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Report No: ICR00005043

IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA-H996, TF-18239

ON A GRANT

FROM THE INTERNATIONAL DEVELOPMENT ASSOCIATION

IN THE AMOUNT OF SDR 26.4 MILLION

(US$40 MILLION EQUIVALENT)

AND A GRANT

FROM THE GLOBAL ENVIRONMENT FACILITY

IN THE AMOUNT OF US$6.3 MILLION

TO THE

REPUBLIC OF MOZAMBIQUE

FOR A

CONSERVATION AREAS FOR BIODIVERSITY AND DEVELOPMENT PROJECT

May 29, 2020

Environment, Natural Resources & The Blue Economy Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective November 29, 2019)

Currency Unit	=	MZN
MZN 63.60	=	US$1
US$1.37	=	SDR 1

FISCAL YEAR
July 1 - June 30

Regional Vice President:	Hafez M. H. Ghanem
Country Director:	Mark Lundell
Regional Director:	Ede Jorge Ijjasz-Vasquez
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ABBREVIATIONS AND ACRONYMS

ADM	Accountability and Decision-Making
AFD	Agence Française de Développement
ANAC	National Administration of Conservation Areas (*Administração Nacional das Areas de Conservação*)
BANP	Bazaruto Archipelago National Park
BIM	Banco Internacional de Mocambique
BIOFUND	Foundation for the Conservation of Biodiversity (*Fundação para a Conservação da Biodiversidade*)
CA	Conservation Area
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CO_2e	Carbon dioxide equivalent
CoP17	Conference of the Parties to CITES in South Africa
DNAC	National Directorate of Conservation Areas (*Direcção Nacional das Areas de Conservação*)
DO	Development Objective
EA	Environmental Assessment
ERR	Economic Rate of Return
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EU	European Union
FM	Financial Management
FNDS	National Sustainable Development Fund (*Fundo Nacional de Desenvolvimento Sustentável*)
FY	Fiscal Year
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEO	Global Environment Objective
GRM	Grievance Redress Mechanism
ha	Hectare
ICR	Implementation Completion and Results Report
IDA	International Development Association
IFC	International Finance Corporation
INC	Initial National Communication
IP	Implementation Progress
ISR	Implementation and Results Report
KfW	Kreditanstalt für Wiederaufbau
M&E	Monitoring and Evaluation
MICOA	Ministry for Coordination of Environmental Affairs (*Ministério para Coordenação da Accão Ambiental*)
MITADER	Ministry of Land, Environment, and Rural Development (*Ministério da Terra, Ambiente e Desenvolvimento Rural*)
MITUR	Ministry of Tourism (*Ministério do Turismo*)

MoU	Memorandum of Understanding
MozBio	Mozambique Conservation Areas for Biodiversity and Development
MozBio 1	Mozambique Conservation Areas for Biodiversity and Development Project – Phase 1 (first MozBio Project)
MozBio 2	Mozambique Conservation Areas for Biodiversity and Development Project – Phase II (second MozBio Project)
MozFIP	Mozambique Forest Investment Project
MSR	Maputo Special Reserve
MZN	Mozambican Metical
MTR	Mid-term Review
NGO	Non-governmental Organization
NP	National Park
NPV	Net present value
NR	National Reserve
PAD	Project Appraisal Document
PARP	Poverty Reduction Strategy Paper (*Plano de Acção de Redução de Pobreza*)
PDO	Project Development Objective
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PPA	Project Preparation Advance
PPF	Peace Parks Foundation
PPMR	Ponta do Ouro Partial Marine Reserve
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SDR	Special Drawing Rights
SoP	Series of Projects
TF	Trust Fund
TFCA	Transfrontier Conservation Area (*Áreas de Conservação Transfronteira*)
TFCA I	Transfrontier Conservation Areas Pilot and Institutional Strengthening Project
TFCATDP	Transfrontier Conservation Area and Tourism Development Project
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
US$	United States Dollar
USAID	United States Agency for International Development
WBG	World Bank Group

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P131965	Mozambique Conservation Areas for Biodiversity and Development Project
Country	**Financing Instrument**
Mozambique	Investment Project Financing
Original EA Category	**Revised EA Category**
Partial Assessment (B)	Partial Assessment (B)

Related Projects

Relationship	Project	Approval	Product Line
Supplement	P132597-Mozambique GEF Conservation Areas for Biodiversity and Development Project	18-Nov-2014	Global Environment Project

Organizations

Borrower	Implementing Agency
Institute for Insurance and Pensions Supervision	Ministry of Land, Environment and Rural Development, Biofund, Fundo Nacional de Desenvolvimento Sustentável

Project Development Objective (PDO)

Original PDO

To increase the effective management of the Conservation Areas and enhance the living conditions of communities in and around these Conservation Areas

FINANCING

		Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing				
P131965	IDA-H9960	40,000,000	39,951,433	36,764,816
P132597	TF-18239	6,319,635	6,319,635	6,285,490
Total		**46,319,635**	**46,271,068**	**43,050,306**
Non-World Bank Financing				
Borrower/Recipient		0	0	0
Total		**0**	**0**	**0**
Total Project Cost		**46,319,635**	**46,271,068**	**43,050,306**

KEY DATES

Project	Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
P131965	18-Nov-2014	01-May-2015	15-May-2017	30-Nov-2018	29-Nov-2019

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US$M)	Key Revisions
19-Jan-2017	14.94	Change in Loan Closing Date(s) Reallocation between Disbursement Categories
24-Oct-2017	23.34	Change in Implementing Agency Change in Results Framework Change in Loan Closing Date(s) Change in Disbursements Arrangements Change in Institutional Arrangements Change in Financial Management

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Satisfactory	Satisfactory	Modest

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	19-Feb-2015	Satisfactory	Satisfactory	1.76
02	13-Aug-2015	Satisfactory	Satisfactory	4.62
03	30-Dec-2015	Moderately Satisfactory	Moderately Satisfactory	5.51
04	22-Jun-2016	Moderately Satisfactory	Moderately Unsatisfactory	7.91
05	29-Oct-2016	Moderately Satisfactory	Moderately Satisfactory	12.19
06	03-May-2017	Moderately Satisfactory	Moderately Satisfactory	19.18
07	22-Jun-2017	Satisfactory	Satisfactory	19.91
08	27-Dec-2017	Satisfactory	Satisfactory	25.74
09	01-May-2018	Satisfactory	Satisfactory	28.37
10	31-Oct-2018	Satisfactory	Satisfactory	32.84
11	14-Feb-2019	Satisfactory	Satisfactory	34.14
12	20-Sep-2019	Satisfactory	Satisfactory	36.21

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Agriculture, Fishing and Forestry	**95**
Public Administration - Agriculture, Fishing & Forestry	33
Other Agriculture, Fishing and Forestry	62
Industry, Trade and Services	**5**
Other Industry, Trade and Services	5

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)

Environment and Natural Resource Management	**0**
Climate change	10
Mitigation	10
Environmental Health and Pollution Management	24
Air quality management	8
Water Pollution	8
Soil Pollution	8
Renewable Natural Resources Asset Management	30
Biodiversity	30
Environmental policies and institutions	35
Private Sector Development	**100**
Jobs	100

ADM STAFF

Role	At Approval	At ICR
Regional Vice President:	Makhtar Diop	Hafez M. H. Ghanem
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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. **Country context**. When the project was appraised in 2014, Mozambique had achieved impressive gross domestic product (GDP) growth rates that averaged approximately 8 percent between 1993 and 2010 and slightly decreased to 7.4 percent in 2012. It received a significant influx of direct foreign investments, with the Centre for Investment Promotion having approved US$4.2 billion for 515 projects in 2013. However, the rapid economic growth had not translated into rural poverty reduction in recent years. Approximately 70 percent of Mozambique's population of 22.9 million lived in extreme poverty, that is on less than US$2 per day. The country ranked 178 out of 187 in the Human Development Index (2013) of the United Nations Development Programme (UNDP), the lowest in southern Africa. Over 70 percent of the population lived in rural areas, including in and around Conservation Areas (CAs), and were dependent on subsistence agriculture and natural resources for their livelihoods.

2. **Sector context**. At appraisal, Mozambique's system of CAs consisted of seven National Parks (NPs), ten National Reserves (NRs), 17 controlled hunting areas (*coutadas*) and three Community Reserves.[1] The system had been established to conserve ecosystems, wild habitats, biological diversity, and natural resources; and to contribute to the socio-economic well-being of Mozambicans. The CAs covered 18.5 million hectares, which corresponded to 23 percent of the country's land surface. While they had generated income for the national economy and local communities, their potential was not fully used, in part still a consequence of the negative effects of the 1977-1992 civil war on wildlife stocks and habitats. The revenue from tourism and hunting was largely insufficient to finance their management, making them dependent on government allocations and donor funding. Natural resources from CAs played a significant role for rural households for subsistence and income, but important opportunities to use them for improving the livelihoods of local communities had not been fully realized. This was particularly the case for accessing new markets through integrated conservation development activities (e.g. harvesting of non-timber forest products) and for benefitting from nature-based tourism. Despite this potential, CAs faced threats from illegal mining and logging, agricultural encroachment, illegal hunting, and overfishing. The overall cost of environmental degradation in Mozambique was estimated to be nearly US$370 million in 2009.[2]

3. **MozBio Program.** In 2014, the government launched the Mozambique Conservation Areas for Biodiversity and Development (MozBio) Program to reconcile biodiversity conservation, tourism development, and poverty reduction in and around Mozambique's CAs. The program was designed to be financed with resources from the government, the Bank, and various donors and would focus on six pillars.[3] It built on the achievements and

[1] Mitchéu, Tchuma Chatu, and Chipanje Chetu
[2] Ministry for Coordination of Environmental Affairs, 2009: The National Report on the Implementation of the Convention on Biological Diversity in Mozambique.
[3] 1. Policies and Legislation; 2. Institutional & Human Resources; 3. Financial Sustainability; 4. CAs Management; 5. Contribution of CAs to Poverty Reduction; 6. Contribution of CAs to Economic Growth.

lessons learned of the IDA- and GEF-supported Transfrontier Conservation Areas (TFCA) series, which comprised two projects: the TFCA Pilot and Institutional Strengthening Project (TFCA I), which was implemented from 1998 to 2003, and the TFCA and Tourism Development Project (TFCATDP), which was implemented from 2006 to 2014. The Bank's long-term engagement in the sector was key for establishing the MozBio Program. Particularly TFCATDP set the stage by facilitating in 2011 the establishment of the National Administration of Conservation Areas (*Administração Nacional das Areas de Conservação*, ANAC) as the public agency managing all CAs and the Foundation for the Conservation of Biodiversity (*Fundação para a Conservação da Biodiversidade*, Biofund) to raise funds for managing CAs through innovative financing tools. The project further supported the development of five TFCAs and activities for community-led conservation. TFCATDP also facilitated private sector investment in collaboration with the International Finance Corporation (IFC). The TFCA series thus strengthened the legal and institutional framework to scale up CA management and tourism nationally.

4. **MozBio Project.** Upon government request, the World Bank approved the MozBio Project in 2014 as the first in a new Series of Projects (SoP) to support the government's MozBio Program. The first MozBio Project (MozBio 1), for which this Implementation Completion and Results Report (ICR) was carried out, sought to strengthen the management of the CAs with the highest potential for generating revenue and reducing poverty in rural communities. It focused on reducing rural poverty through: i) improving the benefit-sharing mechanism that returns tourism revenues to communities; ii) increasing job creation and business opportunities from tourism; and iii) promoting alternative livelihood activities that reduce destructive practices. The project sought to implement the new institutional and policy framework that TFCATDP supported for management of and tourism development in Mozambique's CA system. The emphasis was on building the capacity of ANAC and Biofund. In addition, the project intended to promote nature-based tourism, finance infrastructure and recurrent costs of the CAs, strengthen community rights to land and resources, and promote alternative livelihoods.

5. **Government strategies.** Mozambique submitted its Initial National Communication (INC) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2003, highlighting the importance of measures integrating environmental issues and socio-economic development and managing natural resources sustainably. It also indicated that forest and grassland conversion account for 97 percent of the country's greenhouse gas emissions. MozBio 1 sought to contribute to addressing these issues directly, also supporting the national readiness process for Reducing Emissions from Deforestation and Forest Degradation (REDD+). The INC also stated that promoting the use of renewable energy sources and energy efficiency measures could help Mozambique to reduce emissions. The project sought to contribute to this by promoting energy efficiency in charcoal making and renewable energy among tourism operators in the CA. Though not referenced in the PAD, the project was also aligned with the upcoming National Strategy and Action Plan of Biological Diversity of Mozambique (2015-2035) with its vision for biodiversity to contribute directly to improving the quality of life of Mozambicans through integrated management, conservation, and equitable use. While the government's Rural Development Strategy and ANAC's Strategic Plan would only be approved in 2015, the team ensured through its consultations at appraisal that the project would also be in line with these in substance.

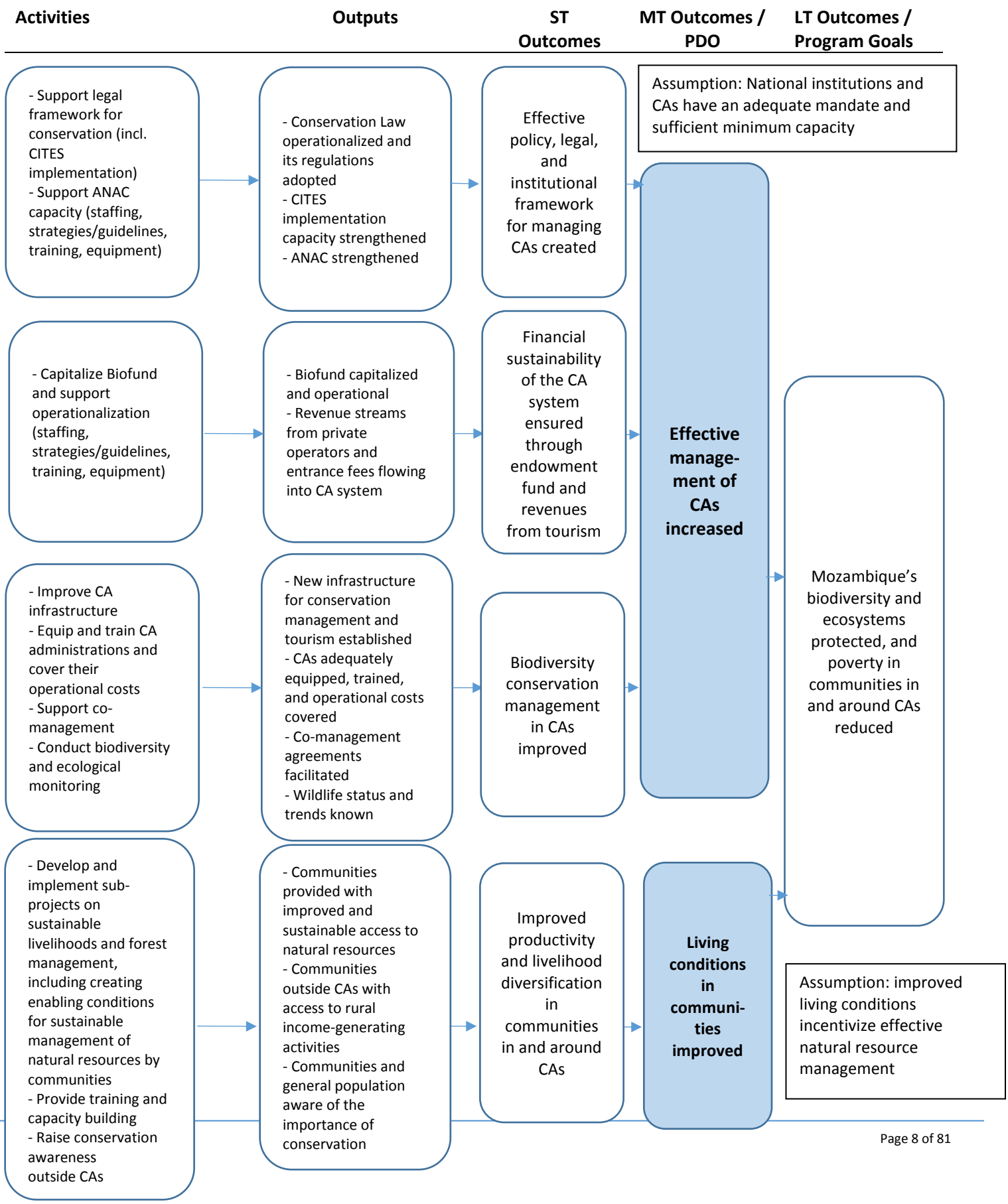
6. **Rationale for Bank involvement.** Through its support for the TFCA series, the Bank was well-positioned to further promote Mozambique's CAs and their potential to develop tourism and reduce poverty. It had already successfully contributed to the reform process of the legal and institutional framework for conservation and

tourism development and had financed key infrastructure in select CAs. The MozBio Program was to continue and expand this engagement, with MozBio 1 seeking to strengthen additional CAs and introducing additional activities for supporting communities in and around target areas, beyond tourism, which was the focus of the TFCA series.

7. **Higher level objectives to which the project contributed.** The project was aligned with the government's poverty reduction strategy as laid out in its 2011-14 Poverty Reduction Strategy Paper (*Plano de Acção de Redução de Pobreza*, PARP). The PARP's third pillar focused on Governance and Public Sector Capacity and included the goal of improving natural resource management to increase its contribution to the domestic economy and local communities' welfare. The project also contributed to the World Bank Group's strategy to end extreme poverty and promote shared prosperity by recognizing nature-based tourism, ecosystems conservation, alternative livelihood activities, and strengthening the biological resource base of CAs as key for supporting food security, nutrition, and job creation for some of the poorest communities in the country. The project also contributed to the Bank's 2012-2015 Country Partnership Strategy for Mozambique, particularly Objective 1.2: "Increased productivity in agriculture and other potential growth sectors", Objective 2.2: "Improved resilience to natural disasters and impacts of climate change", and Objective 3.3: "Strengthened non-renewable, renewable natural resources and environmental management". Furthermore, it contributed to the Global Environment Facility's (GEF) objectives to improve sustainability of protected area systems (Biodiversity Focal Area); to promote conservation and enhancement of carbon stocks through sustainable management of land use, land-use change, and forestry; and to promote market transformation for energy efficiency in industry and the building sector (both Climate Change Focal Area). In this sense, the project contributed to a range of environmental benefits by protecting globally important biodiversity and mitigating greenhouse gas emissions.

Theory of Change (Results Chain)

8. The project's theory of change (see figure below) is derived from the PDO, outcomes, components, and description of activities in the Project Appraisal Document (PAD). The project was designed to achieve two medium-term outcomes (i.e. the two parts of the PDO), namely increasing the effective management of key CAs and enhancing the living conditions of communities in and around CAs. These outcomes were to be achieved through the short-term outcomes of creating an effective policy, legal, and institutional framework for managing CAs, ensuring the financial sustainability of the CA system through the Biofund endowment fund and revenues from tourism, improving the management of biodiversity conservation within CAs, and fostering community development through improved productivity and livelihood diversification. The medium-term outcomes of the project, along with the other completed, ongoing, and future activities under the MozBio Program (including MozBio 2 as follow-up project to MozBio 1), would help achieve the government's long-term goal of protecting Mozambique's biodiversity and ecosystems, while improving the living conditions of communities in and around CAs and also their contribution to conservation. The chart below outlines the project's theory of change in further detail.


Activities
Outputs
ST Outcomes
MT Outcomes / PDO
LT Outcomes / Program Goals
- Support legal framework for conservation (incl. CITES implementation)
- Support ANAC capacity (staffing, strategies/guidelines, training, equipment)
- Conservation Law operationalized and its regulations adopted
- CITES implementation capacity strengthened
- ANAC strengthened
Effective policy, legal, and institutional framework for managing CAs created
Assumption: National institutions and CAs have an adequate mandate and sufficient minimum capacity
- Capitalize Biofund and support operationalization (staffing, strategies/guidelines, training, equipment)
- Biofund capitalized and operational
- Revenue streams from private operators and entrance fees flowing into CA system
Financial sustainability of the CA system ensured through endowment fund and revenues from tourism
Effective manage-ment of CAs increased
Mozambique's biodiversity and ecosystems protected, and poverty in communities in and around CAs reduced
- Improve CA infrastructure
- Equip and train CA administrations and cover their operational costs
- Support co-management
- Conduct biodiversity and ecological monitoring
- New infrastructure for conservation management and tourism established
- CAs adequately equipped, trained, and operational costs covered
- Co-management agreements facilitated
- Wildlife status and trends known
Biodiversity conservation management in CAs improved
- Develop and implement sub-projects on sustainable livelihoods and forest management, including creating enabling conditions for sustainable management of natural resources by communities
- Provide training and capacity building
- Raise conservation awareness outside CAs
- Communities provided with improved and sustainable access to natural resources
- Communities outside CAs with access to rural income-generating activities
- Communities and general population aware of the importance of conservation
Improved productivity and livelihood diversification in communities in and around CAs
Living conditions in communi-ties improved
Assumption: improved living conditions incentivize effective natural resource management

Project Development Objectives (PDOs)

9. The PDO and Global Environment Objective (GEO) of the project, as articulated in the PAD and the IDA and GEF financing agreements, was to increase the effective management of the CAs and enhance the living conditions of communities in and around the CAs. Eleven of the CAs included in the project were selected through a participatory process with key conservation stakeholders in the country and based on the recommendations of a scoping study on tourism potential prepared by the International Finance Corporation (IFC). In addition, the Malhazine NR was included as a potential future headquarters for ANAC.[4] Maps of the project area can be found in Annex 7.

