



Report No: ICR00450

IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA-D3720, TF-B4075 and TF-B4664

ON A

GRANT FROM THE
INTERNATIONAL DEVELOPMENT ASSOCIATION (SDR 32 MILLION)
(US\$45.00 MILLION EQUIVALENT)

GRANTS FROM THE GLOBAL ENVIRONMENTAL FACILITY (US\$23.1 MILLION)

AND THE INTEGRATED LANDSCAPE AND FOREST MANAGEMENT MULTI-DONOR TRUST FUND (US\$2.3 MILLION)

TO THE
REPUBLIC OF MOZAMBIQUE

FOR
MOZAMBIQUE CONSERVATION AREAS FOR BIODIVERSITY AND DEVELOPMENT - PHASE 2
MAY 27, 2025

Environment, Natural Resources & the Blue Economy Global Practice
Eastern and Southern Africa Region



CURRENCY EQUIVALENTS

(Exchange Rate Effective May 20, 2025)

Currency Unit =	Mozambique New Meticais (MZN)
-----------------	----------------------------------

MZN63.83=	US\$1
-----------	-------

US\$1.34 =	SDR 1
------------	-------

FISCAL YEAR

July 1 - June 30

Regional Vice President:	Ndiame Diop
Country Director:	Luc Lecuit
Regional Director:	Anna Wellenstein
Practice Manager:	Abdelaziz Lagnaoui
Task Team Leader (s):	Andrew Zakharenka
ICR Main Contributor:	Laza Rakotondrasoa

**ABBREVIATIONS AND ACRONYMS**

AF	Additional Financing
ANAC	National Administration of Protected Areas (<i>Administração Nacional das Áreas de Conservação</i>)
BIOFUND	Foundation for the Conservation of Biodiversity
CA	Conservation Area
CBO	Community- Based Organization
CEO	Chief Executive Officer
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLP	Conservation Leadership Program
CNR	Chimanimani National Reserve
CPF	Country Partnership Framework
DA	Designated Account
DNT	National Treasury Directorate (<i>Direcção Nacional do Tesouro</i>)
EBDG	Environment Business and Development Group
ECT	Emergency Covid Tourism
EDUCA+	Environmental Education program for gender-sensitive development
ENMC	National Climate Change Strategy (<i>Estratégia Nacional para as Mudanças Climáticas</i>)
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EX-ACT	Ex-ante Carbon Emissions Tool
FAO	Food and Agriculture Organization
FM	Financial Management
FNDS	National Sustainable Development Fund (<i>Fundo Nacional de Desenvolvimento Sustentável</i>)
GALS	Gender Action Learning System
GBV	Gender- Based violence
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GoM	Government of Mozambique
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IDA	International Development Association
IFR	Interim Financial Report
ILM	Integrated Landscape Management
INE	National Statistics Institute (<i>Instituto Nacional de Estatística</i>)
IPF	Investment Project Financing



ISR	Implementation Status and Results Report
LDN	Land Degradation Neutrality
LMU	Landscape Management Unit
M&E	Monitoring and Evaluation
MASA	Ministry of Agriculture and Food Security (<i>Ministério da Agricultura e Segurança Alimentar</i>)
MDTF	Multi-Donor Trust Fund
METT	Management Effectiveness Tracking Tool
MFD	Maximizing Finance for Development
MGS	Matching Grant Scheme
MGU	Matching Grant Unit
MICULTUR	Ministry of Culture and Tourism (<i>Ministério da Cultura e Turismo</i>)
MIMAIP	Ministry of Sea, Inland Waters and Fisheries (<i>Ministerio do Mar, Aguas Interiores e Pescas</i>)
MITADER	Ministry of Land, Environment, and Rural Development (<i>Ministério da Terra, Ambiente e Desenvolvimento Rural</i>)
MozBio	Conservation Areas for Biodiversity and Development
MSMEs	Micro, Small, and Medium Enterprises
MSR	Maputo Special Reserve
NBT	Nature-based Based Tourism
NGO	Non- Governmental Organization
NP	National Park
NPF	New Procurement Framework
NPV	Net Present Value
NR	National Reserve
OP	Operational Policy
PAD	Project Appraisal Document
PCR	Saving and Credit Groups (<i>Poupança de Crédito Rotativo</i>)
PDO	Project Development Objective
PECE	Small Emerging Commercial Entrepreneurs (<i>Pequenos Empreendedor Comerciais Emergentes</i>)
PF	Process Framework
PFM	Public Finance Management
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PLCM	Mozambique Program for Conservation Leadership
POPMPR	Ponta de Ouro Partial Marine Reserve
PP	Parent Project
PPF	Peace Parks Foundation
PPP	Public-Private Partnership



