetings with stakeholders -Documentation of the process (photographs, list of participants, minutes)	Stakeholder and KBA	Oct 2018	Nov 2018	Technical monitoring	
	Site selection for establishment of farm	-two meetings with stakeholders -Documentation of the process (photographs, list of participants, minutes)	Stakeholder, KBA, consultant, Agriculture and Forest Departments	Nov 2018	Dec 2018	Technical and compliance monitoring	3,000
	Seeding for farm establishment selected and planted	- trainer identified and training implemented - bi-monthly meeting with stakeholders, FD, AG and KBA -Documentation of the process-training manual, report etc. (photographs, list of participants, minutes)					3,000
	Capacity building for caring of Bayleaf farm			Jan 2019	Feb 2019		5,000
	Bayleaf Farms established					Technical and compliance monitoring	5,000
	Management of Plantation (Monitor, Weed Competition, Insects and Disease Damage, Forest Fires)	-monthly visits to monitor farms -Documentation of the process-training manual, (photographs, list of participants, minutes)		Jan 2019	Oct 2019	Technical and compliance monitoring	5,000
	Market for Bayleaf secured	-Marketing training provided - meeting with potential buyers completed -agreement with buyers signed -Documentation of the process (photographs, list of participants, minutes)	BELTRADE, KBA and stakeholders	Mar 2019	Sept 2019	Technical and compliance monitoring	5,000
	To monitor the day to day operation of the Bayleaf farm	-quarterly meetings with stakeholders - Documentation of the process - financial reports, progress reports (photographs, list of participants, minutes)	KBA, FD, AD, stakeholders	Oct 2018	Oct 2019	Technical and compliance monitoring	5,000
	-To provide technical support in the agro-processing						2,000
	To ensure the long- term success of the project						5,000
	-Baseline Data Collection to measure increase of income over time	-survey completed and report submitted		Oct 2018	Nov 2018		3,000
						Material	15,000
						Total	55,000

Project 4	Establishment of pilot project on Gibnut/Deer husbandry						
Activity	Sub-Activity	Achievement/Indicator	Responsible	Start	End	Monitoring & Evaluation	Budget
Pilot project for establishment of gibnut and or deer rearing.	Stakeholders plan and develop their proposal and submit for financial support	Stakeholders receive grant -Bank account opened for funds transfer -Record keeping instrument in place -two meetings with stakeholders -Documentation of the process (photographs, list of participants, minutes)	Stakeholder and KBA	Oct 2018	Nov 2018	Technical monitoring	
	Site selection for establishment of farm	-two meetings with stakeholders -Documentation of the process (photographs, list of participants, minutes)	KBA, Agriculture & Forest department , stakeholders	Nov 2018		Compliance and technical monitoring	5,000
	Through consultation workshops, develop and institutionalize clear guidelines for the establishment of farms and marketing of gibnut and or deer meat	-workshops with stakeholders -Documentation of the process (photographs, list of participants, minutes)		Nov 2018	Dec 2018		5,000
	Collection to Baseline Data to measure increase of income over time	Survey developed, implemented and report submitted	KBA Rural Development	Nov 2018			3,000
	Establishment of facility	- Consultant identified -Trainings implemented	BAHA, consultant,	Dec 2018			50,000
	Training on Husbandry of gibnut and or deer rearing	-Documentation of the process (photographs, list	Forestry and Agriculture	Dec 2018	Feb 2019		10,000
	To promote food safety and quality control	of participants, minutes)	Department, KBA	Mar 2019	April 2019		10,000
	To comply with good sanitary practices to prevent contamination of food products						
	To comply with Food Handler's Regulation to prevent and control the transmission of human diseases						
	To provide support in the packaging and labeling of products		BELTRADE	May2 019	June 2019		5,000
	To provide technical support in the husbandry of gibnut/deer	Consultant identified and training provided	Forest department, KBA, consultant	Oct 2018	Oct 2019		15,000
	To monitor the day to day operation of the gibnut/deer farm	-quarterly meetings with stakeholders - Documentation of the process -financial reports, progress reports (photographs, minutes, list of participants etc.)	Forest department, KBA,				3,000
	To ensure the long- term success of the project						3,000
						Material	40,000
						Total (estimated)	150,000