Key Expected Outcomes and Outcome Indicators

10. The key indicators linked to the outcomes specified in the PDO statement above were as follows:

Increase the effective management of the CAs:
- Areas brought under enhanced biodiversity protection (ha) (World Bank Core Indicator)
- Increase in number of visitors in targeted CAs with tourism potential (percentage increase)

Enhance the living conditions of communities in and around the CAs:
- Direct project beneficiaries (number) (World Bank Core Indicator)
- Female beneficiaries (percentage) (World Bank Core Indicator)

Components

11. The project was organized in five components as follows:

i. *Component 1: Strengthening Institutions for CA Management* (*original allocation: US$8.0 million IDA, US$3.2 million GEF; actual cost: US$5.2 million IDA, US$3.2 million GEF*): Improve the capacity of ANAC, Biofund, and the Ministry for Coordination of Environmental Affairs (Ministério para Coordenação da Accão Ambiental, MICOA) to develop and influence conservation and tourism policies and regulations, strengthen coordination and management of the CA system and critically endangered species conservation, increase the financial sustainability of CAs and tourism revenues, improve monitoring and evaluation systems, and support communication strategies, including through:
   - Strengthening ANAC by providing equipment, technical assistance, and training;
   - Strengthening Biofund by supporting its consolidation through, inter alia, a) the capitalization of the endowment fund, and b) the operationalization of Biofund through the provision of equipment, financing of operating costs, and technical assistance;
   - Strengthening the national authority for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) by supporting proper implementation of the CITES

[4] The full list of targeted CAs was as follows at appraisal: Zinave NP, Banhine NP, Chimanimani NR, Gilé NR; Maputo Special Reserve, Ponta do Ouro Marine Reserve, Quirimbas NP, Bazaruto NP, Pomene NR, Limpopo NP, Marromeu NR and surrounding four coutadas (No's 10, 11, 12 and 14), and Malhazine NR.

Convention requirements to improve wildlife management through the provision of technical assistance and training to the CITES authority within MICOA.

ii. *Component 2: Promotion of Tourism in CAs (original allocation: US$1.9 million IDA; actual cost: US$2.3 million IDA)*: Support ANAC and selected public-private institutions to address barriers to nature-based tourism development to better manage sports hunting administration and improve revenue generation in the Republic of Mozambique, through:

- Tourism development in CAs by providing training and technical assistance with regards to, inter alia, developing a business plan, establishing a revenue management system, tourism statistics, marketing activities, studies informing tourism planning, tourism master plans, and organization of public-private fora;
- Sports hunting development by providing training and technical assistance with regards to, inter alia, establishing a revenue management system, sports hunting statistics and plans, and land availability studies.

iii. *Component 3: Improving CA Management (original allocation: US$16.4 million IDA; actual cost:* US$16.0 million IDA*)*: Strengthen the management of key CAs[5] and carry out wildlife surveys and monitoring through:

- CA Management: Provision of training and equipment, works including housing and road repairs and maintenance, technical assistance to develop business and management plans, and financing of operating costs;
- Monitoring and Survey: Carrying out wildlife surveys in terrestrial and marine environments, including: (a) one national aerial survey of elephant ranges; (b) a national survey of key marine environment; (c) a survey to establish the national status and distribution of lions and leopards; and (d) a survey to establish the national status and distribution of hippos and crocodiles.

iv. *Component 4: Piloting Support to Sustainable Livelihoods of Communities within and around CAs* (*original allocation: US$6.8 million IDA, US$3.1 million GEF; actual cost: US$5.6 million IDA, US$3.1 million GEF*): Improve and strengthen natural resource-based livelihoods of communities in and around CAs through:

- Supporting sustainable management of natural resources by local communities through the provision of technical advisory services and equipment to conduct community land zoning, natural resource mappings, and training and capacity building of local community members, leaders, and organizations;[6]
- Promoting sustainable livelihoods within and around CAs through sub-projects relating, inter alia, to tourism, fisheries, conservation agriculture, and sustainable forestry;[7]

[5] The component was designed to be implemented in all twelve targeted CAs, but its geographical scope was reduced as a result of the Mid-term Review (MTR), as described in Section I.B.

[6] Sub-component 4.1 (Support enabling conditions for sustainable management of natural resources by local communities), which included these activities, was designed to be implemented in all twelve CAs, but was only implemented in those six that benefited from sub-projects under Sub-components 4.2 and 4.3, as described in further detail in Section I.B.

[7] The PAD did not specify in which CAs these activities, which were included under Sub-component 4.2 (Promote Sustainable Livelihoods within and around CAs), were to be implemented. As a result of the MTR, it was decided to implement sub-projects in six CAs, as described in Section I.B.

- Promoting sustainable forest management through technical advisory services, equipment, and payment of operating costs to reduce deforestation within and around the Quirimbas NP and Gile NR, and promote energy efficient charcoal making kilns.[8]

v. *Component 5: Project Management, Monitoring, and Evaluation (original allocation: US$6.9 million IDA; actual cost: US$7.7 million IDA)*: Support the project's management and coordination and build its capacity regarding procurement, financial management, safeguards, and monitoring and evaluation through technical advisory services, training, the acquisition of goods, and the payment of operating costs

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

12. The project underwent two Level 2 restructurings. The first one took place in January 2017 and extended the loan closing date and included a reallocation between disbursement categories to entrust Biofund with the responsibility to manage the operational costs of CAs. The second one, which was a result of the Mid-term Review (MTR), took place in October 2017 and had the main goals of adjusting the results framework, changing the disbursement arrangements and estimates in line with Biofund's new role, and reallocating funds to higher-performing CAs. Details on this and the underlying reasons are summarized in the following paragraphs.

Revised PDOs and Outcome Targets

13. The PDO and outcome targets of the project were not revised.[9]

Revised PDO Indicators

14. The PDO indicator "Increase in number of visitors in targeted CAs with tourism potential (percentage increase)" was dropped due to difficulties in data collection and attributability to the project and replaced by the indicator "Number of regularized accommodation concessions".

15. Changes were also made to the Intermediate Results Indicators, mainly by dropping an indicator that was no longer considered adequate, by adjusting baseline and target values to recent developments, and by accounting for refinements and simplifications in methodologies. Please refer to Table 1 for an overview of the changes and to Section IV.A for an assessment of the project's monitoring and evaluation (M&E) performance.

[8] These activities, included under Sub-component 4.3 (Promoting sustainable forest management within and around selected CAs), were designed for two CAs. This plan was maintained during implementation, but one CA changed as a result of the MTR, as described in Section I.B.

[9] Note that for three PDO indicators (Areas brought under enhanced biodiversity protection (ha); Direct project beneficiaries (number); Female beneficiaries (percentage)), the annual target values for 2017 and 2018 were slightly reduced while maintaining the end targets. For the indicator on female beneficiaries, the restructuring paper stated that the unit of measurement was to be changed from number to percentage. However, percentage was already the unit stated in the PAD.

Table 1: Summary of project indicators before and after restructuring

Original Indicators	Second Restructuring (October 2017)[10]
PDO Indicators	
Areas brought under enhanced biodiversity protection	**Revised**: Annual targets for 2017 and 2018 reduced
Direct project beneficiaries	**Revised**: Annual targets for 2017 and 2018 reduced
Female beneficiaries	**Revised**: Annual targets for 2017 and 2018 reduced; unit of measurement changed from number to percentage
Increase in number of visitors in targeted CAs with tourism potential	**Dropped**: Due to difficulties in data collection and attributability to the project
	New: Number of tourism concessions regularized in the Bazaruto Archipelago National Park
Intermediate Results Indicators	
Score on the institutional capacity tool for ANAC	**Revised**: Baseline increased from 37 percent to 38 percent (2.7 percent increase) and end target reduced from 61 percent to 58 percent (4.92 percent decrease), due to a review of the evaluation methodology that concluded that the original baseline was too low and the original target too ambitious
Annual Biofund disbursement to the CAs	**Revised**: End target increased from an annual target of US$500,000 to a cumulative target of US$3 million (which corresponds to a 140 percent increase[11]) due to over-performance by Biofund and new resources available
ANAC's annual revenues collected from targeted CAs	**Revised**: Baseline decreased from US$1,280,000 to MZN 32,676,821 (17.33 percent[12]) and end target decreased from US$1,460,000 to MZN 36,778,050 (18.42 percent) due to exclusion of four *coutadas* from project support and monitoring. The measurement unit changed from US$ to MZN because revenues were registered in the local currency and given large fluctuations in the exchange rate.
	New: Submitted and/or signed Co-Management Agreements for Conservation Areas
ANAC annual budgetary support from central state treasury	**Dropped**: **A**s no longer considered adequate because the financial crisis had weakened the government's financial capacity to support ANAC
Number of jobs created in tourism and conservation in targeted CAs	**Revised**: Data collection methodology changed to only include jobs inside CAs (exclusion from Ponta do Ouro and Inhassoro/Vilanculos also from the title of the indicator); baseline reduced from 937 to 926 (1.17 percent) and end target increased from 1,136 to 1,299 (14.31 percent) due to the methodology changes; unit of measurement changed from percentage to number
Law Enforcement patrols in targeted CAs	**Revised**: Methodology changed to count the number of patrols and indicator renamed correspondingly (original title: "Law enforcement zones regularly patrolled in targeted CAs", measured in percentage), given technical limitations within CAs
Planned priority infrastructure completed	**No changes**
Index on local communities' perception of benefits from target CAs	**Revised**: Title and description adjusted to better reflect the intention of the indicator (original title: "Average increase in economic benefits of communities supported by Component 4"); previously missing baseline defined and target increased accordingly from 29 percent to 35 percent (75 percent increase)
Number of beneficiaries of	**No changes**

[10] No changes to the results matrix were made during the January 2017 restructuring.
[11] The restructuring paper stated that the target for Biofund's disbursements to the CAs was increased by 500 percent, but this value is based on a calculation error resulting from mixing annual with cumulative values.
[12] Exchange rate of US$1 = MZN 30.88, based on November 18, 2014 as the date of the baseline assessment.

subprojects supported by the project	
Income derived from tourism and wildlife utilization in targeted CAs and returned to communities	**Revised**: Baseline reduced from US$220,000 to MZN 3,115,035 (54.15 percent[13]) and end target reduced from US$250,000 to MZN 3,786,345 (50.95 percent), to account for the fact that the indicator only includes CAs with revenues and excludes four *coutadas*; unit of measurement changed from US$ to MZN as the revenues were registered in the local currency; "annual" removed from indicator title (but no change in substance as the methodology continued to report annual amounts)
Annual CO_2 emissions from deforestation in selected CAs	**No changes**[14]

Revised Components

16. Some components were revised with the second restructuring:

- To reflect Biofund's new role as disburser of operating costs to CAs, the sub-components of Component 3 "Improving CA Management" were re-arranged. Sub-component 3.1 was realigned to focus on "Operating Costs of Key CAs", thus isolating the financing of the operating costs of CAs in a stand-alone sub-component. The other activities that had originally been included in this sub-component were added to Sub-component 3.2, which had previously focused exclusively on carrying out wildlife surveys and monitoring, and was now renamed from "Monitoring and Survey" to "CA Management" to reflect this change in focus.
- To allow for more flexibility in implementing Sub-component 4.3 "Promoting sustainable forest management within and around selected CAs", it was changed to "Reduce deforestation within and around selected CAs" and the target areas were adjusted to include more suitable areas, including environmental education. Activities to promote environmental education in communities (including the development of corresponding guidelines) were added to ensure that communities were made aware of the role of the sub-projects in natural resource management.

Other Changes

17. The following additional changes were made:

- *Closing date extension:* A twelve-month extension from November 30, 2018 to November 29, 2019 was processed for the IDA grant through the first and for the GEF grant through the second restructuring to facilitate the adequate finalization of community projects and infrastructure works. This was necessary to compensate for the delays caused by the slow and limited transfer of resources through the public expenditure system e-SISTAFE in the first year of implementation, and to allow for sufficient time to implement infrastructure works and community sub-projects.

[13] Exchange rate of US$1 = MZN 30.88, based on November 18, 2014 as the date of the baseline assessment.
[14] However, the value for the average carbon stock suggested in the PAD did not take into account that the emission reduction potential depends on the type of forest, which led to a slightly inaccurate baseline value. This issue was identified after the mid-term review and corrected during project completion.

- *Changes in the Project Implementation Unit (PIU):* Project implementation changed from ANAC to the National Sustainable Development Fund (*Fundo Nacional de Desenvolvimento Sustentável*, FNDS). Refer to the favorable factors affecting implementation in Section III.B. for details.
- *Adjustment of target institutions:* As part of Component 1, the project intended to strengthen the capacity of MICOA as host of the national authority for CITES. However, when the government was restructured and MICOA dissolved and its responsibilities integrated into the newly created Ministry of Land, Environment, and Rural Development (*Ministério da Terra, Ambiente e Desenvolvimento Rural*, MITADER), the CITES authority was incorporated into ANAC. Therefore, ANAC received the support that had initially been intended for MICOA.
- *Changes in disbursement arrangements:* At the beginning of the project, funds were disbursed to the CAs through e-SISTAFE, which proved too rigid for processing the many small transactions of CA operations. Operating costs were therefore channeled through Biofund starting in 2017. The first restructuring adjusted the disbursement categories accordingly (see Table 1), the second one raised the disbursement ceiling of Biofund's Designated Account from US$200,000 to US$500,000 to ensure an adequate cash flow towards the CAs.
- *Changes in disbursement estimates:* The second restructuring adjusted the disbursement estimates given the institutional changes around the PIU and the need for larger disbursements. The latter were necessary to ensure timely completion of the project and to accommodate the depreciation of Special Drawing Rights (SDR) against the United States dollar that had reduced the project budget.
- *Reallocation of funds:* The second restructuring reallocated funds under Sub-Component 4.3 from Quirimbas NP to Chimanimani NR and Maputo Special Reserve (MSR) to reward CAs with higher implementation performance. This was also possible because Quirimbas received support from the Mozambique Forest Investment Project (MozFIP; P160033). However, as MSR received sufficient support through a TFCATDP-facilitated collaboration with the non-governmental organization (NGO) Peace Parks Foundation (PPF) and a 2018 co-management agreement facilitated by MozBio 1, the funds it was supposed to receive as per the restructuring paper were instead allocated to Gilé NR, where need was greater despite the CA's co-management agreement.
- *Reduction of number of targeted areas as a result of the MTR:* To focus the available funds and in line with capacity, support on salaries and operational costs for the CAs of Banhine, Zinave, Marromeu, and Pomene under Component 3 was mostly stopped, though contracts that had already been signed were completed, including some infrastructure support in Pomene for staff housing. Zinave and Banhine continued to receive support through a co-management agreement and from other sources channeled through Biofund. Also Malhazine NR received support from other sources instead of MozBio 1. Similarly, it was decided to implement sub-projects under Sub-component 4.2 (Promote Sustainable Livelihoods within and around CAs) in six areas due to limited local implementation capacity.[15]

[15] The PAD had not specified how many CAs would be included under this sub-component.

- *Reorganization of enabling conditions for sustainable management of natural resources by local communities:* The enabling conditions under Sub-component 4.1 (Support enabling conditions for sustainable management of natural resources by local communities) were to a large extent included in the service provider contracts signed under Sub-components 4.2 and 4.3 (Promoting sustainable forest management within and around selected CAs), rather than being executed as separate activities. The goal was to expedite the implementation of sub-projects and to avoid raising expectations in communities that could not be met. Funds under Sub-component 4.1 could thus be reallocated to implement community development activities in two additional CAs, namely Bazaruto Archipelago National Park (BANP) and Limpopo NP.

Table 2: Reallocation between disbursement categories through first restructuring

	Disbursement Category	Original Allocation	Actuals + Commited	New Allocation through Restructuring	Disbursement % (Type Total)	
					Original	Proposed
IDA (XDR)	GD,WK,NCS,CS,TRG,OP except A(ii),b,D	20,200,000.00	3,278,818.21	17,985,667.00	100	100
	GD,WK,NCS,CS,TG,OP part Aii,b	1,200,000.00	241,618.61	3,398,500.00	100	100
	GD,WK,NCS,CS,TRG,OP part D(ii)	3,800,000.00	33,381.87	3,800,000.00	100	100
	PPF Refinancing	1,200,000.00	1,215,832.97	1,215,833.00		100
	TOTAL	26,400,000.00	4,769,651.66	26,400,000.00		
GEF (US$)	Capitalization of the Endowment Fund	3,196,347.00	3,196,347.00	3,196,347.00	100	100
	GDS,NCS,CS OP part D(iii)	3,123,288.00	5.00	3,123,288.00	100	100
	TOTAL	6,319,635.00	3,196,352.00	6,319,635.00		

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

18. The changes described above strengthened the results matrix by improving the adequacy of indicators to capture the results and ensured effective project and financial management.

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

Rating: High

19. The project's development objectives were **highly relevant** for achieving the government's development goals at appraisal (see Section I.A.) and remained so up until completion. The government's 2015-2019 Five-Year-Program included the promotion of employment (Priority III) as well as ensuring the sustainable and transparent management of natural resources and the environment (Priority V) as dedicated priority areas.[16] The project contributed to key objectives and activities under these priorities, for example those on increasing the productivity of family agriculture, supporting community involvement in tourism, strengthening the national capacity on biodiversity planning and management, assuring the ecological and financial sustainability of CAs, and improving environmental education. The project did so by focusing on key challenges in conservation like the weak capacity of decentralized authorities, the absence of a framework for partnering with the private sector, and the lack of incentives for local communities to contribute to sustainable resource management. Furthermore, the project was embedded in the government's wider and ongoing MozBio Program, as described above.

20. The project objectives also contributed significantly to the Bank's Country Partnership Framework (CPF) for Mozambique for fiscal years (FY) 2017 to 2021. The project's objectives were closely aligned with two of the eleven CPF Objectives. In Focus Area 1 "Promoting Diversified Growth and Enhanced Productivity", CPF Objective 2 is "Increasing Agriculture Growth". To achieve this, the CPF program proposes to unlock the agriculture sector's potential by, inter alia, providing farmers with access to productivity-enhancing inputs and training to increase agriculture and forestry productivity; and by improving access to both national and regional markets for such products. MozBio 1's objective of enhancing the living conditions of communities in and around the CAs was closely aligned with CPF Objective 2 as these communities were highly dependent on agriculture, which is why the project supported their productivity and, at least for farmers in buffer zones, their access to markets. Consequently, the project's activities will be accounted for under the CPF Objective Indicator: "Number of farmers reached through agribusiness and forestry investments".

21. MozBio 1's objectives were also closely aligned with CPF Objective 11: "Improving Management of Climate Risk and Natural Resources", which is part of Focus Area 3 on "Enhancing Sustainability and Resilience". The World Bank Group (WBG) committed to help increase resilience to weather variability and climate change, including through the support of sustainable management of renewable natural resources like forests, particularly as these can also provide benefits to poor rural communities. The project objectives were highly

[16] Government of Mozambique 2015: Proposta do Programa Quinquenal do Governo 2015-2019. Approved by the Council of Ministers in February 2015. Maputo.

relevant to these ambitions as they encompassed the effective management of CAs that are key for conserving such resources, most notably forests and wildlife, and that host ecosystems that are effective natural buffers to natural hazards, including droughts. The project activities were also in line with the CPF in that they sought to support poor communities in benefiting from natural resources in a sustainable manner by improving their livelihoods, productivity, and market access. MozBio 1 will therefore also contribute to the CPF Objective Indicator: "Average increase in economic benefits of communities targeted by natural resource management interventions (forestry, fisheries, conservation in MozBio intervention areas)" and the Supplementary Progress Indicator: "Areas brought under enhanced biodiversity protection". Project objectives were also aligned with the incremental reasoning for the project's GEF allocation.

22. The project built adequately on the preceding TFCA projects, both in terms of incorporating relevant lessons learned and by maintaining their approach to managing biodiversity and improving livelihoods. Lessons from the TFCA projects that were particularly relevant and incorporated into project design were the following: i) the importance of a strong institutional framework for adequate CA management, with a particular focus on ANAC and Biofund, ii) the need to promote alternative livelihoods for communities to reduce pressure on CAs, and iii) a preference for capturing results at the CA- rather than the district-level to ensure that they can be attributed to project activities. The PAD articulated the challenges to be solved clearly and formulated them in an ambitious PDO. However, the second part of the PDO would have benefited from more specific wording as the enhanced living conditions of communities correspond to a long-term outcome that is beyond what the project could have achieved. This will be further discussed in Sections II.B. and IV.A. as it impacted the project's ability to meet this objective and the design of the results framework.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Rating: Substantial

23. Building on the success of the TFCA series, the government was able to mobilize resources from different development partners to achieve the goals of the MozBio Program. MozBio 1 was closely integrated with financing from the government and the funds made available by other partners. In total, this funding amounted to approximately US$172 million from 2015 to 2019, 29 percent of which stemmed from MozBio 1. The two most important financiers of relevant activities were the German development bank Kreditanstalt für Wiederaufbau (KfW), which supported Limpopo NP with US$32 million and contributed US$9 million to the Biofund endowment, and (through the co-management agreements facilitated by the project) PPF, which focused on Zinave NP (US$20 million), Maputo Special Reserve (US$16 million), Banhine NP (US$1 million), and Limpopo NP.

Assessment of Achievement of Each Objective/Outcome

24. The PDO comprised two objectives. The extent to which they were achieved as a consequence of project activities is evaluated separately based on evidence collected through the results framework and additional information. Details on the individual indicators of the results framework are available in Annex 1. Through

employment generation, CA revenue sharing, and community sub-projects, MozBio 1 reached a total of 57,393 beneficiaries by project completion, achieving its target at 102 percent.[17] 34 percent of the beneficiaries were women. The annual income for communities from tourism and wildlife utilization reached 6.1 million MZN (US$89,838), significantly exceeding the target of MZN 3.8 million (US$55,965).[18]

Objective 1: Increasing the effective management of the Conservation Areas

25. At appraisal, Mozambique's policy and institutional system for managing CAs was still in its infancy. The milestone Conservation Policy from 2009 had not yet been fully implemented and key institutions had only been recently established and were not yet fully functional. ANAC's core staff had not yet been recruited and it did not dispose of strategic and business plans. Biofund's staffing was also not complete and its endowment fund had not been capitalized yet and could thus not adequately support CAs. Founded as a private not-for-profit entity with legal and financial autonomy and the right to own and manage its assets, Biofund was expected to take on a key role in conservation in Mozambique. Its stated mission was to support the conservation of aquatic and terrestrial biodiversity and the sustainable use of natural resources. At the same time, CAs were faced with inefficiencies in the process that the Ministry of Finance used to return to them 80 percent of the revenues they generated. Neither could CAs rely on sufficient income from tourism, partly because marketing was weak, infrastructure investment lacking, and the concessions had not been satisfactorily regulated. Due to this combination of insufficient institutional support from the national level and a lack of funding, CAs were not able to operate effectively. Suffering from weak administrative capacity and limited equipment and infrastructure, they did not adequately fulfil their role of managing biodiversity conservation.