PPR	Procurement Post Review
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
QCBS	Quality- and Cost-Based Selection
REDD	Reducing Emissions from Deforestation and Forest Degradation
RPF	Resettlement Policy Framework
SA	Social Assessment
SANParks	South African National Parks
SAPA	Social Assessment for Protected Areas
SCD	Systematic Country Diagnostic
SDR	Special Drawing Rights
SLM	Sustainable Land Management
SMEs	Small and Medium Enterprises
SoP	Series of Projects
STAR	System for Transparent Allocation of Resources
Sustenta	World Bank Agriculture and Integrated Landscape Management Project
TA	Technical Assistance
TFCA	Transfrontier Conservation Areas Program
TTL	Task Team Leaders
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WOP	Without Project
WP	With Project



TABLE OF CONTENTS

DATA SHEET	i
I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES.....	1
II. OUTCOME.....	4
III. KEY FACTORS AFFECTED IMPLEMENTATION AND OUTCOME.....	11
IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME	12
V. LESSONS AND RECOMMENDATIONS	15
ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS	17
ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION	26
ANNEX 3. PROJECT COST BY COMPONENT	28
ANNEX 4. Theory of Change	29
ANNEX 5. EFFICIENCY ANALYSIS	30
ANNEX 6. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS	42
ANNEX 7. SUPPORTING DOCUMENTS	43

**DATA SHEET****BASIC DATA****Product Information**

Operation ID P166802	Operation Name Mozambique Conservation Areas for Biodiversity and Development - Phase 2
Product Investment Project Financing (IPF)	Operation Short Name MozBio Phase 2
Operation Status Closed	Approval Fiscal Year 2019
Original EA Category Partial Assessment (B) (Approval package - 20 Sep 2018)	Current EA Category Partial Assessment (B) (Restructuring Data Sheet - 10 Jul 2023)

CLIENTS

Borrower/Recipient Ministry of Economy and Finance	Implementing Agency Fundo Nacional de Desenvolvimento Sustentavel (National Sustainable Development Fund)
---	---

DEVELOPMENT OBJECTIVE

Original Development Objective (Approved as part of Approval Package on 20-Sep-2018)

To improve management of target conservation area landscapes and enhance the living conditions of communities in and around these conservation areas.

Current Development Objective (Approved as part of Additional Financing Package Seq No 1 on 27-Aug-2020)

To improve management of target conservation area landscapes and enhance the living conditions of communities in and around these conservation areas.



FINANCING

Financing Source	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing	45,000,000.00	43,413,440.00	43,443,341.31
IDA-D3720	45,000,000.00	43,413,440.00	43,443,341.31
World Bank Administered Financing	25,615,776.00	25,492,592.23	25,433,802.63
TF-B4664	2,500,000.00	2,376,816.23	2,376,816.23
TF-B4075	23,115,776.00	23,115,776.00	23,056,986.40
Total	70,615,776.00	68,906,032.23	68,877,143.94

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Type	Amount Disbursed (US\$M)	Key Revisions
30-Jun-2021	Portal	30.90	• Loan Closing Date Extension
10-Jul-2023	Portal	52.05	• Components • Results • Disbursement Arrangements • Reallocations • Institutional Arrangement