ANNEX 7. TRAININGS UNDER THE KBA PROJECT

DATE	TRAINING COURSE	COURSE OBJECTIVE	# OF PERSONS	GOB ENTITIES	OTHER STAKEHOLDERS
May 16-27, 2016	Basic Wildland Fire Training	This course was designed to provide entry level firefighters skills. It dealt with LCES (Lookouts, Communications, Escape Routes and Safety Zones), construction of fire lines, extinguish fire with or without water, proper use of personal protective clothing, etc.	49	Forest Department, Department of the Environment and Agriculture Department	4 Co-management Organizations
February 9-10, 2017	Basic Fire Management Training	Provide basic fire management skills to Forest Department front line personnel and other stakeholders in the Mountain Pine Ridge area.	18	Forest Department	2 Resident Lodges
February 20, 2017	Basic First Aid & CPR Training	Provide basic first aid and CPR skills to Forest Department front line personnel to deal with emergency and life-threatening situations.	11	Forest Department	N/A
January 7-13, 2018	Annual Plan of Operation (APO) Preparation Training	Provide participants with practical skills in stock inventory collection, theoretical knowledge of APO content and criteria to be met, training in the use of the General Yield Model (v. April 2017) to ensure species sustainability checks are met, guidance in the use and population of tables to represent yield model results and other specific logging activities, practical skills in the development of stock maps to display harvest plans, and guidance in APO writing techniques.	13	Forest Department	1 Community Forestry Group and 3 Co-managers
February 8-9, 2018	Green Laws Training (Cohort I)	To increase capacity within FD Staff, protected areas co-managers, and other partners to increase enforcement of FD Legislation.	44	Forest Department, Police Department and Belize Defence Force	8 Co-management Organizations
March 1-2, 2018	Green Laws Training (Cohort II)	To increase capacity within FD Staff, protected areas co-managers, and other partners to increase enforcement of FD Legislation.	41	Forest Department, Police Department and Belize Defence Force	8 Co-management Organizations

DATE	TRAINING COURSE	COURSE OBJECTIVE	# OF PERSONS	GOB ENTITIES	OTHER STAKEHOLDERS
March 19-21, 2018	SMART Training (Spatial Monitoring and Reporting Tool)	Application of the SMART tool for the collection of field data in order to produce real time reports and improve monitoring.	34	Forest Department	N/A
May 14-25, 2018	Special Constable Training	To strengthen Ranger's knowledge and skills to effectively enforce all aspects of green law legislation, namely the Forests Act, Wildlife Protection Act and the National Protected Areas System Act among other legislation.	54	Forest Department	9 Co-management Organizations
June 26-29, 2018	Permanent Sample Plot (PSP) Techniques Training	Introduce the concept of PSP and techniques to the new PSP field crew and to refresh FD Staff in PSP concepts.	18	Forest Department	Environmental Research Institute (UB-ERI)
July 11-13, 2018	Court Procedures Training	To train FD Staff and Co-management partners in proper court procedures with the aim of increasing the number of cases successfully prosecuted by the Forest Department.	28	Forest Department	4 Co-management Organizations
February 10-16, 2019	Annual Plan of Operation (APO) Preparation Training	Provide participants with practical skills in stock inventory collection, theoretical knowledge of APO content and criteria to be met, training in the use of the General Yield Model (v. 13 July 2018) to ensure species sustainability checks are met, guidance in the use and population of tables to represent yield model results and other specific logging activities, practical skills in the development of stock maps to display harvest plans, and guidance in APO writing techniques.	16	Forest Department	1 Community Forestry Group and 2 Co-managers

DATE	TRAINING COURSE	COURSE OBJECTIVE	# OF PERSONS	GOB ENTITIES	OTHER STAKEHOLDERS
March 29-31, 2019	Basic Fire Management Training	Provide training in basic fire management techniques - use basic fire management techniques, identify and describe forest fire fuels, weather and topography to safely suppress and manage fires, and be aware of the roles and responsibilities needed to safely manage fire operations and develop a fire management plan.	11	Forest Department	1 Co-management Organization and St. Paul's Community Residents
March 29-30, 2019	Prosecutorial and Court Processes Tutorial and Training	To build capacity in the Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development in the proper presentation of and marshalling of evidence in the Magistrate's Court, to highlight the importance of preservation of evidence, chain of custody, witness statements, etc.	25	Forest Department and Department of the Environment	N/A
June 25-27, 2019	Trial Preparation & Advocacy Course (Co-finance)	To identify and develop skills and techniques associated with trial preparation and advocacy at the Magistrate's Court level, understand Magistrate's Court rules of procedure, recognize concepts and theories in the area of trial preparation and advocacy, and obtain practical experience, skills and techniques of trial advocacy.	6	Forest Department and Department of the Environment	N/A

DATE	TRAINING COURSE	COURSE OBJECTIVE	# OF PERSONS	GOB ENTITIES	OTHER STAKEHOLDERS
July-September 2019	ISO 14001 and ISO 17020 Courses	Training in ISO 14001 Environmental Management System (EMS) was designed to help learners understand how to implement, and audit organizations' systems, to international standards; ISO 17020 Awareness Course was designed to support learners to become more aware of the best practices for conducting inspections with the aim of ensuring impartiality. The Training is geared towards increasing the competence of the relevant personnel to enable increase in performance and improve credibility of the regulatory organization.	15	Department of the Environment; Mining Unit, MNR; Belize Bureau of Standards.	Coastal Zone Management Authority and Institute
		TOTAL	383	7	

ANNEX 8. MAP OF BELIZE KEY BIODIVERSITY AREAS