Effective policy and institutional framework for managing CAs created

26. The project contributed significantly to the creation of an effective policy and institutional framework for managing CAs. Facilitating the legislative process, it helped the government, particularly through ANAC, in operationalizing the new Conservation Law by amending it to better achieve its objectives and by supporting the design of key regulations. Both the amendment and the new regulations were adopted in 2017. The project further supported the CITES authority at ANAC. The implementation of CITES is fundamental for improving wildlife management and a pre-requisite for promoting trophy hunting to generate income. The project supported the authority by (a) providing equipment, including tools to mark ivory, (b) monitoring the domestic market for illegal wildlife trade, (c) supporting inter-sectoral collaboration, mainly by facilitating meetings with relevant agencies to investigate wildlife crime, (d) contributing technical expertise to CITES committee meetings and to the Conference of the Parties to CITES in South Africa (CoP17), and (e) carrying out an audit to catalogue the country's ivory stockpile. A significant result of the project was that it helped Mozambique to obtain an upgrade from *Country of Concern* to *Country under Observation* in 2016 through assistance in drafting and submitting the *Report on the National Action Plan on Ivory and Rhino Horns*. A dialogue with the private sector on exporting CITES products is ongoing. While the PAD indicated that the project intended to also finance the revision of legislation on CITES relevant for poaching and illegal wildlife trade and for strengthening the CITES

[17] Please refer to Annex 1 for a discussion on the baseline used and the implications for the target value.
[18] Exchange rate used: US$1 = MZN 67.90; MZN 1 = US$0.0147 (as of April 15, 2020)

Management Authority, these activities were not implemented. The preparation of a communication strategy for ANAC to raise awareness on conservation was financed by a separate program under USAID.

27. Strengthening ANAC was a key approach for the project to improve the institutional framework for CA management. It included a variety of activities to do so, particularly (a) funding staff salaries, especially at the management level (including five directors and nine heads of department), (b) facilitating annual meetings with all CA Administrators and TFCA coordinators, (c) organizing study tours to South Africa, Brazil, and Botswana, (d) funding the attendance of ANAC staff at international conferences, (e) introducing management tools like operational guidelines that are now used by all CAs, a CA database that allows ANAC to monitor biodiversity in the CAs, a revenue collection system at the central level (for sports hunting fees) as well as for MSR, the Ponta do Ouro Partial Marine Reserve (PPMR), and BANP that helped increase revenues by ensuring that entrance and other fees are consistently paid[19] and that will be replicated in Limpopo, and the Management Effectiveness Tracking Tool (METT) for CA monitoring, (f) training ANAC staff in headquarters and CAs in monitoring and evaluation and safeguards, (g) offering planning and training workshops on financial management, human resource management, procurement, team building, and other topics, (h) funding scholarships for staff to attend national and regional institutions such as the College of African Wildlife Management, Mweka, in Tanzania and the Southern African Wildlife College in South Africa, (i) providing equipment such as vehicles, computers, and office furniture, and (j) funding operating costs and local travel for supervising the CAs. ANAC required and received more capacity building than was originally conceived during project preparation, particularly in the form of event participation and training. This targeted investment enabled ANAC to support project implementation and general operations in all CAs despite the institutional changes that weakened its structure and contributed to the decision of moving the PIU FNDS. While ANAC was reasonably strengthened by the project, the institution remains weak and will require further support. An important shortcoming was that the human resource management strategy that the project sought to support was not developed as intended. Similarly, no performance-based human resource management system, a precondition for hiring and retaining qualified staff, could be put in place because ANAC had to follow the general government system. ANAC's weakness is evidenced, for example, by its limited role in community engagement. The community sub-projects of Component 4 were mainly supported by the PIU at the central level and by the beneficiary CAs and district officials locally, with ANAC's council only approving them. ANAC also did not produce the national guidelines on how CAs should engage with local communities. Additional gaps that need to be addressed include the introduction of new financial management software and corresponding staff training, as well as launching advocacy for increasing the national budget allocations for CAs. The software could not be introduced because it became clear during implementation that general government procedures had to be followed, which require the use of e-SISTAFE. An even broader challenge that remains is improving the financial flows between the national and provincial offices and individual CAs. To a large extent, this must be resolved at the ministerial level, particularly with a view to the difficulties in having the Ministry of Finance return 20 percent of CA revenues to CA communities, as required by law.

[19] The new revenue collection system contributed to an increase in receipts of 52 percent in MSR and of 32 percent in BANP from 2018 to 2019 and, together with an increase in fees, resulted in higher revenue for the CA system. The exact increase in revenue from the new system cannot be quantified because there is no adequate baseline data and because the impacts from potential increases in tourism, the higher fees, and the increase in fee collection cannot be reliably separated.

Financial sustainability of the CA system ensured through endowment fund and revenues from tourism

28. To ensure the financial sustainability of the CA system, the project operationalized Biofund. US$3.2 million from the GEF grant were disbursed as seed funding to capitalize Biofund's endowment fund in 2015. The project also financed around 40 percent of Biofund's staff salaries, equipment, consulting services, and operating costs. It supported the institution in developing its internal procedures, including an Operational Manual and annual work plans, and in designing communications, fundraising, and investment strategies as well as the 2018-2022 Strategic Plan. As a result, Biofund implemented additional financing mechanisms such as an affinity debit card that generated about US$50,000 in revenue in 2019 and biodiversity offsets supported by other partners. It also mobilized endowment funds from KfW and the NGO Conservation International, as well as sinking funds from the Agence Française de Développement (AFD), the European Union (EU) the United States Agency for International Development (USAID), and UNDP. Additional grants from the EU and AFD are expected for 2020. With this support, Biofund could initiate its first disbursement to CAs in 2016 and was able to use different funding sources to support 14 CAs by the end of the project. By having disbursed US$3.9 million from its endowment and sinking funds to CAs by December 2019, it achieved its respective target under the project at 131 percent. The funds benefited six CAs and constituted around 22 percent of their operational budget. In addition, the project supported Biofund in organizing exhibitions on biodiversity, in participating in international conferences, and in developing promotional material and its website.

29. The project also supported the effective management of CAs by increasing revenues from tourism. These almost tripled from 2012 to 2018, from around US$1 million to US$2.5 million, 54 percent of which came from safari hunting.[20] While this is still insufficient for financing CA management and supporting local communities, it demonstrates a positive trend and is an important achievement that can also be attributed to project activities. The project contributed to an increase in employment in tourism and conservation in CAs by 66 percent, from 1,074 persons in 2014 to 1,781 persons in 2019.[21] Most importantly, the project sought to improve the business climate for tourism investments in CAs. It supported the consultancies to prepare and launch the tourism concession tenders for MSR, Limpopo NP, and BANP, which resulted in a successful tender for the latter. It also helped regularize eight tourism concessions in BANP,[22] thus providing clarity for both CAs and operators and surpassing the corresponding indicator target. It further engaged successfully in attracting investment for concession sites in MSR (Membene as part of the co-management agreement with PPF) and BANP (Zenguelemo Lodge). The initially intended establishment of public-private fora for select CAs with high tourism potential was not realized as relevant platforms already existed in some areas.[23] Tourism was promoted through marketing and communication campaigns that included branding CAs, promoting ANAC and Biofund, and raising the profile of nature-based tourism, for example by developing new logos, brochures, and movies, and through the organization of and participation in tourism fairs and other events, including Biofund's successful annual

[20] Ministry of Agriculture and Rural Development 2020: Completion Report MozBio 1.
[21] Note that the baseline and target values used here correspond to those measured by the PIU. See Annex 1 for details.
[22] Thumba Yedhu (Zenguelemo), Azura, Pestana, Beyound, Cipriano Neto, Eugénio Numaio, Yassine Amugy, Indico Bay. Note that some of these were part of the agreements signed at the International Conference on Nature Based Tourism in 2018, mentioned below.
[23] MSR had a Steering Committee in which PPF as the co-manager participated. This was extended to include relevant private sector stakeholders. Similarly, the management committee of Quirimbas NP also had a seat for a private sector representative.

biodiversity exhibitions. In doing so, the project made a major contribution to anchoring biodiversity conservation in the public discourse in Mozambique. A highlight was the FNDS-funded International Conference on Nature Based Tourism in 2018, which resulted in the signing of eight public-private partnership agreements with expected investments of over US$600 million, US$22.4 million of which have already been disbursed.[24] Investments in infrastructure and wildlife in CAs were undertaken not only to support conservation, but also with a view to improving the enabling environment for tourism operators. Activities to promote tourism were also linked to the community sub-projects, as best exemplified by the construction of Zenguelemo Lodge. While the lodge could not be finished before the project closing date, funding was secured in cooperation with the co-manager to ensure that it will become operational during 2020 (further details provided under Objective 2). To better manage tourism and the resulting revenues, the project helped improve tourism statistics and financed a new system to collect data and revenues in MSR and BANP. To increase the revenue from sports hunting and in support of the implementation of CITES, the project helped strengthen the information base on wildlife counts and update the plans for lion and leopard hunting. It also supported an annual meeting to foster coordination with hunting operators. The component that supported tourism in CAs was temporarily downgraded twice to moderately unsatisfactory during project implementation due to slow progress, particularly on the tourism concessions. However, this could be resolved and the component closed as moderately satisfactory.

30. Despite these achievements, certain challenges remain. Several activities that had been included in the PAD were not completed.[25] This was partly because tourism was no longer a responsibility of the ministry in charge of ANAC and the PIU after the reorganization of the government structure. There were also changes in needs and priorities during project implementation for several reasons, including ANAC's limited capacity and changing international attitudes towards sports hunting. Some activities were included under MozBio 2.

Biodiversity conservation management in CAs improved

31. MozBio 1 strengthened the effective management of CAs also by supporting select areas directly, thus increasing the area with improved biodiversity protection to 2,052,100 ha and consequently meeting the project's target at 108 percent. The project financed infrastructure and equipment in the targeted CAs. This included the construction of housing infrastructure for senior staff and rangers in MSR, PPMR, BANP, Quirimbas, Marromeu and Pomene, as well as small bridges (drifts) in Chimanimani and Limpopo to improve accessibility

[24] The following agreements were signed: 1. 20-year extension of the long-term agreement with the Carr Foundation for co-management of Gorongosa NP; 2. Memorandum of Understanding (MoU) with Farquhar for co-management of Pomene NR; 3. Co-management agreement with PPF for MSR/PPMR 4. Co-management agreement with PPF for Banhine NP; 5. MoU with the commercial bank Banco Internacional de Moçambique (BIM) to provide concessional loans; 6. MoU with African Parks for technical assistance to Quirimbas NP; 7. Regularization of Cipriano Neto's contract for BANP; 8. Regularization of Eugénio Numaio's contract for BANP. Note that some of these agreements correspond to the regularized concessions and co-management agreements measured through the results framework.

[25] These include the establishment of a payment for ecosystem services scheme, the organization of trips for potential investors, an overhaul of the tourism website, a tourism satisfaction survey (because the corresponding results indicator was dropped), an internship program, the "Friendly Mozambique" campaign, the preparation of a business plan and strategy for the Association of Mozambique's Safari Operators, inputs for a new immigration strategy, tourism market research, a mandatory hunting and wildlife monitoring model, regulations to reduce greenhouse gases in tourism, land availability studies, tendering concessions in several CAs, and the strengthening of the regulatory framework, human resources capacity, community outreach, contracts, and a code of conduct for sports hunting.

and circulation. All infrastructure investments aiming at supporting CAs in their conservation function were completed by project completion. A major achievement of the project was maintaining the operations of all eleven CAs by funding staff training, salaries, supplies, fuel, and other operational costs. This contributed to an increase of annual patrols in the targeted CAs from 5,523 in 2014 to 10,786 in 2019, far surpassing the target of 7,075. While MSR did not receive the planned road construction support due to high costs when tendered, it did receive support for transferring 3,488 animals to the reserve, which strengthened biodiversity and increased its tourism potential. Support to the CAs was provided particularly through the national institutions. FNDS supported planning, monitoring and evaluation, procurement, financial management, and the dialogue with the Bank's task team. ANAC organized trainings and provided technical advice. Biofund disbursed operating costs to the CAs and helped build their capacities on financial management. The achievements obtained in terms of effective CA management are considered sustainable because they were complemented by the improvements in revenue streams and capacity achieved under other project components and will be consolidated and enhanced under MozBio 2. While the PAD proposed to update the management plans of six CAs, this was not implemented under the project, partly because some of these plans could be prepared with funding from KfW. Similarly, no support was provided to the Malhazine NR as it also received funding from KfW. Some activities related to communications hardware, software, and training that had initially been intended to be implemented under MozBio 1 were included under MozBio 2. Some infrastructure, like the housing for CA staff in BANP, was finished but not in use by project completion because high-level political participation was expected for the inauguration.

32. CAs also received project support for monitoring wildlife populations and for research. A hippopotamus survey found that the current population in Mozambique is around 7,300 individuals. An assessment on lions and leopards informed a conservation strategy, an action plan, and hunting guidelines. A study on the leopard population found that safari hunting could create revenue to help protecting the species. Instead of a national elephant range survey, which was transferred to an AFD project, several aerial wildlife surveys were conducted in and around Marromeu as well as in Quirimbas, Gilé and MSR. The surveys detected positive trends in wildlife populations. The biodiversity survey for Chimanimani collected data on over 1,100 species of animals and plants and supported the set-up of a corresponding database. In MSR, PPMR, BANP, Quirimbas, and Pomene, a survey collected data as part of the annual national turtle monitoring, recording 2,133 tracks and 968 nests during the 2017-2018 nesting season. The marine ecosystems in PPMR, BANP, Quirimbas, and Pomene were surveyed and the results used in annual discussions on improving marine conservation. A Special Land Use Plan of the coast of Matutuine was prepared as a key input for establishing the Environmental Protection Area of Maputo, which would encompass MSR, PPMR, as well as surrounding high-conservation value areas and high-value tourism areas in the Matutuine District.

33. During project implementation, the effectiveness of CAs improved. According to the government's completion report, particularly the areas under co-management demonstrated high performance, both when measured using the General Factors of Implementation and Resilience, which measure implementation performance, and when using the METT, which measures the level of management effectiveness at the end of the project. Seven of the targeted CAs increased their management effectiveness measured through the METT

by one level.[26] While the report finds little correlation between the scale of improvement and the amount of project financing received by a specific CA, there was evidence that co-managed CAs performed better than others. This indicates that supporting CAs in creating or expanding these partnerships was a major contribution of the project. This was the case for the co-management agreements for BANP, MSR, and Banhine, which were facilitated by ANAC, with the project having been key for finalizing the legal agreements. In the CAs that did not have co-management agreements, the funding provided through the project succeeded in stabilizing or even improving management effectiveness.

Objective 2: Enhancing living conditions of communities in and around the Conservation Areas

34. At the time of project appraisal, Mozambique's increased economic prosperity had largely failed to improve the living conditions for much of the rural population. CAs showed potential to contribute more to the livelihoods of the 250,000 people living in and around them, many in poverty. While their ecosystem goods and services, such as watershed protection, fish and bush meat, and non-timber forest products, were often crucial for people's livelihoods, the use of their resources was in many cases not sustainable. In addition, there was an opportunity to generate additional employment in park management and through seasonal labor as well as to increase revenues from tourism. Reversely, communities could contribute more to conservation efforts. The reasons for why this potential was not fully realized included the absence of a strategy for the cooperation between CAs and communities, the lack of systematic practices to harmonize community needs and conservation, limited experience in CA management with community engagement, low project management capacity of community organizations, and insufficient involvement of local governments in natural resource management activities. The project intended to reduce these bottlenecks to enhance the living conditions of communities in and around the CAs.

Result 1: Community development fostered through improved productivity and livelihood diversification

35. The project delivered a variety of community projects to improve productivity and diversify livelihoods, in line with priorities identified during stakeholder consultations. Financed activities included support to groundwater access, conservation agriculture, horticulture, agroforestry, fishing, beekeeping, mushroom foraging, sustainable charcoal production, tourism, and environmental education for children. Most sub-projects were completed by the end of the project. As local communities receive 20 percent of CA's tourism revenues, they also benefited from the project's general support to the CA system, which contributed to an increase in revenue and thus to a rise of the funds available to communities from MZN 3.1 million (US$45,791) to MZN 6.1 million (US$89,605).[27] In addition, the project supported community associations in managing these resources. Community liaison officers were hired in the CAs and equipped in order to deepen the dialogue with communities. The activities benefited 16,239 people in and around seven CAs, approximately 93 percent more than initially intended. The reason for having the target significantly surpassed is that the project could support more sub-projects than planned during design, especially on agroforestry and conservation agriculture. The CAs included were Chimanimani NR, BANP, Limpopo NP, MSR, and PPMR (under Sub-component 4.2), Gilé NR (under

[26] Quirimbas NP, Banhine NP, and Pomene NR did not improve sufficiently to achieve the next level.
[27] Exchange rate used: US$1 = MZN 67.90; MZN 1 = US$0.0147 (as of April 15, 2020)

Sub-component 4.3), and Quirimbas NP (under Sub-components 4.2 and 4.3). Women constituted 40 percent of sub-project beneficiaries. Communities also benefited from the more than 700 tourism and conservation jobs created in targeted CAs during implementation.[28] At project completion, an increase of 23 percentage points was recorded in the index on local communities' perception of benefits from the CAs. While there are some caveats to this figure that will be discussed in Section IV.A., the positive trend was confirmed by CA management teams and the Bank's task team during field visits, through monitoring reports, and during a final project seminar with community representatives. Complementing the satisfaction surveys, FNDS used a poverty assessment tool to evaluate the living conditions in communities in three CAs.[29] Conditions improved between 2016 and 2019 in all participating CAs, with poverty score increases of 9 percent in MSR, 8 percent in Chimanimani NR, and 4 percent in Quirimbas NP. FNDS is confident that the project has contributed to these improvements. For example, the improved access to water reduced the time and effort that particularly women and children had to spend to fetch water and increased the productivity of community gardens. The agriculture warehouses supported by the project added storage capacity for produce, providing families with more flexibility for timing their sales with higher market prices.

36. Conservation agriculture was promoted in all project areas, both by providing inputs and training. In buffer zones, small-scale commercial agriculture was supported, including through activities to provide market access. Individuals or associations received inputs and training. Infrastructure was built, including a rice processing facility in Quirimbas, storage facilities and markets in Chimanimani, and six drinking water and irrigation systems in BANP. Many of these investments had direct benefits for conservation. For example, the drinking water system for cattle in MSR reduced human-wildlife conflicts by eliminating the need for a local community to bring its livestock to a river that also attracts large mammals. An important contribution of the project was the support to the community-owned eco-lodge Zenguelemo in BANP. The government provided a concession to a community association and facilitated an agreement with a regional ecotourism operator to operate the lodge. The first phase of the sub-project will offer around 30 beds in equipped tents and self-catered units, with 20 more planned for the next phase. The lodge is expected to benefit approximately 5,054 community members through fees paid by the operator to the community, employment generation, and other opportunities. Construction only started in April 2019 due to delays in procurement, but funding for finalizing the works has been secured and the lodge is expected to open in 2020.[30]

37. Like Zenguelemo Lodge, some sub-projects could not be completed before project completion, for example some of the water systems in BANP. Activities like beekeeping activities in Gilé and Chimanimani and agroforestry in Gilé were started or completed too late to provide substantial livelihood improvements by

[28] This is based on a baseline of 1,074 jobs, as recalculated by the PIU during implementation. See Annex 1 for details.
[29] The methodology of the *Simple Poverty Scorecard* was applied. It uses surveys to score poverty levels of households based on criteria like building materials used for housing, access to services like sanitation and electricity, and the availability of household items.
[30] At the time of writing, the park administration and African Parks, the co-manager, were finalizing a contract with a construction company to complete the remaining works necessary for the lodge to become operational. Due to the 2019-2020 coronavirus pandemic, completion of the works had to be rescheduled from April to July 2020. The lodge is now expected to open in November 2020, that is as soon as the required inspection, licensing, and training processes have been completed. The selected tourism operator continues to be actively engaged in the process. Mozambique's Agency for Promotion of Investment and Exports has already approved US$200,000 in additional financing available to the operator for the purchase of equipment.

project completion. A part of the infrastructure built, for example some of the water systems in BANP, also stopped operating due to technical failure combined with challenges with service providers, despite the management and maintenance protocols that had been developed. In consequence, five of the six water systems in BANP were not fully functional at project closing, with three of them not having water at all.[31] Park management is expected to resolve this issue in the foreseeable future. In some cases, there are signs that investments might not have met community needs, for example in the case of Bazaruto's solar-powered fish market, which has not been taken full advantage of and may face challenges with the maintenance of its technical equipment after the provider's 1-year warrantee expires.

38. All sub-projects were identified and implemented in a collaborative effort between local communities, CAs, and contracted service providers. The service providers were contracted to guide communities in the identification of sub-projects and to ensure their implementation. A technical committee composed of representatives from ANAC, FNDS, and the National Directorate of Rural Development approved sub-project proposals based on a manual developed as part of the project and monitored their implementation. CA management teams engaged with local and district governments to ensure their support in the process, for example by providing technical expertise. In the cases of MSR and Gilé, the co-managing organizations were contracted as service providers, ensuring close alignment between community activities and CA management. However, community engagement was impacted by the lack of the corresponding guidelines that should have been developed by ANAC. In consequence, the different CAs used different solutions, which led to adequate results but would have benefited from a common approach.