KEY DATES

Key Events	Planned Date	Actual Date
Concept Review	23-Mar-2018	23-Mar-2018
Authorize Negotiations	16-Jul-2018	17-Jul-2018
Approval	20-Sep-2018	20-Sep-2018
Signing	27-Sep-2018	27-Sep-2018
Effectiveness	21-Dec-2018	21-Dec-2018
Additional Financing Sequence.01	Not Applicable	27-Aug-2020
Restructuring Sequence.01	Not Applicable	30-Jun-2021
Restructuring Sequence.02	Not Applicable	10-Jul-2023
Mid-Term Review No. 01	23-May-2022	23-May-2022



Operation Closing/Cancellation	30-Nov-2024	30-Nov-2024
ICR/NCO	30-May-2025	--

RATINGS SUMMARY

Outcome	Bank Performance	M&E Quality
Satisfactory	Moderately Satisfactory	Substantial

ISR RATINGS

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	14-Feb-2019	Satisfactory	Satisfactory	0.00
02	20-Sep-2019	Satisfactory	Moderately Satisfactory	4.51
03	03-Mar-2020	Satisfactory	Moderately Satisfactory	6.56
04	03-Sep-2020	Satisfactory	Moderately Satisfactory	9.76
05	24-Dec-2020	Satisfactory	Moderately Satisfactory	11.96
06	28-Jun-2021	Moderately Satisfactory	Moderately Satisfactory	30.90
07	24-Dec-2021	Moderately Satisfactory	Moderately Unsatisfactory	34.48
08	28-Jun-2022	Moderately Satisfactory	Moderately Satisfactory	39.92
09	12-Jan-2023	Moderately Satisfactory	Moderately Satisfactory	46.38
10	16-Jun-2023	Moderately Satisfactory	Moderately Satisfactory	51.96
11	18-Dec-2023	Satisfactory	Satisfactory	57.17
12	28-Jun-2024	Satisfactory	Satisfactory	63.34
13	25-Nov-2024	Satisfactory	Satisfactory	68.01

SECTORS AND THEMES**Sectors**



Major Sector	Sector	%	Adaptation Co-benefits (%)	Mitigation Co-benefits (%)
FY17 - Agriculture, Fishing and Forestry	FY17 - Forestry	80	20	24
FY17 - Industry, Trade and Services	FY17 - Tourism	20	58	42

Themes

Major Theme	Theme (Level 2)	Theme (Level 3)	%
FY17 - Environment and Natural Resource Management	FY17 - Climate change	FY17 - Adaptation	27
		FY17 - Mitigation	27
	FY17 - Environmental policies and institutions		38
	FY17 - Renewable Natural Resources Asset Management	FY17 - Biodiversity	27
		FY17 - Landscape Management	8
FY17 - Finance	FY17 - Financial Infrastructure and Access	FY17 - MSME Finance	29
FY17 - Human Development and Gender	FY17 - Gender		62
	FY17 - Labor Market Policy and Programs	FY17 - Skills Development	33
FY17 - Private Sector Development	FY17 - Jobs	FY17 - Job Creation	62
	FY17 - Public Private Partnerships		33
FY17 - Urban and Rural Development	FY17 - Rural Development	FY17 - Rural Non-farm Income Generation	38

**ADM STAFF**

Role	At Approval	At ICR
Practice Manager	Magda Lovei	Abdelaziz Lagnaoui
Regional Director	n.a.	Anna Wellenstein
Global Director	Karin Erika Kemper	Genevieve Connors
Practice Group Vice President	n.a.	Juergen Voegelé
Country Director	Mark R. Lundell	Luc Lecuit
Regional Vice President	Hafez M. H. Ghanem	Ndiame Diop
ADM Responsible Team Leader	Andre Rodrigues de Aquino	Andrew Zakharenka
Co-Team Leader(s)	n.a.	n.a.
ICR Main Contributor	Laza Rakotondrasoa	

I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES**A. CONTEXT AT APPRAISAL****Context**

1. **Mozambique remained richly endowed with natural resources but one of the poorest countries in the world with food and nutrition insecurity in rural areas.** At the time of appraisal, despite economic growth driven by foreign investments, Mozambique ranked 181 out of 188 in the UNDP Human Development Index with 70 percent of its total population living in extreme poverty in pastoral areas. The rural population was highly dependent on miombo woodlands that contributed up to 19 percent of household cash income and 40 percent of household subsistence income. The country's substantial natural capital included 36 million ha of arable land and 32 million ha of natural forests, water, energy, mineral resources, and offshore natural gas. Mozambique's 2,700 km coastline, the 4th longest in Africa, features spectacular coral reefs and productive estuaries. Climate change poses significant risks to growth and poverty reduction.