39. Initially, the project intended to create enabling conditions for community sub-projects in those CAs that would not receive support through sub-projects, essentially by improving community governance structures (Sub-component 4.1). The goal was to improve the organizational capacities of these communities so that they could generate income themselves and better use the 20 percent allocated to them from CA tourism revenues. A service provider was recruited for this activity, but the levels of capacity of the targeted CAs were too low. The Bank and client teams agreed in the first year of implementation to use the available resources instead for additional sub-projects to increase the direct impact of the project on community livelihoods. This allowed to implement sub-projects also in Limpopo and BANP and helped avoid raising expectations by only providing capacity building to some communities without implementing sub-projects. To ensure that all communities that received sub-projects had the required local governance and technical capacity, activities similar to those originally intended under Sub-component 4.1 were included in the contracts of service providers. Some activities to enhance the impact of sub-projects were implemented as planned. This included hiring a Community Development Specialist at ANAC as well as community liaison officers in CAs. A socio-economic survey was conducted to inform the indicator on beneficiary perceptions. Some communities received training on local governance issue, but key activities like the establishment of CA Management Councils with participation of communities and local governments as well as the development of guidelines for taking full advantage of the 20 percent of CA revenues allocated to communities were postponed to MozBio 2. The same

[31] At the time of writing, three of the six water systems in BANP were operational. The remaining three were near completion, with only the photovoltaic system for the water pumps pending installation. The CA administration and African Parks were committed to finalize the works in coordination with the beneficiaries.

holds true for participatory land-use zoning, the identification of potential entities in and around CAs to provide technical support to communities, improving the local capacity for designing and implementing revenue-generating activities, and the identification of potential new community-managed CAs.

40. With GEF funding, the project implemented sustainable forest management activities in the surrounding areas of two CAs under Sub-component 4.3. By helping to reduce deforestation, these contributed to a decrease in carbon dioxide equivalent (CO_2e) emissions from deforestation from over 1 million tons of CO_2e per year to 131,113 tons per year, far exceeding the target of 500,000 tons per year.[32] In the Chimanimani landscape, these activities were similar to and blended with the sub-projects implemented under Sub-component 4.2. Supported activities included conservation agriculture, silviculture, horticulture, the expansion of honey production and commercialization, and an environmental education program. Responding to the destruction caused by Cyclone Idai, the project provided emergency kits to affected people. In the Gilé landscape, focusing on dryland forests in line with GEF priorities, the project built on existing approaches to sustainable forest management. It supported especially conservation farming, agroforestry, honey production, mushroom collection, efficient charcoal kilns, environmental education, a wildfire control program, and a community outreach program on the value chain for cashew nuts. Adopting an integrated landscape management portfolio approach, activities were closely coordinated with other projects, including through a civil society platform on natural resource management in the Zambézia landscape, which includes Gilé NR. Community development activities were also implemented outside the CA's buffer zone to reduce additional population stress on the reserve and its immediate surroundings. Though intended during preparation, no forest management activities were implemented in the Quirimbas landscape due to weak CA management capacity and insufficient service provider performance. Quirimbas received additional support through MozFIP though.

41. For some sub-projects, there are concerns about their sustainability. These have to do with the limited capacity and financial ability of communities to maintain the infrastructure provided, but also with issues like the limited market access of communities. This is the case both for selling produce and for purchasing improved seeds, the latter being important given that most of the seeds distributed by the project were hybrids, which can only be used for one harvest cycle. In addition, the unconditional distribution of seeds in Chimanimani, even though their use has been monitored by the CA, may contribute to further deforestation due to a lack of incentives for recipients to comply with sustainable land management practices, particularly if support to farmers should stop.

Result 2: Raise conservation awareness in communities and the general population

42. The project succeeded in raising awareness for conservation in communities in and around CAs as well as the general population. The project's focus on environmental education was strengthened further with the second restructuring. Activities to promote environmental education were implemented in all targeted CAs. Workshops, awareness raising campaigns, training for teachers, lessons at schools, and environmental clubs

[32] Note that the baseline and targets in the PAD were calculated based on emissions in Gilé and Quirimbas, but that the actual emissions reported corresponded to Gilé and Chimanimani. This was due to the changed allocation of funds under Sub-component 4.3, as described in Section 1.B.

were offered, and equipment and educational materials provided. Topics ranged from natural resource management to biodiversity conservation. In a collaboration between ANAC, other national institutions, and the CA management teams, guidelines on environmental education were developed, targeted particularly at children and adults in CAs. Promotional materials like videos, brochures, and websites were developed to support ANAC, Biofund, the CAs, and other institutions. The five annual biodiversity exhibitions organized by Biofund during implementation reached more than 17,000 people, particularly primary, secondary, and high school students, as well as prospective teachers. In 2017, the project also financed the national school games, a biennial sports event with participation of up to 700 primary and mid-school students, focusing them on conservation. The event was so successful, that it maintained this focus also in 2019.

Justification of Overall Efficacy Rating

43. MozBio 1 almost fully achieved all of its objectives and exceeded most of them, partly by far. Efficacy is therefore rated as **substantial**. The project successfully improved conservation in Mozambique by strengthening the assets, financial resources, and capacity of national institutions and CAs. Simultaneously, it helped improve the living conditions of communities in and around CAs, particularly through sub-projects that supported the sustainable use of natural resources. However, not all objectives could be fully achieved as ANAC as the central national institution in the CA system remained weak and some project activities to enhance livelihoods were not completed in time or may in some cases not be sustainable.

C. EFFICIENCY

Assessment of Efficiency and Rating

Rating: Substantial

Economic Analysis

44. At appraisal, an extensive quantitative economic analysis was conducted based on a net present value approach, with focus on quantifiable revenue benefit streams and reference to the project components and a baseline. The appraisal-stage assessment identified environmental and economic benefits that the project could achieve. Since it was difficult to quantify all economic benefits, the analysis focused on those that could be measured best: i) total annual revenues generated from economic activities in targeted CAs and their zones of influence (63 percent of total ex-ante project benefits); ii) annual revenues generated by Biofund's invested endowment capital (8 percent of total ex-ante project benefits); and iii) additional revenue accruing to communities living in and around the CAs through enhanced livelihoods (29 percent of total ex-ante project benefits). The assessment acknowledged the lack of standardized data collection methodologies across countries as a major challenge for economic analysis and sought to address this by creating a database informed by a literature review, government sources, and field reports on tourism fees, the value of natural resources (for example, marine and terrestrial resources), and private sector investments in tourism. The analysis found that the project would be economically viable with net benefits at US$39 million over a ten-year project period. The Economic Rate of Return (ERR) was 14.39 percent and the net present value (NPV) equaled US$6.7 million (at a 10 percent discount rate). A range of scenarios was assessed to test assumptions, accounting for changes

in tourism fees, daily spending of tourists, and the value of marine resources. However, while cross-checking estimates, it was found that an NPV of US$6.7 million would result in an ERR of 4 percent at a 10 percent discount rate.[33] This means that the project was viable in terms of a positive NPV, but it was not in terms of the ERR. This would affect the sensitivity analysis and results presented at appraisal stage.

45. An ex-post analysis carried out after project completion updated the appraisal-stage assessment based on the government's final project report and additional data provided. It extrapolated the benefits accruing beyond 2019 using the original approach but with a revised set of assumptions (including inflation, exchange rate, and number of beneficiaries) and adjusting benefit streams in line with the project restructuring. This allowed to capture the "maximizing finance for development" approach of crowding in sustainable financing for biodiversity conservation well beyond the project boundary through Biofund's disbursements and to monetize the benefits from greenhouse gas emission reductions. Biofund's disbursements amounted to US$26.4 million. In addition, the project helped mobilize at least US$949 million in private sector investments as illustrated in Table 4.

46. The ex-post analysis found that the project was viable at a 10 percent discount rate. The total net benefits over ten years were estimated at US$128.6 million with an ERR of 13 percent and an NPV of US$43.3 million. While the project was not viable for a discount rate above 11 percent, it needs to be taken into account that not all benefits were monetized. Including the value of the greenhouse gas emissions reduced from 2014-2019 adds an additional US$39.1 million in benefits, leading to overall net benefits of US$167.8 million with an ERR of 25 percent and an NPV of US$70 million, making the project viable at all discount rates from 5 to 20 percent. The majority of the benefits were accrued from the revenues generated through economic activities in CAs and their zones of influence (41 percent), followed by revenues accruing to communities living in and around the CAs through enhanced livelihoods (26 percent), the avoided social costs of carbon (19 percent), and the disbursements from Biofund (14 percent). These results hold through a sensitivity and stress test, details of which are available in the complete ex-post analysis in Annex 4.

Table 3 Summary of Results for the Ex-post Economic Analysis

Discount Rate:	5%	10%	12%	20%
Using ex-post data based on indicator data reported by the project until 2019, with extrapolations based on the analysis included in the PAD and revised assumptions on exchange rate and inflation (Scenario 1)				
NPV (US$):	76,276,043	43,354,768	22,302,635	8,661,732
ERR:	19%	13%	9%	4%
Scenario 1 plus accounting for the additional benefits of emission reductions (social costs of carbon avoided) from 2015-2019 (Scenario 2)				
NPV (US$):	108,431,404	70,024,618	44,617,751	27,483,339
ERR:	31%	25%	19%	14%

[33] This error could be because of a misinterpretation of IRR/ERR = 0 at a 14.39 percent discount rate. However, the IRR was calculated when NPV = 0. When the discount rate was 14.39 percent, the NPV was still positive at US$4.5 million in Year 10 as per the Excel sheet accompanying the economic analysis in the PAD. Hence 14.39 percent cannot be the IRR. It remains unclear how the analysis at appraisal reached the conclusion that the IRR was 14.39 percent at a 10 percent discount rate.

47. The ex-post economic efficiency analysis confirms the project's viability and the positive economic impact that was estimated during appraisal. At discount rates from 5 to 20 percent, the ERR is 31 to 14 percent and the NPV is US$27.4 million at a 20 percent discount rate. M&E data from project implementation suggests that the benefits that the project could monetize exceeded the appraisal-stage estimates, for example for greenhouse gas reductions. Benefits are expected to be even higher as the analysis did not capture i) all tourism revenues given the lack of data, ii) an expected US$4.2 billion in natural capital according to relevant academic literature, and iii) the aforementioned US$949 million in private sector investments that were leveraged by the project.[34] The quantitative analysis is strictly limited to values that can be clearly attributed to the project. By funding the activities that led to the estimated greenhouse gas reductions, the GEF incremental contribution made the project viable at all discount rates from 5 to 20 percent, with a GEF incremental benefit cost ratio of 12. Note that benefits from improved CA management were not fully measured. However, they were within a reasonable range of cost effectiveness of US$7.8 cost/ha compared to similar projects. In summary, based on this economic evaluation, it is concluded that the project resulted in significant positive development impacts, in line with the benefits anticipated at appraisal stage.

Implementation Efficiency

48. The project displayed a considerable degree of efficiency in its implementation. It exceeded most of its targets during the extended project period without requiring additional financing, even though the available funds had been reduced by approximately US$3.2 million by project completion due to the depreciation of Special Drawing Rights against the United States dollar. The project was able to fully disburse the available funds. Project management costs were 12 percent higher than originally budgeted, which can be explained by the increased management costs incurred due to the one-year extension. It is also worth mentioning that US$50,000 of project funds were used to ensure a smooth transition to MozBio 2. Avoiding a major potential bottleneck in implementation, PIU responsibility was transferred to FNDS when it became clear that ANAC would not be able to deliver. This allowed the project to benefit from streamlined management by an institution that was able to bundle the implementation of various Bank-financed projects.

49. The project experienced certain challenges in the procurement of service providers, which led to delays in implementation and temporarily reduced efficiency. The use of service providers also resulted in high implementation costs, particularly for sub-project implementation. The implementation of the socio-economic surveys provides another example for costs that were higher than necessary. The baseline survey was conducted in 2015/16 in three CAs. The costs were US$334,000 for its implementation by service providers. However, the follow-up survey was done in-house in 2018/19 by FNDS in collaboration with a local university, resulting in much lower costs of only US$60,000 for comparable work. In addition to causing high costs, some service providers also lacked the capacity to complete their tasks in an efficient manner, for example in the implementation of community sub-projects in BANP, including Zenguelemo Lodge.

[34] Andrea Ghermandi et al (2019): Marine ecosystem services in the Northern Mozambique Channel: A geospatial and socio-economic analysis for policy support. Ecosystem Services, Volume 35, 2019. Pages 1-12. ISSN 2212-0416. Available at: *https://doi.org/10.1016/j.ecoser.2018.10.009*.

50. The project also demonstrated some inefficiencies regarding its scope. While designed to create enabling conditions for sustainable management of natural resources by local communities in twelve CAs under Sub-component 4.1, such activities were only implemented in six CAs. Also, while improving living conditions in CAs was a key objective of the project, only US$5.8 million were allocated to the sub-component financing sub-projects. In consequence, the activities were too specific to impact many of the factors that influence living conditions (for example, education, health, and energy access) and also reached only 5 percent of the total population in and around the CAs that benefited from sub-projects. However, the underlying issue here is less a lack of results achieved but rather a design that was too ambitious, as described in further detail in Section III.A. In addition, many other project activities, particularly under Components 2 and 3, also contributed to improving living conditions, though indirectly, particularly by increasing the revenues of CAs (for example, by promoting tourism and improving revenue collection) and thus the monetary value of the 20 percent returned to communities. The project also contributed to enhanced living conditions by improving community engagement in CA management. Following an integrated landscape management approach, the project's contribution to living conditions was also closely coordinated with other activities under the MozBio Program and other relevant projects, particularly MozFIP and the Sustenta Project (P149620) on agriculture and natural resource management.

51. Based on the economic analysis after project completion and the qualitative assessment of implementation efficiency, the project's efficiency is rated as **substantial**, meaning that it is in line with the expectations for a biodiversity conservation project.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

Rating: Satisfactory

52. The overall outcome rating is based on the relevance of the project objectives, the efficacy of the project as measured by its indicators and taking into account additional evidence and interviews with stakeholders, and the efficiency of the project. The project demonstrated high relevance, achieved a substantial outcome rating, and is considered substantial in its efficiency. The overall outcome is therefore considered **satisfactory**, which means that there were only minor shortcomings.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

53. Women's participation and equity were priorities of the project and taken into account both for targeting and project management . 34 percent of all project beneficiaries were women, in the case of sub-projects even 40 percent as the project teams made an effort to involve women associations and to support sub-projects with activities traditionally dominated by women. In consequence, in many associations that focused on such activities most members were women, thus yielding considerable decision-making power. However, women

only constituted 20 percent of those who benefited from employment in tourism and conservation, reflecting the difficulty the project faced in influencing private operators.

54. The project also collected data on the gender ratio in the national institutions and CA administrations. Biofund was the only institution with equitable gender representation, with 50 percent of its employees being women. ANAC had 32 percent of female employees, FNDS 30 percent. While the national institutions had no policies on gender balancing, they did appoint women to managerial and leadership positions. In the CA administrations, only about 12 percent of employees were women, varying from less than 5 percent in Gilé, Pomene, and Marromeu to 39 percent in BANP due to its explicit effort to recruit female rangers. Gender balancing was particularly difficult given traditional roles, particularly in the conservation sector, and the overall low numbers of qualified people.

55. While MozBio 1 thus ensured that women benefited from project activities and could participate to a certain degree in decision-making, it did not make a major contribution to transforming traditional gender roles. Women mostly continued to be engaged in their traditional activities (like vegetable farming), which, compared to those done by men (like fishing or working as tour guides or CA staff), only yield moderate income. However, positive experiences were made with the potential of girls clubs in helping develop girls' reading and writing skills as well as their knowledge on reproductive health, conservation, and academic opportunities. Such activities have therefore also been incorporated under MozBio 2.

Institutional Strengthening

56. The project strengthened the technical and administrative capacity of key institutions of Mozambique's CA system, in line with the first part of the PDO as discussed in detail in Section II.B. This was particularly the case for ANAC and Biofund at the national level, and for the targeted CAs. The effectiveness of these activities was evidenced by the improvements in METT scores. Biofund demonstrated a particularly noteworthy increase in performance according to stakeholder interviews, reassuring both its financiers and recipients. The clear definition of its function, the identification of concrete milestones to be achieved, and the adherence to international best practices were important factors for achieving this result. By project completion, Biofund's endowment had increased to US$35 million, generating revenues of 3 percent per year, which were used for supporting CAs. MozBio 1's support was crucial in this regard as it allowed Biofund to increase its endowment when funds from other donors were delayed and because it provided technical assistance in line with international standards on financial and administrative procedures.

Mobilizing Private Sector Financing

57. Mobilizing private sector financing was a key consideration during project design and implementation, particularly in two regards. Firstly, the project supported the CA system, both at the national and at the CA level, in realizing the tourism potential of CAs to increase revenue from nature-based tourism. It invested in the necessary infrastructure, built required technical capacity, supported marketing campaigns, and facilitated partnerships with private operators, resulting in the regularization of eight concessions. Secondly, the project leveraged private investment in national parks by supporting co-management agreements with international

partners, thus increasing the financial and technical capabilities of park administrations. The signing of eight public-private partnership agreements (including some of the aforementioned agreements) at the International Conference on Nature Based Tourism in 2018 is expected to mobilize investments of over US$600 million. In total, the agreements supported by the project have leveraged US$949.2 million, of which US$25.4 million have already been disbursed and spent as illustrated in Table 4.

Table 4: Private sector investments leveraged through tourism concessions and other public-private partnerships[35]

Organization	Type of Agreement	Amount Pledged (million US$)	Amount Spent (million US$)
African Parks	Co-management of Bazaruto	12.0	3.0
PPF	Co-Management of Banhine	1.0	0.7
PPF	Co-management of MSR/Marine Reserve	16.0	4.7
PPF	Co-Management of Zinave	20.0	No information available at time of writing
Farquhar	Co-Management Pomene	500.0	3.0
BIM	Credit Facility	50.0	No information available at time of writing
Greg Carr Foundation	Co-management Gorongosa	350.0	14.0
Far & Wide	Joint venture with Thomba Yedyo (Zenguelemo Lodge)	0.2	In-kind contribution by providing equipment for the lodge
Total		**949.2**	**25.4**

* Regularized contracts including construction of tourist lodges

Poverty Reduction and Shared Prosperity

58. Mozambique is one of the poorest countries in the world and poverty is particularly high among people living within and around CAs. At the same time, CAs have the potential to provide sustainable income opportunities for local communities. The project contributed to realizing this potential by strengthening the management of these CAs and by investing in people's livelihoods. As described in Section II.B., important achievements of the project include its contributions to doubling the CA revenues shared with communities to MZN 6.1 million (US$89,605) and to creating more than 700 jobs in tourism and conservation in targeted CAs. Furthermore, the supported sub-projects benefited 16,239 people and are understood to have contributed to a decrease in poverty as measured by a poverty scorecard and to increased satisfaction of beneficiaries. Important pathways to shared prosperity that the project supported were the sustainable use of natural resources for consumption and, outside CAs, for commercialization, as well as the promotion of tourism, both for employment generation and revenue-sharing. The project also contributed to long-term community resilience by promoting climate-smart agriculture.

[35] This table only includes agreements whose value was quantifiable at the time of writing.

Other Unintended Outcomes and Impacts

59. No unintended outcomes have been reported.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

Adverse Factors

60. **Level of ambition concerning CAs covered**: The project was designed with the ambitious objective to improve management (Component 3) and livelihoods (Component 4) in twelve areas. However, the institutional risk was underestimated during preparation. The capacity of ANAC and some CAs was so low that not all activities could be adequately implemented, especially as the project had initially been intended to include more Bank funding. This was particularly the case for the second part of the PDO, improving livelihoods, given the substantial and growing need in the areas, compared to a relatively small share of project funds allocated to these activities during design (US$9.9 million or 21 percent for Component 4), reaching only 5 percent of the population in and around CAs. The project corrected this during implementation by reducing the targeted areas and focusing its funds on those with the highest potential for impact. At the same time, it worked closely with other projects to identify synergies for promoting sustainable rural development, acknowledging that a conservation project by itself cannot transform livelihoods at the required scale. The corrections allowed to achieve the PDO despite scaling down the geographic reach of the project, but a closer assessment of CA and community capacities during preparation could have contributed to avoid these challenges.

61. **High staff turnover**: According to interviews with stakeholders, project design and early implementation were complicated by a relatively high staff turnover in the participating institutions. This included a change in the Bank's task team leader, the change of government and the subsequent change in the ministry hosting the project, and changes in ANAC's as well as the PIU's leadership. Combined, these changes were disruptive and led to difficulties in fully integrating the lessons learned from the TFCA series into the project design. This could not be fully compensated by the project's activities to develop human resources.

Favorable Factors

62. **Long-term Bank engagement on biodiversity**: Project design benefited from the Bank's long-term engagement on biodiversity in Mozambique and particularly the groundwork done through the TFCA series. The Bank and government teams were familiar with each other's policies and procedures and could build on the strategies and institutions developed previously, particularly through TFCATDP. This long-term engagement also benefited the credibility of the planned activities, making it possible to convene additional partners and to create the MozBio Program. A concrete measure that allowed to connect previous activities on biodiversity

to MozBio 1 was the project's considerable project preparation advance because it helped close the financing gap between TFCATDP completion and the start of MozBio 1.

63. **Coordination with other donors**: As indicated above, MozBio 1 was part of the government's wider MozBio Program. As its objectives and activities were integrated with Mozambique's overall approach to biodiversity conservation, it could benefit from the close coordination with other donors. This was particularly the case whenever various partners worked within the same CA. The most significant support for other relevant activities came from KfW for Biofund's endowment fund and Limpopo NP, as well as from PPF, which supported MSR, Limpopo NP, Banhine and Zinave. Other donors that supported Mozambique's CA system and with which the project closely coordinated its activities included the International Foundation for Wildlife Management, which supported Gilé NR, and AfD, which provided funding for the national elephant survey as well as for activities in Limpopo NP's buffer zone, in Gilé NR, and in Quirimbas NP.

64. **Soundness of financing mechanisms**: A defining characteristic of the project was its support to Biofund by improving its technical capacity and by contributing to its endowment. This design was key for allowing Biofund to become an effective funding mechanism for CAs, channeling operating costs efficiently. It also set the stage for attracting and implementing additional funds from a variety of sources. This allowed the Bank to reallocate IDA funding for CA operating costs to Biofund once it became clear that ANAC could not easily transfer them to CAs.

B. KEY FACTORS DURING IMPLEMENTATION

Adverse Factors

65. **Challenging institutional environment**: With ANAC being the central institution for CA management at the national level, the project was rightfully designed with a key role for ANAC in its implementation, both in the sense of strengthening the institution's capacity and by relying on it to coordinate the activities implemented at the CA level. The project should be managed by the MozBio Unit as PIU within the Ministry of Tourism (*Ministério do Turismo*, MITUR). The unit was the successor of the PIU of TFCATDP and was intended to work closely with ANAC, which was expected to manage technical aspects through its regular structure. In January 2015, following the presidential elections and government restructuring, ANAC was placed under the authority of the newly created MITADER. As part of this restructuring, coordination and implementation of the project were fully assigned to ANAC. In February 2016, after it had become clear that a team dedicated to the implementation of the project would be needed, a PIU was created within ANAC. Additional staff was hired as consultants with more competitive salaries than those of ANAC's core staff of public officials. However, a series of circumstances and government decisions that had been weakening the institution continued to delay the flow of funds and affected its capacity.[36] Due to the lack of funding and weak staff performance, ANAC

[36] Most importantly, Bank funds could not be passed directly to ANAC, but had to be channeled through the Treasury, which led to delays in the flow of funds. ANAC also legally lost the ability to retain revenues from CA operations, requiring the funds to also be

continued to underperform in project implementation. In combination with a desire to bundle Bank-financed projects under one agency, this caused the government to transfer the PIU to FNDS in 2017, following a recommendation from the Bank's task team. This action was successful in that it accelerated implementation while allowing ANAC to focus on strategy, policy, and legislation. Nevertheless, it also further decreased ANAC's relevance, thus to a certain extent undermining the goal of enabling it to fulfil its central role in Mozambique's CA system. While this was unavoidable given the institutional decisions of the government, insisting on competitive staffing and improving project management capabilities and relevant guidelines, for example on better coordinating with Biofund, could have helped resolve this situation. Another institutional challenge was that the project's steering committee only convened in the last year of implementation and was thus not able to provide guidance during most of implementation.

66. **Delays in Procurement**: Given the challenges surrounding ANAC's capacity, procurement in the first year of implementation was delayed, with processes for large contracts only having been completed during the second year. Particularly the procurement for sub-projects proved difficult, leading to delays in implementation that in some cases prevented the timely completion of activities. Some CA management teams perceived the procurement process as too lengthy and bureaucratic. The centralized approach also added considerably to the workload of the PIU. This issue was alleviated when Biofund channeled funding to CAs as this allowed them to play a more active role in procurement.

67. **Underperformance of service providers**: The performance of several service providers was below expectations. Where attempted, re-negotiating contracts was difficult due to miscommunications between the parties and misunderstandings concerning the expected results. This was particularly the case with the consortium leading the community development activities in Quirimbas NP and the company that supported the reforms in sports hunting management. In BANP, the late launch of activities, together with the remoteness of the area and the lack of qualified providers, made it particularly difficult for the PIU to address underperformance, resulting in partly incomplete or already defective sub-project infrastructure. In other cases, more stringent due diligence in service provider selection, particularly an early and thorough capacity assessment, could have helped avoid underperformance, especially where providers had no prior experience with working in CAs. A particular weak spot of several sub-project service providers was their limited capacity to engage local communities, which was aggravated by the absence of guidelines for community engagement. In addition, the contracting model of service providers did not do justice to the long-term engagement and field proximity needed to build fruitful relationships with communities. Effective engagement would have been particularly important as Sub-component 4.1 on enabling conditions was not implemented as originally intended. Incentives for service providers to implement them effectively were limited and geared more towards sub-project implementation. The aforementioned delays in procurement also affected service provider contracting, reducing the time available for implementing their activities and taking corrective action where needed. Most activities on the ground only started in 2017. Similarly, payments to service providers

channeled through the Treasury. At the same time, the government was not able to provide ANAC with the budget that it would have required to operate effectively. Moving ANAC away from the ministry responsible for tourism complicated coordination on this theme as a cornerstone of the project. Also, instead of recruiting staff through a competitive process, positions were filled with officials that had previously worked in the National Directorate of Conservation Areas (DNAC), the MITUR department that had previously been responsible for managing CAs.

were partly delayed due to the approval processes required by Mozambique's legislation, up to one year in the case of a provider implementing sub-projects in Chimanimani. As contracting was done at the national level, collaboration between sub-project service providers and CAs was partly challenging, especially where CAs did not have a clear vision for how the sub-projects fit into their conservation efforts and where the capacity to monitor providers was limited. At the same time, this led to the perception in some communities that benefits in the form of sub-projects were provided by the service providers and not linked to the CA and thus conservation.

68. **External events**: External factors had disruptive impacts on project implementation in certain areas. In March 2019, tropical cyclone Idai caused severe human loss and damages in central Mozambique. In Chimanimani, it strongly affected project beneficiaries and destroyed infrastructure built by the project, particularly two bridges. As a response, the project provided farming emergency kits and aligned its activities to the immediate needs. In Cabo Delgado, political conflict and violence affected particularly Quirimbas. In 2019, for example, this led to a collapse of revenues from tourism and limited the project's ability to implement fieldwork. Political conflicts also contributed to the decision to reduce investments in Marromeu and Chimanimani.

Favorable Factors

69. **Adjustments to implementation arrangements**: The project faced two key constraints during implementation that could be resolved through effective adjustments to the project's implementation arrangements. Firstly, the government's expenditure system, e-SISTAFE, resulted to be not flexible enough to channel funds to CAs in a timely manner. The project therefore took advantage of Biofund's successful consolidation and its ability to receive funding directly from the Bank, circumstances that allowed using it as a mechanism for CA disbursements. Secondly, when it became clear that ANAC did not have the administrative capacity to lead project implementation, even with a dedicated team within its structure, the project moved the PIU to FNDS in 2017 and replaced the project coordinator. Formalized through the second restructuring, this improved implementation decisively. FNDS had been created under MITADER as a public fund to manage several Bank-financed projects and domestic revenues, including those concerning protected areas and wildlife. The move enabled the project to strengthen its alignment with other Bank-funded projects implemented by FNDS, which particularly benefited the community sub-projects as these required broad technical expertise beyond conservation and close coordination with similar activities to ensure a long-term approach. Moving the PIU to FNDS, together with using Biofund for disbursing to CAs, allowed the Bank to upgrade the project's implementation progress rating.

70. **Co-management agreements**: The project strongly encouraged and facilitated the establishment of public-private partnerships for the effective management of CAs through co-management agreements. The negotiations of these agreements were led by ANAC based on regulations that the institution had developed with project support. The agreements were decisive factors for improving implementation performance and the achievement of project results. The government's completion report presented evidence that the METT scores for co-managed CAs increased significantly more than those of areas without a co-management partner.

Biofund assessed these results and published a study outlining the modalities and advantages of co-management.[37]

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

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

M&E Design

71. Results monitoring and evaluation were designed to be coordinated by ANAC, with the MozBio Unit supporting it and Biofund and the CAs responsible for contributing data. This arrangement was adequate and to be complemented by M&E training, especially for CA staff. The theory of change was clear as described above and the indicators mostly adequate. However, there were weaknesses in the design that were only partly addressed during the second restructuring.

72. Most importantly, the second part of the PDO was phrased too broadly and did neither clarify what the living conditions to be enhanced should include nor what would constitute an enhancement. The corresponding indicators did not measure a wide range of possible changes in living conditions, which could have included very different aspects like access to specific infrastructure and services or improvements in health and education. Instead, the two indicators that sought to quantify enhancements in living conditions (jobs in tourism and conservation; income from tourism and wildlife utilization) focused on mostly economic benefits. This was adequate in that it was in line with the kind of improvements that the project intended to provide, which would have made them suitable PDO-level indicators for a more specific livelihood PDO. This would have been particularly desirable as the only PDO indicator linked to livelihood enhancements (number of direct project beneficiaries) did not measure such enhancements.[38] Another issue was that the indicator on emissions reductions from deforestation was problematic. The value for the average carbon stock suggested in the PAD did not take into account that the emission reduction potential depends on the type of forest, which led to a slightly inaccurate baseline value. This issue was identified after the mid-term review and corrected during project completion.[39] However, the indicator's methodology made it still not possible to clearly attribute the achieved reductions in the two CAs that it covered to project activities. While emission reductions were substantial in Gilé, Chimanimani only achieved reductions that followed the national trend, indicating that the value added by the project might have been limited there.

[37] http://www.biofund.org.mz/wp-content/uploads/2018/10/Co-Management-Models-for-Conservation-Areas-In-Mozambique-2018-05-30.pdf

[38] Also, the baseline of this indicator should not have been 0 given the methodology used (see Annex 1 for details).

[39] This did not negatively affect the results achieved because the new baseline value of 1,029,296 tons annual CO_2e emissions was slightly higher than the original value (1,000,000 tons CO_2e), while the target remained the same (500,000 tons CO_2e) and was significantly surpassed (131,113 CO_2e). Note that the unit of the indicator is carbon dioxide equivalent (as described in the indicator descriptions of the PAD), not carbon dioxide (as stated in the indicator title).

M&E Implementation

73. Throughout implementation, the project strengthened the PIU's M&E capacity. It recruited monitoring staff to collect data on the ground through standardized datasheets. The PIU held frequent internal meetings on M&E and discussed relevant issues, particularly progress on the results indicators, with the Bank during monthly meetings and in dedicated sessions during supervision missions. The Bank supported the PIU in developing the M&E Manual for the project and helped coordinate regular trainings with the M&E teams of other Bank projects. The GEF tracking tools were completed and tracked, and the final results submitted at completion.

74. M&E implementation was challenging at the beginning of the project given ANAC's general performance issues. In June 2016, the M&E rating was downgraded to moderately unsatisfactory because the results framework had not been completed and data not been collected. This improved once the PIU was transferred to FNDS. There, M&E was further strengthened through changes in staffing. These changes and the second restructuring helped to resolve this situation, which led to an upgrade of the M&E rating in June 2017. Still, collection of data from the CAs continue to prove challenging throughout the project. Data reported by the CA administrations was not routinely validated, which led to incomplete data records. For example, some CAs reported the number of patrols realized as the number of patrol days while others reported them as the number of patrol walks or the number of staff sent on patrol.

75. Similarly, the same beneficiaries were counted multiple times when they benefited from employment opportunities in tourism and conservation, were members of a community that received support through sub-projects, and/or benefited from the tourism income returned to communities. While this was partly corrected, there continued to be issues with the quality of the data, for example because beneficiaries had not been subtracted when sub-projects stopped functioning. Similarly, the entire population of the island of Bazaruto was counted as beneficiaries of the Zenguelemo Lodge even though the lodge was not completed and operational at project completion.[40] Despite these issues, the target was clearly surpassed, which may indicate that the project benefited more people than expected either way.

76. The implementation of the M&E framework was in some cases flawed. The indicator on local communities' perception of benefits from targeted CAs, while highly relevant given the importance of community satisfaction to ensure support for conservation, was insufficiently operationalized. Data was collected by conducting a baseline household survey in 2016 and a follow-up survey in 2019. Baseline data was thus gathered later than would have been ideal, i.e. before or at the very beginning of implementation. Also, the questions on beneficiary satisfaction were phrased too general and the responses might have been biased by a tendency of respondents to answer in a manner viewed as favorable, which would explain some implausible results. For example, in Quirimbas, where the smallest number of sub-projects was financed, satisfaction increased much more than in Chimanimani, where satisfaction dropped even though investments were largest. While the project achieved its objective regarding beneficiary satisfaction, it is therefore not clear whether this reflected beneficiaries' reality. Even though the data needs to be interpreted with caution,

[40] However, the project did transfer the grant for constructing the lodge and facilitated the concession.

additional feedback received by the project from different communities and associations indicated that beneficiaries were generally satisfied with the benefits they had received.

77. The results framework was adjusted during the second restructuring, which resolved some of the issues that had resulted from the weaknesses in design and operationalization, but also created new challenges.[41] For example, the indicator on law enforcement zones was adjusted to simplify its methodology given technical limitations within CAs, but did not clearly define the key term "patrol", which contributed to difficulties in data collection. The restructuring paper also stated that the target for Biofund's disbursements to the CAs was increased by 500 percent, but this value was based on a calculation error resulting from mixing annual with cumulative values and should have rather been 140 percent. Some of the changes made at restructuring were not sufficiently explained. For example, the second restructuring paper stated that Ponta do Ouro and Vilanculos/Inhassoro would be removed from the indicator on jobs created in tourism and conservation, but did not explain that the reason was that these areas were outside the CAs and thus not covered by the indicator's definition. Also the title of the indicator should have been adjusted as it did not report on jobs created but on jobs available, which is the reason why its baseline was not 0. It was also not clear why the indicator's new 2019 target (1,237) was different from the end target (1,299). Furthermore, the restructuring did not clarify that the description of the indicator on greenhouse gas reduction would no longer measure reductions in Quirimbas because the funds for the relevant activities under Component 4 were reallocated.

M&E Utilization

78. M&E data on institutional performance and results achieved was continuously used to inform decision-making and improve project management. This is evidenced best by the two restructurings, which took corrective action particularly to improve the results framework and to reward CAs with higher performance according to indicator data.

Justification of Overall Rating of Quality of M&E

79. The overall quality of the project's M&E is rated as modest because there were significant short-comings with regards to the second part of the PDO, which was too broad and not adequately operationalized through the results framework. Furthermore, there were minor shortcomings in M&E implementation, particularly errors during restructuring and in data collection.

[41] The restructuring would have been particularly an opportunity to sharpen the second part of the PDO or to introduce more suitable indicators to measure livelihood enhancements, particularly as the PDO indicator on the number of beneficiaries was only a weak proxy for measuring this. This was not done though.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

Environmental and Social

80. Based on a social and environmental screening, the project was categorized as a category B operation and therefore required a partial assessment given the site-specific nature of the potentially negative impacts of some of its activities. It 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 4.09
- Physical Cultural Resources OP/BP 4.11
- Involuntary Resettlement OP/BP 4.12

81. The government prepared all necessary safeguards instruments, namely: an Environmental and Social Management Framework (ESMF), a Resettlement Policy Framework, a Pest Management Plan, and a Process Framework. Dedicated safeguards staff at the PIU monitored compliance with environmental and social safeguards policies. When the PIU was still based at ANAC, its two safeguards specialists focused exclusively on the environmental and social screening of sub-projects and the elaboration of Environmental and Social Management Plans (ESMP). Communication with the Bank was limited, safeguards reports were not produced as needed, and the Grievance Redress Mechanism (GRM) was not functional yet. When the PIU was transferred to FNDS, this provided an opportunity to take a harmonized approach to safeguards for all Bank-financed projects that it managed. The implementation of the safeguards policies improved notably. A team of five safeguards specialists was created with the combined funding from various FNDS-managed projects and participated in monthly meetings with the Bank. Safeguards staff specialized in different areas, namely infrastructure, forest, agriculture, land, and communities. In addition, safeguards specialists with a regional focus (Cabo Delgado, Zambezia, and Nampula) were contracted and trained. The community liaison officers working in the CAs also received training on safeguards. FNDS developed for its project portfolio, including MozBio 1, a Safeguards Information System, a GRM, and safeguards guidelines. The forms for safeguards screening and the ESMPs were revised and improved, visits to monitor and supervise the safeguards mitigation measures identified in the ESMP became frequent, and the team started producing quarterly safeguards reports with details on the implementation of the mitigation measures planned for project activities. For all civil works, contractors provided performance reports based on site supervision and compliance assessment, taking into account safeguards policies.

82. In the supervision record, the project's overall safeguards performance was mostly rated satisfactory, with a temporary downgrade to moderately satisfactory only from June 2016 to April 2017 due to delays in the finalization of the ESMP for some of the infrastructure to be financed. The safeguards instruments were always recorded as complied with. However, there were occasional safeguards-related issues. Most importantly, the GRM only became fully functional in early 2018. The delay stemmed from the fact that FNDS created a joint GRM for all four projects of the Integrated Landscape Management Portfolio, requiring negotiations with a

large number of partners. Still, the mechanism was already partially functional and received and processed complaints. However, during the final Bank mission, CA staff conveyed that complaints filed in BANP did not always receive a timely response, which was also a consequence of delays in the recruitment of a community liaison officer.

Financial Management (FM)

83. The project complied with FM procedures during its entire duration, with the area mostly rated as moderately satisfactory. The PIU and Biofund each had an FM team with their own procedures. Due to technical difficulties with the initially employed FM software, the PIU used Excel for this purpose, which it perceived as cumbersome. PIU funds were audited by the National Auditor at the Administrative Tribunal. As some reports did not fully clarify issues raised by the auditors, qualified opinions were issued until 2018. Biofund's activities were audited by private auditors and received unqualified opinions.

84. In the first year of implementation, disbursements from Mozambique's treasury to the project account were seriously delayed. Together with ANAC's low institutional capacity, this was the major factor contributing to slow implementation progress, with ANAC being able to only implement 36 percent of its 2015 Annual Work Plan. The situation improved when the Ministry of Economy and Finance granted ANAC in February 2016 budget management authority using the e-SISTAFE system. However, there continued to be delays in accessing the funds due to the need to obtain clearances from the Administrative Court. In addition, the system was also not suitable for the frequent smaller transactions required to disburse funds from the project account to the CAs. Both issues were successfully addressed through the restructuring. Firstly, moving the PIU to FNDS allowed to benefit from its larger fiduciary team familiar with Bank-financed projects. Secondly, channeling operational costs to the CAs through a sinking fund within Biofund allowed to simplify the approval process for disbursements outside e-SISTAFE.

Procurement

85. The project was in compliance with procurement procedures, with procurement mostly rated moderately satisfactory. During the first two years of implementation, progress was slow and documents were submitted for Bank approval with delays and in insufficient quality. With the transfer of the PIU to FNDS and after changes in the procurement staff there in 2017 due to capacity issues, processes picked up sufficiently. Particularly difficult were procurement processes for sub-projects, which led to a large workload for the PIU team. At the same time, CA management teams complained about the centralized procurement approach, bureaucratic procedures, and delays in delivery.

C. BANK PERFORMANCE

Quality at Entry

86. The World Bank supported project preparation adequately and building on its long engagement in conservation, tourism, and rural poverty reduction. In close collaboration with the government and other partners, it ensured that project design was based on an extensive analytical base and incorporated the lessons learned from the TFCA series. The team assessed the development challenges correctly and identified adequate activities to help address them. The Bank fulfilled its fiduciary role through financial management and procurement assessments and ensured that environmental and social safeguards policies were applied correctly.

87. There were certain shortcomings that also affected implementation. Firstly, project design was in parts too ambitious. Taking into account the scope of the activities, the importance of policy dialogue, and the low capacity of the institutions involved, the initial duration of four years should have been recognized as too short and the number of CAs included as too high. The project was initially designed for a much larger funding amount, but when a French contribution did not materialize and the IDA allocation was spread over two phases (i.e. including MozBio 2), its scope was not scaled back sufficiently. Secondly, ANAC's capacity and the political leadership's commitment to strengthen the institution had been overestimated during preparation. The institutional capacity risk was therefore increased to "High" already in December 2015. Thirdly, the results framework exhibited weaknesses as described in detail in Section IV.A under "M&E Design". Most importantly, the second part of the PDO was too broad and not properly reflected by its indicators. Also, several indicators measured outputs rather than impacts. During implementation, these shortcomings were addressed, especially through the restructuring, with only minor issues in the results framework remaining.

Quality of Supervision

88. The Bank conducted a total of eleven implementation support missions during the five years of implementation,[42] with three missions in each of the first two years to ensure hands-on implementation support when most needed. Comprehensive aide memoires and ISRs were produced following best practice. Field visits were conducted as appropriate. A task team leader was based in the country office throughout implementation, which facilitated regular meetings with clients, partners, and beneficiaries to complement the formal missions. Specialists of all relevant disciplines, including environmental and social safeguards, FM, and procurement participated adequately. The close collaboration between the Bank team and the government team clearly benefited project performance.

89. The Bank team demonstrated proactivity and contributed effectively to resolving barriers to implementation. Most importantly, the task team supported two restructurings of the project that helped overcome to a large extent design issues and adapt implementation to evolving circumstances. Key actions that contributed to the project's success included reducing the number of supported CAs, channeling CA

[42] This includes the launch mission in March 2015, but not the completion and ICR mission in December 2019.

operating costs through Biofund, and transferring the PIU to FNDS. It quickly took steps to address ANAC's weak performance, first by providing additional capacity building support and revising the Annual Work Plan, later by strengthening the role of Biofund and leveraging the capacity of FNDS, effectively overcoming resistance from ANAC. While the decision to separate the PIU from ANAC partly undermined the goal to strengthen the institution, it was necessary to achieve the project's development objectives. To compensate for this additional weakening of ANAC, the Bank stepped up capacity building for the institution even more. Another example for the Bank's contribution to good decision-making was its support of co-management agreements for the CAs, an approach that contributed decisively to the performance of the CA system. The Bank team also successfully facilitated a solution for completing the delayed works of Zenguelemo Lodge after project closures.. A survey among the client institutions involved found that counterparts were largely satisfied with the Bank's performance. The Bank team was perceived as transparent and approachable and the missions as well-organized and useful.

90. Noteworthy is also the Bank's effort to ensure a smooth transition to MozBio 2. By starting the preparations for MozBio 2 in a timely manner, the new project could become effective almost a year before MozBio 1 was completed, which helped avoid discontinuities in staffing, programming, and funding. The use of funds from MozBio 1 to prepare the second phase of the SoP made it unnecessary to process a PPA. However, the relatively long overlap between the two projects also meant that the PIU was initially not able to fully focus on the new project because much remained to be done to bring MozBio 1 to completion.

91. Even though the Bank's supervision record was mostly positive, there were some weaknesses. Firstly, the restructurings, while necessary and effective measures, did not resolve all issues, particularly with a view to the results framework as indicators that measured outputs rather than results were maintained and even added. Some additional adjustments and clarifications would have been desirable, as indicated in Section IV.A under "M&E Implementation". The restructuring paper for the second restructuring should have also provided a clear description and justification for the reduction of targeted CAs and the changed approach to Sub-component 4.1. Secondly, the lesson from TFCATDP on the necessity of strong attention on building community-based institutions, while included as part of Sub-component 4.1 in the PAD, was not adequately followed through. Many of the envisioned activities were not implemented, particularly the establishment of CA Management Councils and capacity building on designing and implementing revenue-generating activities. However, some activities to create adequate enabling conditions were implemented by service providers as preparation for the sub-projects. To a certain extent, relevant activities were also included in MozBio 2. The experiences from MozBio 1 with community-level support also informed the corresponding approach used by the matching grant scheme Sustenta Biodiversidade in MozBio 2. Thirdly, though World Bank supervision was lauded by counterparts as demonstrating the Bank's commitment to the project and reflecting a problem-solving attitude, it was also in parts perceived as too assertive and detail-oriented. This was particularly, but not only, the case for the complex relationship with ANAC, which contributed to partly low participation of ANAC staff in missions and meetings.

Justification of Overall Rating of Bank Performance

92. The Bank's performance is rated overall as satisfactory to reflect the adequacy of project preparation and supervision, particularly the generally sound project design and the proactive, solution-oriented implementation support. The rating also takes into account the minor shortcomings, particularly with a view to the scope of the project, the results framework, and the reduced support to community-level governance.

D. RISK TO DEVELOPMENT OUTCOME

93. Project implementation highlighted a number of risks to the development outcomes achieved or expected to be achieved (i.e. to their sustainability). Firstly, ANAC's continued weak capacity poses a risk to the overall effectiveness of the conservation system. FNDS and Biofund have assumed strong roles and the division of responsibilities between the three institutions has not always been clear and widely accepted, which has led to partly competitive rather than collaborative relationships with ANAC. Secondly, the CA system still suffers from a lack of funding, with even Biofund not being self-sufficient yet. All key institutions rely at least in part on donor funding. Without continued support from donors, the progress made could degrade quickly. Thirdly, a range of external factors could jeopardize the project's outcomes. Political violence in Cabo Delgado continues to affect Quirimbas and could also deter tourists in other CAs if the situation exacerbates. The ongoing coronavirus pandemic could also negatively affect the CA system (for example, through a decrease in tourism and the corresponding revenues) and the lives and livelihoods in communities. Extreme weather events like cyclone Idai could lead to human loss and destroy CA infrastructure and sub-projects. Climate change may further aggravate this situation. MozBio 2 is contributing to the CAs' preparedness by supporting the rehabilitation of infrastructure through approaches that will make it more resilient to future extreme weather events. In some CAs, encroachment and urbanization pose a challenge to conservation. In Chimanimani, the increasing population might lead to more deforestation. MSR and PPMR have been affected by the rapid development of the town of Ponta de Ouro and there is still no clarity on whether the construction of Techobanine Harbour, which would be highly detrimental to any protection efforts, is off the table despite the MoU that the government had signed with Botswana and Zimbabwe. However, the creation of the Environmental Protection Area of Maputo and the ongoing efforts to render the area a UNESCO World Heritage Site, both supported under MozBio 2, could mitigate this risk.

94. While the risks listed above have the potential to undo the progress made under MozBio 1, the continuation of the MozBio Program and particularly the implementation of MozBio 2, with additional IDA and GEF resources, constitute opportunities to minimize them. The continued policy dialogue, capacity building, and investments all contribute to the mitigation of these risks in terms of probability and impact. This is expected to secure the results achieved, to deliver additional outcomes, and to ensure the sustainability of all achievements.

V. LESSONS AND RECOMMENDATIONS

95. The project generated the following lessons and recommendations, which have already been considered in the design of MozBio 2 and are also guiding its implementation:

96. **Landscape Approaches are key for making conservation and livelihood development compatible**. The project recognized the importance of linking conservation and livelihood support because local communities can put additional pressure on CAs or contribute to their protection, depending on their livelihood options. While the sub-project activities also benefited communities outside the CAs and significantly surpassed their targets in terms of number of beneficiaries, the approach taken came with high expenses for service providers, was not always sufficiently connected to conservation efforts, and was too small-scale to reverse current patterns of settlement and unsustainable resource use. This underlines the need for conservation projects to collaborate closely with other initiatives in the targeted CA landscapes. Particularly activities in the agriculture and forestry sector should be streamlined with conservation as a conservation project by itself will not be able to transform rural livelihoods and impact the many different dimensions of rural living conditions. This would also allow conservation projects to focus on setting rules within which livelihood development can take place. At the same time, the project demonstrated that conservation can be a driver of rural development and income generation. To implement such an approach, MozBio 2 has established Landscape Management Units to coordinate relevant initiatives within each landscape. It also supports landscape/territorial land use plans at district-level to inform future investments.

97. **Project design needs to adopt a comprehensive approach to institutional capacity that supports not only capacity building activities for staff, but systematically enables effective human resource management and accounts for differences in capacities across institutions**. While providing funding and technical expertise for staff training are important, they will only lead to results if embedded in a human resource management system that is also able to recruit and retain qualified staff. For example, systematic assessments of gaps in the institutional skillset need to be conducted and must inform the selection criteria for recruitment. To ensure success on the job, individual learning programs and clear performance milestones are crucial. To retain staff, compensation and non-monetary incentives need to be leveraged, which can be particularly challenging for public sector institutions. When working with different institutions, project design needs to take into account that capacities may differ widely between entities. During MozBio 1 implementation, such differences became particularly visible between ANAC and Biofund, but also among different CAs. MozBio 2 places significant emphasis on human resources through additional capacity development for these institutions, for example through the Mozambique Program for Conservation Leadership hosted by Biofund. Still, building the required workforce is a long-term commitment and needs to be envisioned beyond the duration of the SoP.

98. **Leveraging institutions under private law can be a key success factor for strengthening conservation**. MozBio 1 demonstrated this at the central and at the CA level. At the central level, the project showed that conservation trust funds can provide efficient, sustainable finance for conservation activities. The successful operationalization of Biofund demonstrated how sound human resource management, performance-based staffing, and targeted capacity building contribute to effective institutions. Biofund's endowment fund has the potential to become a significant and reliable source of income for the CA system if sufficiently capitalized. The

institution has already demonstrated its ability to simplify the disbursement arrangements for the CAs through its sinking fund. To fully realize this potential, a clear distribution of responsibilities at the central level is necessary. Acknowledging this, Biofund and ANAC signed an MoU in 2019 that seeks to improve their collaboration. At the CA level, MozBio 1 demonstrated the potential of co-management agreements. The co-managed CAs generally demonstrated the highest levels of improvement in their performance. At the same time, they showed higher CA involvement in and stronger ownership of the livelihood activities. The partnerships complemented the strengthening of public institutions rather than requiring them as a pre-condition for effective execution. To be successful, co-management partnerships need to be based on standardized approaches and include clearly defined objectives and milestones. These should be set by the agency in charge of conservation management, ANAC in the case of Mozambique. MozBio 2 is supporting ANAC in incorporating such approaches through the establishment of a dedicated Public-Private Partnership Business Unit.

99. **Livelihood activities need to carefully balance short-term economic needs and community capacity building**. MozBio 1 generated valuable lessons on the importance of not only addressing immediate livelihood needs of the population in and around CAs, but also building the longer-term capacity of communities to engage in natural resource management. This would allow communities to become active partners in conservation-based tourism rather than merely recipients of revenues generated by investors. Such ventures would strengthen the link between livelihoods and sustainable natural resource management. Key actions to achieve this include adequate zoning with clear boundaries for community land and strengthening community governance capacity for managing and developing natural resources under their jurisdiction. MozBio 1 supported the creation of a network for community-based natural resource management that will develop approaches and methodologies that are key for strengthening community capacity. MozBio 2 will continue these activities and expand them through the Sustenta Biodiversidade matching grant scheme, which seeks to improve the capacity of local entrepreneurs and micro, small, and medium enterprises for managing conservation-compatible value chains.

100. **The implementation of livelihood activities by service providers requires clear guidelines, close collaboration with CA administrations, and strong community ownership.** Service providers played a central role in the livelihood and community engagement activities of MozBio 1, but many lacked the flexibility and capacity to effectively engage communities. Still, the financial costs of contracting these providers were high. In addition, some livelihood activities were detached from the conservation work of the CA administrations, which not only risks undermining conservation, but also constitutes a missed opportunity for providing CA administrations with visibility in communities. For these reasons, the design of community engagement and livelihood activities needs to take into account the following. Firstly, service providers need clear guidelines on community engagement, particularly for participatory sub-project identification. In Mozambique, ANAC should play a central role in developing these, thus making community engagement for natural resource management part of its core business. Secondly, contracts and accountability mechanisms need to involve CA administrations to ensure their active participation in the livelihood activities and to guarantee that activities are explicitly linked to the CA's conservation priorities. Important areas of collaboration include land, natural resource management, and conservation-compatible livelihood options. Thirdly, to further strengthen the link between conservation and communities, CA administrations need sufficient social development capacity,

which may require a dedicated team working on the ground. Investments in social assets, such as health and education, should also be considered to strengthen this link as they increase the well-being of communities and can thus help reduce pressure on CAs in the long-term. Fourthly, communities require sensibilization and access to environmental education to improve awareness for their ideal role in conservation, as well as capacity building to increase their ownership and contribution to it. This takes time and adequate staff and resources. Given the capacity constraints of service providers in Mozambique, the World Bank is supporting a network that brings together international, national, and community-based organizations to facilitate partnerships that could strengthen the country's landscape of service providers. That being said, community engagement does not have to be implemented by service providers. Collaborating with other initiatives under a landscape approach, as recommended above, may provide opportunities for using alternative institutional settings, for example the extension services of national-level rural development programs.

ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: To improve management of targeted Conservation Areas

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Areas brought under enhanced biodiversity protection (ha)	Hectare(Ha)	0.00 18-Nov-2014	1900000.00 29-Nov-2019		2052100.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 108 percent. The area corresponds to the total area of the CAs targeted by the project.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of tourism concessions regularized in the Bazaruto Archipelago National Park	Number	1.00 29-Nov-2016	7.00 29-Nov-2019		8.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 117 percent. The project supported the concessions by helping ANAC streamline the process in line with the Conservation Law, for example by developing a guide licensing system and adapting the processes for Environmental Impact Assessments. The indicator was introduced with the second restructuring to replace the indicator measuring the increase in number of visitors in targeted CAs with tourism potential.

Objective/Outcome: Enhance the living conditions of communities in and around CAs

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00 18-Nov-2014	56000.00 29-Nov-2019		69136.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 123 percent. This indicator is an aggregation of three values: i) the indicator on the number of beneficiaries of subprojects supported by the project, ii) the indicator on the number of jobs created in tourism and conservation areas in targeted CAs, and iii) the number of beneficiaries from the 20 percent of CA revenue sharing with communities (the US$ amount of which is measured through the indicator on income derived from tourism and wildlife utilization in targeted CAs and returned to communities). Of these three values, only the first one has a baseline of 0. The baseline for the second value was, according to the PIU, 1,074 because the indicator did not measure jobs created but jobs available in CA (contrary to what the indicator title implies). The baseline for the third value was 10,669 according to PIU reporting. In sum, this means that the actual baseline of this indicator would be 11,743. The actual project beneficiaries would then amount to 57,393, which would mean that the target was achieved at 102 percent.

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

Female beneficiaries	Percentage	0.00 18-Nov-2014	30.00 29-Nov-2019		34.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 113 percent. The second restructuring changed the unit of measurement from number to percentage.

A.2 Intermediate Results Indicators

Component: Institutional Strengthening for CA Management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Score on the institutional capacity tool for ANAC	Percentage	38.00 18-May-2014	61.00 29-Nov-2019	58.00 29-Nov-2019	58.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 100 percent. The baseline increased with the second restructuring from 37 percent to 38 percent (2.7 percent increase) and the end target was reduced from 61 percent to 58 percent (4.92 percent decrease), due to a review of the evaluation methodology that concluded that the original baseline was too low and the original target too ambitious. Capacity was measured through the Management Effectiveness Tracking Tool (METT).

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

	Measure			Target	Completion
Annual Biofund disbursement to the Conservation areas	Amount(USD)	0.00 18-May-2014	750000.00 29-Nov-2019	3000000.00 29-Nov-2019	3940839.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 131 percent. The target was exceeded because Biofund received additional funds from new sources, including AFD and Conservation International. With the second restructuring, the end target was increased from an annual target of US$500,000 to a cumulative target of US$3 million (which corresponds to a 140 percent increase) due to Biofund's high performance and new resources available, including from IDA through the second restructuring. Note that the original target would have also been achieved without counting the additional IDA funds that were channeled through Biofund. The original target values per year were US$250,000 for Year 3 and US$500,000 for Year 4, which would sum up to a cumulative original target of $750,000.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
ANAC's annual revenues collected from targeted CAs	Amount(USD)	32676821.00 18-May-2014	1280000.00 29-Nov-2019	36778050.00 29-Nov-2019	46062136.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 326 percent. With the second restructuring, the baseline decreased from US$1,280,000 to MZN 32,676,821 (17.33 percent; exchange rate of US$1 = MZN 30.88, based on November 18, 2014 as the date of the baseline assessment) and the end target decreased by a similar percentage from US$1,460,000 to MZN 36,778,050 (18.42 percent) due to exclusion of four *coutadas* from project support and monitoring. Note that the final result achieved exceeds not only the revised target, but also the original one. The reason for the high performance on this indicator was that the revenue collection systems introduced in MSR and BANP, together with a potential increase in tourism and higher fees, led to higher tourism revenues than expected during the second restructuring. The measurement unit changed from US$ to MZN because revenues were registered in the local currency and

given large fluctuations in the exchange rate. Note that this change has not been recorded correctly in the Bank's system, which is why the unit of measurement above is indicated as US$ even though the values correspond to MZN.

Component: Promotion of Tourism in CA

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of jobs created in tourism and conservation in targeted CAs	Number	926.00 18-Nov-2014	1136.00 29-Nov-2019	1299.00 29-Nov-2019	1781.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 229 percent. The target could be exceeded due to a variety of reasons, including that more jobs than expected were created in i) park administrations due to the success of the co-management agreements, and ii) tourism (field guides, accommodation, restaurant staff, etc.) in coastal CAs. Note that the indicator does not measure the number of jobs created, as implied by its title, but rather the number of jobs available in CAs. Furthermore, during the second restructuring, the data collection methodology was changed to only include jobs inside CAs (exclusion of Ponta do Ouro and Inhassoro/Vilankulo also from the title of the indicator). The baseline was reduced accordingly from 937 to 926. At the same time, the level of ambition of the target was increased from 21 percent (baseline: 937; target: 1,136) to 40 percent (baseline: 926; target: 1,299). Note that the PIU later reassessed the baseline and as a result used a baseline of 1,074 in its reporting. In line with the ambition to achieve a 40-percent increase in the number of jobs, it also adjusted the target it used to 1,500 (compared to the 21-percent increase intended in the original results matrix). Note that the indicator data includes 217 temporary jobs from construction in three CAs (Quirimbas, Limpopo and BANP). Even if these were excluded from the count, the target would still have been achieved at 171 percent.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Submitted and/or signed Co-Management Agreements for Conservation Areas	Amount(USD)	0.00 20-Sep-2017	2.00 29-Nov-2019		5.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 250 percent. Indicator added through the second restructuring. Agreements were signed for MSR, Gilé, Pomene, BANP, and Banhine. The reason for exceeding the target substantially was that political support for co-management agreements increased after first positive experiences with co-management were made in MSR and Gorongosa NP.

Component: Improving CA Management

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Law Enforcement patrols in targeted CAs	Number	5523.00 18-Nov-2014	30.00 29-Nov-2019	7075.00 29-Nov-2019	10786.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 339 percent. The methodology changed with the second restructuring to count the number of patrols, given technical limitations within CAs in applying the previous approach. The indicator was renamed accordingly (original title: “Law enforcement zones regularly patrolled in targeted CAs”, measured in percentage). The target was substantially exceeded as a result of improved technical assistance provided to CAs and support provided through the co-management agreements. Also, the very fact of measuring the number of patrols incentivized CAs to perform well on this metric. There might also have been instances of over-reporting in some CAs, though this was not considered to have substantially inflated the results.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Planned priority infrastructure completed	Percentage	0.00 18-May-2014	100.00 29-Nov-2019		100.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 100 percent. Priority infrastructure includes: roads, outposts, staff housing, bridges, fencing, signs, etc.

Component: Piloting Sustainable Community Livelihoods around CA

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Annual CO2 emissions from deforestation in selected Conservation areas	Tones/year	1000000.00 20-Sep-2017	500000.00 29-Nov-2019		131113.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 174 percent. In its reporting at project end, the PIU had adjusted the baseline for this indicator to 1,029,296 tons CO2e per year. This was the result of applying an improved methodology for estimating deforestation and emissions reductions, with a lower level of uncertainty, a consequence of the improved technical capacity within FNDS. The PAD used 1,000,000 tons CO2e per year as baseline. The PIU's adjustment did not lower the level of ambition of the indicator because the new baseline value was slightly higher than the original value, while the target remained the same

(500,000 tons CO2e) and was significantly surpassed (131,113 CO2e). The reason for having the target substantially surpassed was that activities in Gilé far exceeded expectations, particularly due to strong community ownership with regards to sustainable cashew and efficient charcoal production. There was also a general decrease of deforestation nationally starting in 2014, a trend that may also have materialized in the targeted CAs. Note that the unit of the indicator is carbon dioxide equivalent (as described in the indicator descriptions of the PAD), not carbon dioxide (as stated in the indicator title).

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Index on local communities' perception of benefits from target CAs	Percentage	29.00 18-Nov-2014	35.00 29-Nov-2019		52.00 31-Mar-2020

Comments (achievements against targets):
The indicator target was achieved at 383 percent. A reason for this strong result may have been the implementation of additional sub-projects with some of the funds that had initially been budgeted for Sub-Component 4.1. With the second restructuring, the title and description of the indicator were adjusted to better reflect the intention of the indicator (original title: "Average increase in economic benefits of communities supported by Component 4"). The previously missing baseline was defined and the target increased accordingly from 29 percent to 35 percent (75 percent increase). Data was collected by conducting a baseline household survey in 2016 and a follow-up survey in 2019. Baseline data was thus collected later than would have been ideal, i.e. before or at the very beginning of implementation. Also, the questions on beneficiary satisfaction were phrased too generally and the responses may have been biased by a tendency of respondents to answer in a manner viewed as favorable, which would explain some implausible results. These issues might have contributed to exceeding the indicator target

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

Income derived from tourism and wildlife utilization in targeted CAs and returned to communities.	Amount(USD)	3115035.00 18-May-2014	250000.00 29-Nov-2019	3786345.00 29-Nov-2019	6095594.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 444 percent. With the second restructuring, the baseline was reduced from US$220,000 to MZN 3,115,035 (54.15 percent; exchange rate of US$1 = MZN 30.88, based on November 18, 2014 as the date of the baseline assessment.) and the end target reduced by a similar percentage from US$250,000 to MZN 3,786,345 (50.95 percent), to account for the fact that the indicator only included CAs with revenues and excluded four *coutadas.* The level of income measured by this indicator was a function of ANAC's annual income as measured by a separate indicator. The target was thus exceeded for the same reason, namely that the revenue collection systems introduced in MSR and BANP, together with a potential increase in tourism and higher fees, led to higher tourism revenues than expected during the second restructuring. The unit of measurement was changed from US$ to MZN as the revenues were registered in the local currency. Note that this change has not been recorded correctly in the Bank system, which is why the unit of measurement above is indicated as US$ even though the values correspond to MZN. The term "annual" was removed from the indicator title, but no change in substance was made as the methodology continued to report annual amounts.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of beneficiaries of subprojects supported by the Project	Number	0.00 18-Nov-2014	8400.00 29-Nov-2019		16239.00 31-Mar-2020

Comments (achievements against targets):
Indicator target achieved at 193 percent. The reason for having the target significantly surpassed is that the project could support more sub-projects than originally planned, especially on agroforestry and conservation agriculture, due to the reallocation of resources that had originally been intended to be

implemented under Sub-component 4.1. The CAs included were Chimanimani NR, BANP, Limpopo NP, MSR, and PPMR (under Sub-component 4.2), Gilé NR (under Sub-component 4.3), and Quirimbas NP (under Sub-components 4.2 and 4.3).

B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1: Improve management of targeted CAs	
Outcome Indicators	1. Areas brought under enhanced biodiversity protection 2. Number of tourism concessions regularized in the Bazaruto Archipelago National Park
Intermediate Results Indicators	1. Score on the institutional capacity tool for ANAC (Component 1) 2. Annual Biofund disbursement to the CAs (Component 1) 3. ANAC's annual revenues collected from targeted CAs (Component 1) 4. Submitted and/or signed Co-Management Agreements for Conservation Areas (Component 2) 5. Number of jobs created in tourism and conservation in targeted CAs (Component 2) 6. Law Enforcement patrols in targeted CAs (Component 3) 7. Planned priority infrastructure completed (Component 3)
Key Outputs (linked to the achievement of the Objective/Outcome 1)	1. Amendment of the new Conservation Law and key regulations for its operationalization 2. Provision of equipment to the CITES Authority (e.g. tools to mark ivory) 3. Audit to catalogue the national ivory stockpile 4. ANAC staff salaries funded (including five directors and nine heads of department) 5. Study tours to South Africa, Brazil, and Botswana 6. ANAC staff participation in international conferences 7. A range of management tools (operational guidelines, CA database, CA revenue collection system, Management Effectiveness Tracking Tool (METT) for CA monitoring) 8. Training for ANAC staff in headquarters and CAs in M&E and safeguards 9. Human resource management strategy 10. Planning and training workshops on financial management, human resource management, procurement, team building, etc. 11. Scholarships for ANAC staff for institutions like the College of African Wildlife Management, Mweka, in Tanzania and the Southern African Wildlife College in South Africa 12. Operating costs and local travel for supervising the CAs funded 13. Capitalization of US$3.2 million for Biofund's endowment fund

	14. Biofund staff salaries 15. Biofund equipment, consulting services, and operating costs. 16. Internal procedures for Biofund (Operational Manual, annual work plans, communications, fundraising, and investment strategies, 2018-2022 Strategic Plan) 17. Marketing and communication campaigns for CA branding (including CA logos and website for ANAC) 18. Promotional videos on tourism and community development of CAs 19. International Conference on Nature Based Tourism in 2018 20. Investments in infrastructure, equipment, and wildlife in CAs, including: • 17 housing units, offices, and dormitories for senior staff and rangers (MSR, PPMR, BANP, Quirimbas, Marromeu, and Pomene) • 5 drifts (Chimanimani and Limpopo) • Transfer of 3,488 animals to MSR as part of the repopulation of key mammal species • 2 roads/signage • 1 fence (MSR) • 1 jetty (Quirimbas) • 30 vehicles • 8 pieces of machinery • 27 motor- and quad-bikes • 6 boats 21. Improved tourism statistics 22. New data and revenue collection systems for MSR and BANP 23. Tourism concession tenders for MSR, Limpopo NP and BANP, which resulted in a successful tender for BANP 24. Regularization of tourism operators in BANP 25. Support to the establishment of key co-management agreements between the government and partners for BANP, Gilé, Banhine, Pomene and MSR/PPMR 26. Updated lion and leopard hunting plans 27. Staff training, salaries, supplies, fuel, and other operational costs in eleven CAs 28. Hippopotamus and crocodile survey 29. Assessment on lions and leopards to inform a conservation strategy, an action plan, and hunting guidelines

	30. Several aerial wildlife surveys in and around Marromeu as well as in Quirimbas, Gilé, and MSR 31. Biodiversity survey for Chimanimani 32. Turtle monitoring survey in MSR, PPMR, BANP, Quirimbas, and Pomene 33. Marine ecosystem surveys in PPMR, BANP, Quirimbas, and Pomene 34. Land Use Special Plan of the coast of Matutuine as well as a Partial Urbanization Plan
Objective/Outcome 2: Enhance the living conditions of communities in and around CAs	
Outcome Indicators	1. Direct project beneficiaries 2. Female beneficiaries
Intermediate Results Indicators	1. Index on local communities' perception of benefits from target CAs (Component 4) 2. Number of beneficiaries of subprojects supported by the Project (Component 4) 3. Income derived from tourism and wildlife utilization in targeted CAs and returned to communities (Component 4) 4. Annual CO_2 emissions from deforestation in selected CAs (Component 4)
Key Outputs (linked to the achievement of the Objective/Outcome 2)	1. Inputs and training for sub-projects, identified by the communities as necessary to improve their livelihoods, in and around CAs, including a wide range of activities, particularly small-scale commercial agriculture, conservation agriculture, agroforestry, beekeeping, sustainable charcoal production, and drinking water and irrigation systems 2. Infrastructure constructed, including: • 378 fields for commercial agriculture (Limpopo, Chimanimani) • 2,565 fields for conservation agriculture (MSR, Gilé, BANP, Chimanimani, Quirimbas) • 5,820 beehives (Gilé, Chimanimani) • 69,371 seedlings for agroforestry (Gilé) • 33 water systems for human consumption and irrigation • 5 water systems for animals (MSR) • 1 market house (Chimanimani) • 6 agriculture warehouses (Chimanimani, MSR) • 5 beekeeping storage facilities (Chimanimani) • 6 mills (Chimanimani)

	• 1 rice processing facility (Quirimbas) • 1 fish market (BANP) • 1 community lodge (Zenguelemo Lodge in BANP) 3. Support to community associations, including training on local governance issue 4. Guidelines for community project implementation that can be replicated in future projects 5. Support to environmental education, including guidelines, provision of equipment, educational materials, training for teachers, 33 environmental clubs, workshops, and awareness raising campaigns, e.g. through the 2017 national school games 6. Hiring of and equipment for community liaison officers 7. Socio-economic surveys that gathered vital information on the necessities of communities 8. Distribution of emergency kits after Cyclone Idai in Chimanimani 9. Wildfire control program in Gilé and a results-based payment scheme for communities for reducing fires in MSR 10. Promotional materials like videos, brochures, and websites to support ANAC, Biofund, the CAs, and other institutions

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Claudia Sobrevila	Task Team Leader
Cheikh A. T. Sagna	Social Specialist
Stephen Ling	Social Specialist
Paulo Jorge Temba Sithoe	Social Specialist
Supervision/ICR	
Franka Braun	Task Team Leaders
Amos Martinho Malate, Antonio Laquene Chamuco	Procurement Specialist(s)
Elvis Teodoro Bernado Langa	Financial Management Specialist
Maria Isabel Nhassengo-Massingue	Procurement Team
Andrianina Noro Rafamantanantsoa	Team Member
Andre Rodrigues de Aquino	Team Member
Teofilo Domingos Munjovo	Procurement Team
Amelia Jose Cumbi	Procurement Team
Bruno Alberto Nhancale	Procurement Team
Amanda Teresia Jerneck	Procurement Team
Paulo Jorge Temba Sithoe	Environmental Specialist
Joao Moura Estevao MarquesdaFonseca	Team Member
Maria Do Socorro Alves Da Cunha	Social Specialist
Carmen Lahoz Rallo	Team Member
Bartolomeu Filimao Soto	Team Member
Asha Johnson	Operations Officer
Leela Raina	Team Member
David Maleki	ICR Team Leader

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US$ (including travel and consultant costs)
Preparation		
FY13	13.963	88,676.73
FY14	17.067	147,041.61
FY15	44.298	240,078.71
FY16	.867	2,127.86
FY17	0	0.00
Total	**76.20**	**477,924.91**
Supervision/ICR		
FY15	14.578	94,500.98
FY16	10.774	187,432.89
FY17	11.796	137,532.19
FY18	12.470	187,118.24
FY19	29.571	144,720.34
FY20	35.333	149,292.64
Total	**114.52**	**900,597.28**

ANNEX 3. PROJECT COST BY COMPONENT[43]

Components	IDA		GEF		Total		Percentage of Approval (US$M)
	Amount at Approval (US$M)	Actual at Project Closing (US$M)	Amount at Approval (US$M)	Actual at Project Closing (US$M)	Amount at Approval (US$M)	Actual at Project Closing (US$M)	
Component 1: Institutional Strengthening for CA Management	8.0	5.2	3.2	3.2	11.2	8.4	75
Component 2: Promotion of Tourism in CA	1.9	2.3	-	-	1.9	2.3	121
Component 3: Improving CA Management	16.4	16.0	-	-	16.4	16.0	98
Component 4: Piloting Sustainable Community Livelihoods around CA	6.8	5.6	3.1	3.1	9.9	8.7	88
Component 5: Project Management, Monitoring and Evaluation, PPA	6.9	7.7	-	-	6.9	7.7	112
Total	40	36.8	6.3	6.3	46.3	43.1	93

[43] Due to rounding, numbers presented may not add up precisely to the totals indicated.

ANNEX 4. EFFICIENCY ANALYSIS

Ex- Ante Economic Analysis (PAD stage)

1. The PAD provided an extensive quantitative economic analysis based on a net present value approach, with focus on quantifiable revenue benefit streams and reference to project components and a baseline. Results from the ex-ante project economic analysis were carried forward to the GEF additionally financed components, which was supplemented with an incremental cost analysis in qualitative terms estimating the value of the addition of GEF funds to achieve global environmental benefits of the project interventions and outcomes.

2. Project design identified environmental[44] and economic benefits arising through benefits generated within the CAs receiving support from MozBio. Since it was difficult to undertake economic valuation for all benefits, the assessment at the design stage focused on the most measurable economic benefits. Hence monetized benefits were presented for the following streams i) Total annual revenues generated from economic activities in targeted conservation areas and their zones of influence [45] (63% of total ex-ante project benefits); ii) Annual revenues generated by Biofund's invested endowment capital[46] (8% of total ex-ante project benefits); and iii) Additional revenue accruing to communities living in and around the CAs through enhanced livelihoods (29% of total ex-ante project benefits)[47]. It was noted that the country specifics of data collection are a major challenge to standard economic analysis. Hence, the team is to be commended for building a database from literature review, government sources and field reports for tourism fees, value of natural resources – marine and terrestrial, private sector capital investment in community reserve/hunting etc.

3. An ex-ante cost-benefit analysis was performed based on monetized benefits as outlined above and found the project to be economically viable with net benefits over a 10-year project period at US$39 million. The ERR (Economic Rate of Return) was reported as 14.39% and the NPV equals US$6.7 million (at a 10% discount rate). The project must be commended for taking a range of scenarios to test assumptions around increase in revenues such as changes in tourism fees, daily spending of tourists as well as values of marine resources which yielded the lowest estimate as 11.2% with a 25% decrease in daily spend of tourists. However, while crosschecking estimates, it seemed NPV of 6.7 million would give an ERR of 4%[48] at a 10% discount rate. This means the project was viable in terms of positive NPV, however

[44] The ex-ante analysis acknowledged that including environmental benefits would increase the benefits even further and had identified benefits accruing from: tourism demand above inflation or the impact of increasing the number of concession operations within CAs would have on revenue generation; value of improved provision of environmental services and larger benefits to local communities. Towards this end the team had estimated the contribution of CAs to the national economy and how much flows to private and public actors.

[45] This is composed of a) Tourism entrance fees, concession fees, licenses, fines from CAs that offer non-consumptive (photographic) tourism activities; b) Concession fees, abate tickets and trophies fees from CAs that offer consumptive (hunting) tourism activities; c) Revenue generated from tourism expenditure within the CAs on accommodation, food and beverages, activities and purchases.

[46] A 4% consistent return on endowment capital invested is assumed. This is an optimistic scenario.

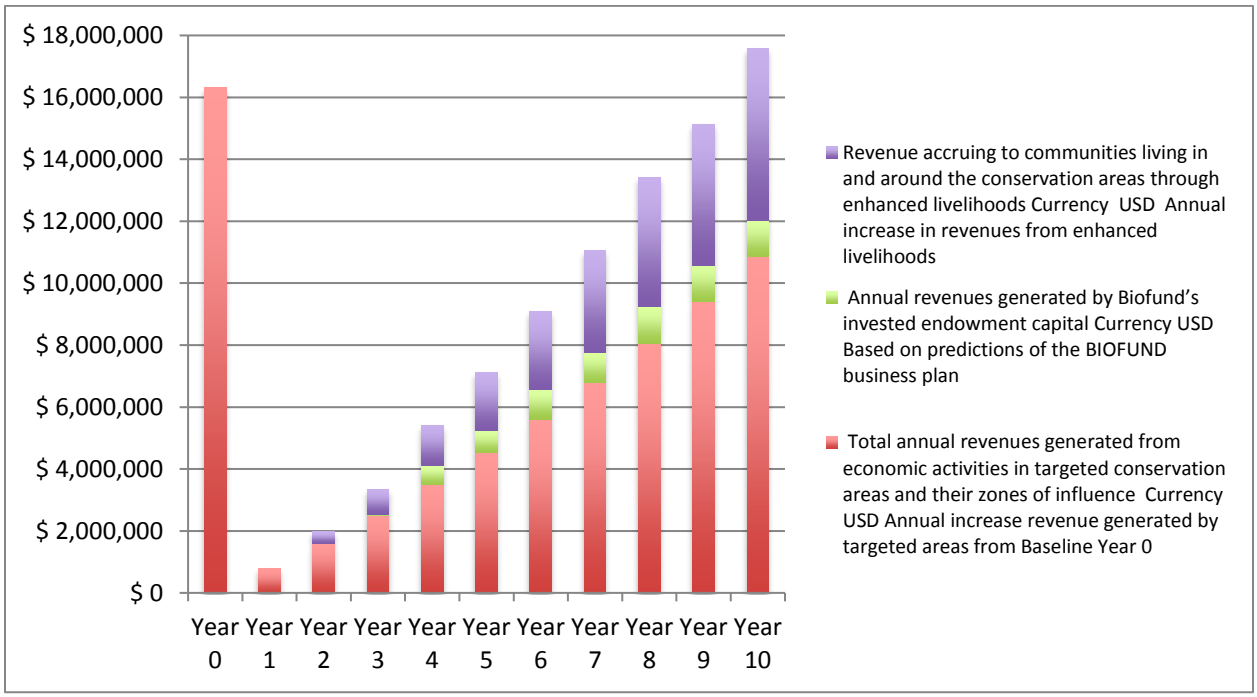
[47] This is based on secondary research conducted by Suich (2006) and is transferred to the CA context., It should be treated carefully as strongly based on extrapolations.

[48] This error could be because of a misinterpretation of IRR=0 at 14.39% discount rate. However, the IRR is calculated when the NPV=0. When 14.39 is the discount rate, NPV is still positive at 4.5MUS$ in year 10 as per the excel sheet accompanying the PAD's economic analysis, hence 14.39 cannot be the IRR. It remains unclear how the PAD analysis reached the conclusion that IRR= 14.39% @ 10% discount rate.

not viable in terms of ERR, this would carry through to all the sensitivity analysis and results presented at appraisal stage.

Discount Rate @10% NPV of benefits (In US$)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
- 9,748,566.72	- 7,873,727.13	- 6,130,358.18	- 4,165,795.21	4,410,360.43	5,131,201.45	5,677,776.83	6,249,626.08	6,420,881.70	6,781,114.35

Table 1 Summary of ex-ante project benefits



Ex- post project economic analysis

Overview of approach and assumptions

4. Ex-post analysis carried forward the analysis at PAD stage with the three benefit streams identified and updated it as per values reported by the final project report using indicators 6, 7, 13, 14 and 15 across 2015-2019. It then extrapolated benefits accruing (beyond 2019) based with the approach of PAD ex-ante analysis, however with a revised set of assumptions (including inflation, exchange rate, no of beneficiaries). The benefit stream -*Annual revenues generated by Biofund's invested endowment capital* was modified to reflect revised project indicators. The revised indicator monitored disbursement of Biofund's capital which helped capture the 'maximizing finance for development' aspect of this project by crowding in sustainable financing for biodiversity conservation well beyond the project boundary and

has been taken as proxy for the invested endowment capital.[49] Biofund's disbursements amounted to US$26.4 million. In addition, the project helped mobilize at least US$949 million in private sector investments as illustrated in Table 4 of the main text. A further benefit stream was identified and monetized from Indicator 15 on reduced carbon emissions based on assumptions. Final costs were obtained from cost tab of project, summary table provided in the GEF incremental analysis section.

Results

5. The analysis finds the project viable at a 10% discount rate and has generated several monetarized and non-monetarized benefits as well as accrued cost efficiencies. The total net present value of benefits (ex post) with a ten-year timeline has been estimated to yield US$128.6 million with an ERR of 13%, NPV of US$43.3 million. The project, however, is not viable for a discount rate above 11%. However, not all benefits were monetized and with the values monitored under indicator 15 on carbon emissions reduced, the project accrues additional benefits of US$39.1 million from 2014-2019 starting with a shadow price of US $34/ ton of CO2e[50], as a lower bound conservative estimate. Hence the revised ex- post net benefits are US$167.8 million, with an ERR of 25%, NPV of US$70 million and the project is viable at all discount rates from 5-20%. The ex-post analysis finds this investment with high efficiency. Majority of these benefits accrue from total annual revenues generated from economic activities in targeted conservation areas and their zones of influence (41%), followed by revenue accruing to communities living in and around the conservation areas through enhanced livelihoods (26%), avoided social costs of carbon (19%) and the rest from disbursement from Biofund, details of which are provided in Annex 4.

Table 2 Summary of Results for Ex- post Economic Analysis

Summary of Results for Ex- post Economic Analysis				
Discount Rate	5%	10%	12%	20%
Using ex- post data based on project reported indicators till 2019 with extrapolations using PAD analysis and revised assumptions on exchange rate and inflation (Scenario 1)				
NPV (US$)	76,276,043	43,354,768	22,302,635	8,661,732
ERR	19%	13%	9%	4%
Including social costs of carbon avoided to the above scenario based on emission reductions accruing from 2015-2019 (Scenario 2)				
NPV (US$)	108,431,404	70,024,618	44,617,751	27,483,339
ERR	31%	25%	19%	14%

[49] It is to be noted that in 2019, investment capital was $50,000, if this value is extrapolated, this would significantly reduce benefits, however, make for project viability with other benefit streams that form the majority of total benefits.

[50] As per WB guidance on shadow prices (2017) based on High Commission on Shadow Prices Carbon Pricing Leadership Coalition 2017. Report of the High-Level Commission on Carbon Pricing, Commission chairs: Stiglitz, J.E. and Stern, N., supported by World Bank Group, ADEME, French Ministry for the Ecological and Inclusive Transition. https://static1.squarespace.com/static/54ff9c5ce4b0a53decccfb4c/t/59244eed17bffc0ac256cf16/1495551740633/CarbonPricing_Final_May29.pdf

For Scenario 1 presented in table above:

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Total
BENEFITS (US$)	-10,256,716	-6,942,991	-6,015,221	12,278,624	18,195,755	27,190,060	29,776,100	32,619,536	35,744,372	39,176,724	171,766,244
TOTAL COSTS (US$)	7,109,521	10,000,852	11,174,322	8,546,489	6,273,982	-	-	-	-	-	43,105,166
NET BENEFITS (US$)	-17,366,236	-16,913,803	-17,103,805	3,785,960	12,348,920	27,190,060	29,776,100	32,619,536	35,744,372	39,176,724	129,257,828

For Scenario 2 presented in table above:

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Total
BENEFITS (US$)	-10,256,716	-6,860,344	-2,519,973	42,732,626	23,309,162	27,190,060	29,776,100	32,619,536	35,744,372	39,176,724	210,911,547
TOTAL COSTS (US$)	7,109,521	10,000,852	11,174,322	8,546,489	6,273,982	-	-	-	-	-	43,105,166
NET BENEFITS (US$)	-17,366,236	-16,831,157	-13,608,557	34,239,962	17,462,327	27,190,060	29,776,100	32,619,536	35,744,372	39,176,724	168,403,131

Sensitivity Analysis

6. While the ex-ante economic analysis was extensive, a sensitivity analysis was included assuming average rate of inflation for a range of tourism fees, and value of natural resources. However, given that the value of natural resources was extrapolated and given Mozambique's fragility context with conflict, the real risks to project outcomes were high range of volatility in exchange rate, inflation as well as delays in implementation/ loss to economic shocks such as floods or droughts. Ex post sensitivity analysis has stress tested results against these risks and finds ERR @10% discount rate still viable for an exchange rate up to 60 MTS and inflation as low as 2%. The ex-post analysis has also revised the assumptions for both exchange rate and inflation and the project also made efforts towards working with government to adjust hunting fees and peg it to the dollar by passing a decree[51]. With a potential ecosystem services payment scheme, it would be easier for values of natural resources to be easily forecasted for realistic estimates of benefit streams. For example, as per Julio et al (2019)[52], the Net Present Value of the Mossurize Forest alone was US $ 43.7 million of which that of timber products alone was US$23.8 million, or $ 577.26 per hectare higher than Malaysian ecosystems at 321.21US $/ha.

Additional benefits not accounted for in ex-post analysis

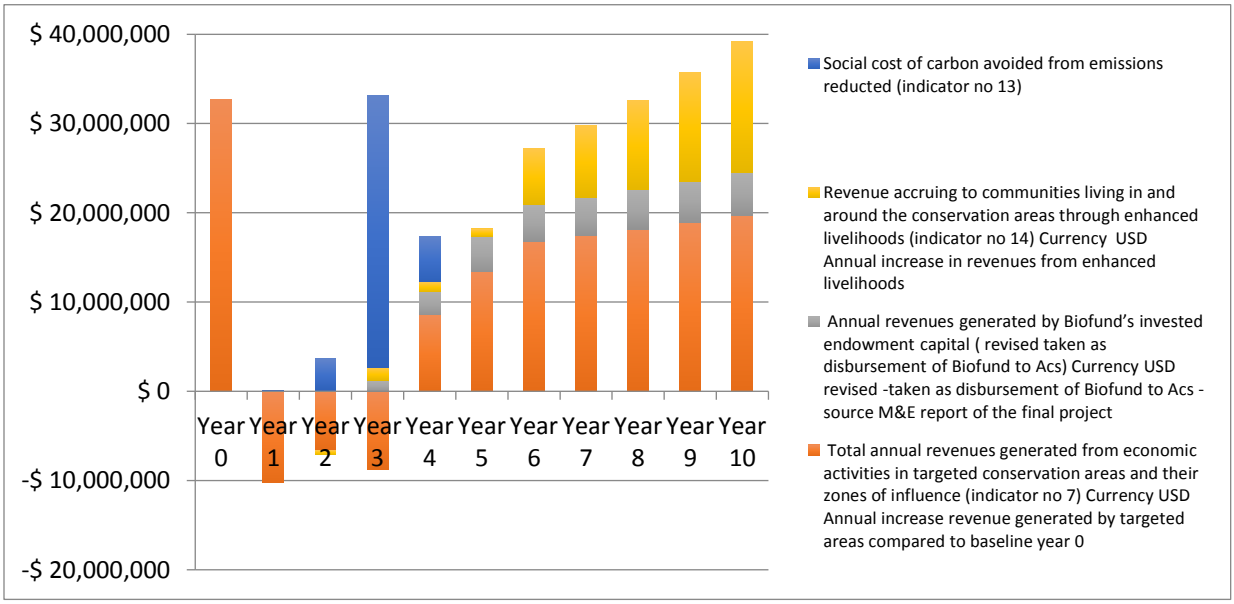
7. ANAC's revenue did not increase as anticipated in 2014 up to 2016 and PAD analysis of project benefits were overestimated by almost 165% versus the reported ex-post data as can be seen in the figure below. This could be because (1) revenues weren't being captured since collection was low and leakage

[51] Lei nº 16/2014 de 20 de Junho, Lei de Conservaçã

[52] Financial Value Of Mossurize Forest In Mozambique, FLORESTA, Curitiba, PR, v. 49, n. 4, p. 607 -614, out/dez2019.Júlio, J. F. et.al.ISSN eletrônico 1982-4688 DOI: 10.5380/rf.v49 i4.53617 available at : https://revistas.ufpr.br/floresta/article/view/53617/39476

was high especially for national parks such as Bazaruto. The project helped build an e-system for collection of fees which enabled improved collection and better revenue estimates being reported in the later half of the project (2) high volatility in inflation which peaked at 15% during the project versus the assumed 8%, and significant exchange rate devaluation. However, despite this there was a sharp increase by 2016 and this is commendable this project has strengthened sustainability in government's system to collect revenue and spend towards biodiversity protection, which is currently largely financed (80%) by international organizations,[53], especially in protected areas. Beyond this, additional revenue that ANAC will accrue since the government has regulated the tourism concessions with 8 operators in Bazaruto, which weren't currently captured in the reported estimates, however would be a significant value add to the revenue and benefit stream accruing from ANAC making the current analysis an underestimate of the true value and range of benefits accrued from this project.

Table 3 Ex post project economic net present flows at a glance



8. Beyond the quantified benefits the project accrues significant benefits from value of ecosystem values, this would make project viable at all discount rates through sensitivity analysis. Andrea Ghermandi et al (2019) [54] finds that across seven provinces in Mozambique value for ecosystems services annually is US$4.2 billion. These include provisioning services -Fishery: US$35.5 million, Mariculture: US$8.8 million; ecosystem regulatory services-: carbon sequestration worth US$3.4 Billion, coastal protection worth US$11.35 million and ecosystem cultural services – coastal tourism worth US$0 0.4 billion coastal recreation US$256 million. The entire range of benefits of leveraging over US$949 million in investments

[53] UNDP- Biofin Mozambique, 2017, *https://www.*biodiversityfinance*.net/mozambique.*

[54] Andrea Ghermandi et al (2019) Marine ecosystem services in the Northern Mozambique Channel: A geospatial and socio-economic analysis for policy support, Ecosystem Services, Volume 35,2019, Pages 1-12, ISSN 2212-0416, *https://doi.org/10.1016/j.ecoser.2018.10.009*

towards biodiversity conservation also add to the total benefits, though only directly attributable disbursements from Biofund have been included in the ex-post analysis.

Cost-Effectiveness

9. In terms of cost efficiency, foremostly it should be recognized that the inflation of prices in 2016 and 2017 were in the range of 19% and 15%, much higher than assumed 8% average consumer inflation, however, the exchange rate devaluation (1US$=26.8 MTS at PAD stage versus 1US$=40.26 MTS at ICR stage) has been a challenge for the project. Despite the challenges, this project falls in the reasonable cost effectiveness range to similar projects with a $7.8 US cost per ha invested in protected area management compared to similar projects which lie within the range of $3.4 to $11.5 US cost per ha as seen in table below.

10. For benefits not quantified related to components on biodiversity protection, comparison to the other projects in the Sahel region with similar components as component 3[55] in this project demonstrates that the cost of the improved protected area management per ha is compatible with other investments (and at the medium range of cost/ha) (see below).

Table 4 Comparative analysis of cost-effectiveness

Project name	Consolidated table	Area under Protected Area Management, ha	Relevant component cost, US$million	Cost per ha, $/ha under the project
Mozambique: Conservation Areas for Biodiversity and Development Project	Total area under improved biodiversity protection practices	2,052,100	16.2	7.8
Benin, Support to the PAM project	Total area under Parks Pendjari and W, ha under improved PAM, ha	1,260,000	5.3	4.2
Gabon: Strengthening Capacity for Managing National Parks and Biodiversity	Area 3 national parks with improved PAM, ha	700,000	8.56	12.2
Burkina Faso: Partnership For Natural Ecosystem Management Project	Protected areas have legal status and size, ha	220,000	7.5	3.4
Mali, Gourma Biodiversity Conservation Project	Area under conservation	275,200	4.3	11.5

[55] Only Component 3 is considered relevant as it focuses on interventions directly in protected areas. Component 4.3 also supports the outcome, but focuses its interventions outside CAs.

GEF's incremental analysis

11. Ex post analysis showed that while GEF contributions accrue a total of 46.2% of benefits (in scenario including carbon benefits), i.e. $77.9 million to GEF financing against a total of 15% costs, US$6.3 million of the entire project making for a benefit to cost ratio of 12. These benefits come from three streams: (1) Under the Climate Change focal area and the Sustainable Forest Management focal area, GEF funds have financed the incremental costs of promoting sustainable forest management in two pilot CAs (Gilé National Reserve and Quirimbas National Park) accruing 100% of carbon benefits for the entire project (2) GEF funds have covered 35% of the total costs of promoting sustainable forest management through a landscape approach (interventions that cut across different sectors such as agriculture, forestry and energy) with benefits adjusted proportionately. (3) The project supported the creation of a mechanism for the sustainable financing of the protected areas system in Mozambique, namely Biofund's endowment fund to cover recurrent costs of protected areas management, with benefits adjusted in proportion to cost component.

12. Global environmental benefits of reduced carbon emission are fully attributable to GEF support on component number 4.3 with total of US $39.1 million of avoided social costs of carbon. GEF incremental support from biodiversity, climate change and sustainable forest management (SFM) focal areas were combined to generate a range of environmental and social benefits in targeted zones including (i) conservation and sustainable use of global biodiversity, benefits extending to the Southern African Region including South Africa, Zimbabwe etc.; (ii) mitigation of climate change through reduced emissions from deforestation and forest degradation in globally important protected areas; (iii) accumulated terrestrial carbon from expanded or protected vegetation.

Table 5 Total Project Cost by Component and Sources of Finance

Project Cost by Component and Source of Finance		GOV	IDA	GEF	Total	GEF%
	US$ ('1000), Source: Project Costab					
Component 1: Institutional Strengthening for Conservation Area Management			5176	3196	8,373	38%
1.1	Strengthening ANAC		3129		3,129	
1.2	Strengthening BIOFUND		1662	3196	4,858	66%
1.3	Strengthening national CITES authority		385		385	
Component 2: Promotion of Tourism in Conservation Areas			2325		2,325	
Component 3: Improving Conservation Areas Management			16,022		16,022	
Component 4: Piloting Livelihood Opportunities for Communities		33	5,622	3069	8,725	35%

4.1	Support the enabling conditions for sustainable management of natural resources by local communities		712	56	767	7%
4.2	Sub-projects to promote sustainable livelihoods within and around Conservation Areas		4,891		4,891	
4.3	Promotion of Sustainable Forest Management in targeted Conservation Areas	33	20	1332	1,385	96%
4.3.1	National Park - Chimanimani	33	20	1681	1,734	97%
4.3.2	National Park - GILE			1660	1,660	100%
Component 5: Managing and Monitoring the Project			5,761		5,761	
	Reimbursement PPA		1,900		1,900	
	Total Project Cost	33	36,806	6,266	43,105	15%

Table 6 Incremental cost matrix

Component	**Category**	**Reported Expenditure (million US$)**	**National and Local Benefit**	**Global Environmental Benefit**
1.Institutional Strengthening for CA Management	Baseline	IDA: 5.1	Management capacity enhanced for the entities in charge of CAs management.	The sustainability of the global environmental benefits is limited given the lack of sustainable sources of funds to finance the costs of the CA system.
	With GEF Alternative	IDA: 5.1 GEF: 3.1	Management capacity enhanced for the entities in charge of CAs management.	A sustainable source of financing to the system of CAs in Mozambique has ensured the good management of biodiversity.
	Incremental	3.1		
2.Promotion of tourism in CAs	Baseline	IDA: 2.2	Tourism is promoted in CAs	Not significant

Component	Category	Reported Expenditure (million US$)	National and Local Benefit	Global Environmental Benefit
	With GEF Alternative	IDA: 2.2	Tourism is promoted in CAs, and incentives towards climate change mitigation in the tourism sector are introduced.	GHG emissions mitigation from the tourism sector, worth US $39.1 million
	Incremental	0		
3.Improving CAs Management	Baseline	IDA: 16.02	Targeted CAs are better managed (as per the METT score)	Biodiversity conservation in targeted CAs, cost effective as per analysis section above
	With GEF Alternative	IDA: 16.02	Targeted CAs are better managed (as per the METT score)	Biodiversity conservation in targeted CAs, cost effective as per analysis in section above
	Incremental	0		
4. Piloting Support to Sustainable Community Livelihoods	Baseline	IDA: 5.5 GoMZ: 0.3	The living conditions of the population living around CAs is increased through the promotion of alternative livelihood activities. The types of Sub-projects to be supported will be local infrastructure (well, small-scale infrastructure, honey production, etc.) not linked to natural resource management.	No significant global environmental benefit.
	With GEF Alternative	IDA:5.5 GEF: 3.06 GoMZ: 0.3	Increased adoption of SFM practices in target areas, landscape ecosystem, will reduce deforestation and forest degradation. Forest, protected areas, agricultural lands, protected areas buffer zones are better managed under management plans. Energy-efficient technologies for charcoal-making are disseminated.	Global environmental benefits including healthy forest ecosystems and associated environmental services. GHG emissions from the land use sector are reduced, and absorption is promoted through the rehabilitation of degraded forests. Overall emissions are decreased through the use of more energy-efficient technologies. Presently not calculated and included in the GHG sequestration reported number and adjoining benefit streams.
	Incremental	3.06		

Conclusion

13. The ex-post economic efficiency analysis conducted for the project confirms assumed at the design stage positive economic impact: at 5-20% discount rates ERR is 31-14%, and NPV at US$27.4 million @ 20% discount rate. Analysis emphasized that benefit assumptions were done by including benefits over and above original benefits based on reported data through M&E e.g. GHG sequestration- carbon benefits and recognizes this is still an underestimate as justified by the absence of specific data on tourism revenues not captured by ANAC re: Bazaruto, and US$4.2B worth of natural capital values. The quantitative analysis is strictly limited to values that can be clearly attributed to the project. It is to be noted that the GEF incremental contribution which accrued 100% of the GHG sequestration and carbon benefits made the project viable at all discount rates from 5%-20% with a GEF incremental benefit cost ratio of 12. In addition, benefits associated with the improved protected areas management were not fully measured in quantifiable terms however were within reasonable range of cost effectiveness of US $ 7.8 cost/ha compared to similar projects. There are also economic benefits arising from better public service delivery resulting from the capacity building efforts. ***In summary, based on this economic evaluation, it is concluded that the project resulted in significant positive development impacts, confirming benefits anticipated during design stage***.

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

1. The World Bank received a detailed Completion Report from the Borrower in February 2020 (listed as supporting document in Annex 6), which was prepared by a consultant specifically recruited for that purpose. The Executive Summary of that report is included below (due to space limitations, some graphics were excluded).

2. The Borrower provided continuously inputs on the World Bank's ICR and assessed the near-final draft as follows: "The document is very well structured and clear on the key points and factors that were relevant during design, preparation and implementation of the project.". Some specific comments were shared. The ICR team addressed these in the final version as appropriate and responded to the remaining issues by email.

Ministry of Agriculture and Rural Development

Completion Report: Project of Conservation Areas for Biodiversity and Development (MOZBIO 1) 2015-2019

February 2020

Executive Summary

1. The Government of Mozambique, guided by its five-year plan, designed the MozBio Program – *Mozambique Conservation Areas for Biodiversity and Development* - that combines biodiversity conservation, tourism development and poverty reduction. This Program arises in recognition of the vital role that conservation areas play as an integral part of a balanced growth of the country, and draws much of it experience from a previous Transfrontier Conservation Area Program.

2. The World Bank provided support to MozBio through a Series of Project (SOP56), the first of which is the MozBio1 project. MozBio1 was prepared between 2012 and 2014, became effective in May 2015, and having been extended a year, it closed on November 30, 2019.

3. This report constitutes the final report of the project, providing information and analyses on the implementation and key results achieved as well as lessons drawn. It also attempted to put into context how the 43 million US$ MozBio1 project (funded by IDA and GEF) successfully contributed to a 172 million US$ program (hereafter MozBio1+57) funded by more than 15 sources including the Government of Mozambique.

[56] SOP is a formal World Bank process whereby a sequence of projects supports a program
[57] MozBio1+ refers to the set of all projects that also supported the WB-funded MozBio1 Conservation Areas (CAs) during MozBio1 project duration (May 2015 to November 2019) and whose overall expenditure is estimated at 172 million US$.

4. Overall, MozBio1 was implemented at a steady pace and generally in compliance with all World Bank fiduciary requirements, and with reasonably satisfactory project management and monitoring. It achieved a disbursement of nearly 100%.

5. The key objective of MozBio 1 (Project Development Objective) was "***to increase the effective management of the Conservation Areas and enhance the living conditions of communities in and around the Conservation Areas***". In this regard, it provided support to key national conservation institutions (ANAC and BIOFUND), as well as to eleven Conservation Areas (CAs) nationally.

6. A total of **seven CAs** improved their management effectiveness, accounting for more than **2 million hectares** of areas with improved biodiversity protection. The interventions provided support to **69,000 direct beneficiaries**, through employment, benefit sharing and community projects, out of which a total of **34% were women**.

7. The project provided important support to 11 CA, covering basic operational costs as well as investing in infrastructure, equipment and training. Key infrastructure investments included 17 management buildings (senior staff houses, law enforcement outposts and an office), drifts and jetty, and entrance gates. The CAs with a presence of co-management partners recorded greater improvement or maintained good management effectiveness. As such, given the relevance of the co-management approach, the project supported ANAC towards the establishment of 4 co-management agreements.

8. A national hippo survey was done, as well as specific wildlife aerial counts, terrestrial and marine biodiversity surveys in eight CAs. This provided key data for decision making, helping to provide insight on the resources that inhabit these areas as well as to guide actions to better manage them. The survey done in Chimanimani resulted in new species for Mozambique and, potentially for science. Furthermore, a Biodiversity Fairs were organized by BIOFUND, every year in a different Province, to help raise awareness to the general public (with particular focus on schools and children) on the rich biodiversity that exists in the CAs and the country.

9. On tourism promotion, the project helped to deliver numerous products and documents to raise awareness of the resources, initiatives and opportunities of some CAs, as well as the visibility of national institutions (ANAC and BIOFUND), and of the sector. Of highlight is the 2018 International Conference on Nature Based Tourism, which draw numerous participants from the region, and shared the existing partnership and tourism investment opportunities in Mozambique's CAs.

10. The project invested over **8 million US$** to help deliver a variety of community projects on topics that included agriculture, agroforestry, apiculture, cashew nuts, sustainable charcoal, environmental education, sustainable fisheries, mushrooms, tourism, nurseries and water. These initiatives, identified by local communities themselves benefited over **16,000 people** in seven CAs. Although the projects were important for rural development, linkages with the surrounding CA still need to be better enforced and strengthened. Furthermore, in many cases, governance of community organizations will still require a continuous support from local authorities, CA management and others.

11. In terms of institutional development, the project was able to provide significant support to ANAC, and although the institution made good progress with improving the standing of Mozambique with

CITES, a number of challenges remain to equip it with the necessary resources to face the growing scope of the conservation sector. In regards to BIOFUND, the institution was able to show good overall progress, reaching all its intended targets, including growing the Endowment Fund from 10.6 to 37.2 million US$ in five years. At the closure of the project, it allowed the realization of a sustainable finance mechanism to disburse more than 3 million US$ (with sinking funds) to support operational costs of CA system of the country.

12. During implementation, the project received generally excellent support from the World Bank and the Government, which enabled rapid decisions that kept the project implementation in focus and resolved issues with agility as they appeared (e.g. changing the financing channel of operating costs to CAs).

13. Overall the project was well designed, and provided important support to key conservation areas of the system. During the Mid Term of the Project, key changes were made to improve project efficiency, design and delivery of intended impact, which included: i) extension of twelve months to the closing date; ii) change of project management from ANAC to FNDS; iii) reallocation of funds for operational costs of CAs to be managed via BIOFUND; iv) focus investments in fewer CAs and shifting implementation of sustainable forestry management activities from Quirimbas to Chimanimani; v) adding investment to pilot environmental education programs in a few CAs; and vi) adjusting indicators and targets as needed.

14. Some of the main challenges faced during the implementation of the project included: i) initial ambition of the project to provide transformational support to 11 CAs, without the necessary financial resources (addressed by focusing investment on key target areas); ii) capacity to adequately manage a complex project (addressed through changes to the PIU and integration of the project within FNDS); iii) agility to efficiently channel funds to support CA operational costs (addressed by counting on the support of BIOFUND to channel such funds); iv) performance of Service Providers (in some cases addressed through improved contract management).

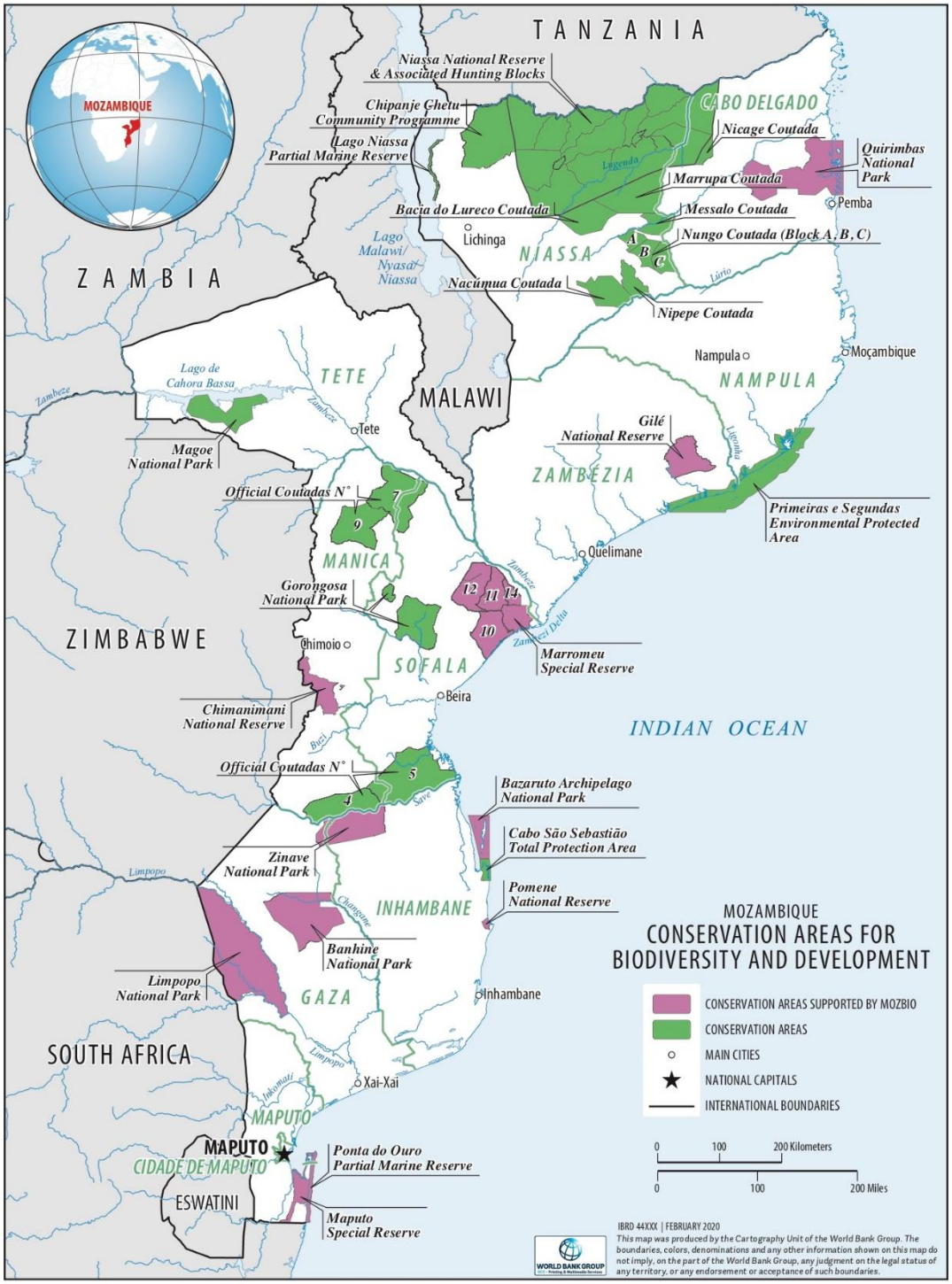
15. Overall, MozBio1 was a successful phase 1 of the MozBio program as a holistic national program with multiple dimensions. While not all dimensions have made same level of progress, MozBio1 helped to set in place respective institutions for central policymaking and financing, and to create conducive environment for advancement of the conservation sector. A second phase of the MozBio Program was approved by the end of 2018, drawing lessons from the first phase, and allowing for the continuation of the support and consolidation of the gains achieved.

ANNEX 6. SUPPORTING DOCUMENTS

- ANAC, FNDS 2017: Balanço Meio Termo. Projecto das Áreas de Conservação para a Biodiversidade e Desenvolvimento.
- FNDS 2019: Nivel de Referência de Emissões Florestais das Paisagens das Reservas Nacionais de Chimanimani e Gilé do Projecto MozBio1.
- Government of Mozambique 2015: Proposta do Programa Quinquenal do Governo 2015-2019. Approved in February 2015 by the Council of Ministers. Maputo.
- MICOA 2003: Mozambique Initial National Communication to the UNFCCC.
- Ministry of Agriculture and Rural Development 2020: Completion Report: Project of Conservation Areas for Biodiversity and Development (MOZBIO 1) 2015-2019. Government of Mozambique.
- MITADER 2015: National Strategy and Action Plan of Biological Diversity of Mozambique (2015-2035). Maputo.
- Rylance, A. 2014: Evaluation of the costs and benefits for the proposed MozBio Project.
- World Bank 2012: Country Partnership Strategy FY12-15 for the Republic of Mozambique. Report No. 66813-MZ.
- World Bank 2014: GEF Financing Agreement: GEF TF Grant Number TF018239.
- World Bank 2014: IDA Financing Agreement: Grant Number H996-MZ.
- World Bank 2014: Implementation and Results Report. Transfrontier Conservation Areas and Tourism Development Project. Report No: ICR00003298.
- World Bank 2014-2019: MozBio 1 Aide Memoires and Management Letters.
- World Bank 2014-2019: MozBio 1 ISRs, Sequences 1-12.
- World Bank 2014: Project Appraisal Document. Conservation Areas for Biodiversity and Development Project. Report No: PAD772.
- World Bank 2017: Country Partnership Framework for the Republic of Mozambique for the Period FY17-FY21. Report No. 104733-MZ.
- World Bank 2017: Restructuring Paper: February 2017. Report No. RES24698.
- World Bank 2017: Restructuring Paper: October 2017. Report No. RES27386.
- World Bank 2018: Project Appraisal Document. Mozambique Conservation Areas for Biodiversity and Development – Phase 2. Report No: PAD2860.

ANNEX 7. MAPS OF PROJECT AREA

1. Conservation Areas supported as of approval in 2014



2. Conservation Areas supported after reduction of scope as a result of the MTR in 2017