2. **The Government of Mozambique (GoM) established a network of conservation areas (CAs) covering around 23 percent of the country's land surface, which continue facing significant challenges.** This network includes seven national parks (NPs), 10 national reserves, one environmental protection area, 17 controlled hunting blocks, over 50 privately run game farms, and two community reserves. The management of CAs involves several actors, including the National Protected Areas Administration (ANAC), the Foundation for the Conservation of Biodiversity (BIOFUND), and the National Sustainable Development Fund (FNDS). Private entities and NGOs also provide significant support through long-term co-management agreements with CAs. Weak institutions and insufficient human capacity hinder effective enforcement of laws, biodiversity monitoring, and community engagement. Underfunded by the state and heavily reliant on international donors, financial sustainability of the CA system remains a major challenge. Human encroachment and poverty around CAs exacerbate these challenges, as local communities often lack formal employment opportunities and access to public goods.

3. **The GoM committed to addressing these challenges.** It adopted a Conservation Policy in 2010, created



ANAC in 2011, and passed a Conservation Law in 2014. It established BIOFUND and the Conservation Endowment Fund, adopted a 10-year Strategic Plan in 2015, and amended the Conservation Law in 2017. The Ministry of Land, Environment and Rural Development (MITADER) was established in 2015, and FNDS managed over US\$400 million in projects.

4. **Rationale for World Bank support at the time of approval** included the project's contribution to the Country Partnership Framework (CPF) for Mozambique FY17–21, the World Bank's Forest Action Plan FY16–20, Sustainable Development Goals (SDGs), Mozambique's Intended Nationally Determined Contribution (INDC 2015), and the Government's high-level priorities and targets expressed in its Five-Year Plan (PQG 2015–2019). MozBio2 contributed to the CPF objectives by creating more inclusive growth, specifically through increasing productivity in smallholder- and emerging commercial farmers (Objective 2), investing in human capital through enhancing skills base (Objective 5), and by improving natural resource and climate risk management (Objective 11). The project was part of the World Bank's Portfolio of projects supporting the Government's integrated landscape management (ILM) approach to foster rural development with sustainable management of natural resources.

Theory of Change (Results Chain)

5. The Theory of Change was based on the continuum from the Transfrontier Conservation Areas Program (TFCA) to the MozBio program with its two phases. At completion of MozBio2, the ToC implicitly underscores that strengthening capacity and financial sustainability of national conservation institutions, improving conservation areas management in target landscapes, and promoting conservation-compatible rural development and endorsing integrated landscape management in target landscapes will improve management of target conservation area landscapes and enhance the living conditions of communities in and around these conservation areas, as stated in the financing agreement of the project. As depicted in Annex 4, the critical assumptions underlying the project implementation are: first is that National Conservation Institutions, National Parks staff, Landscape Management Units (LMU) office and district services work collaboratively and provide strong leadership to drive conservation initiatives forward, second is that Communities within and around the targeted conservation areas with improved living conditions, generated from activities related to Conservation Areas actively support and participate in conservation efforts.

Project Development Objectives (PDOs)

6. To improve management of target Conservation Area Landscapes and enhance the living conditions of communities in and around these Conservation Areas, as stated in the Financing Agreement.

Key Expected Outcomes and Outcome Indicators

7. Key Expected Outcomes and outcome indicators are:

- **Improved management of target conservation area landscapes**

Indicator 1: CAs with improved management effectiveness (Number), with sub indicators:

- a) CAs with improved management effectiveness: Elephant Coast CA (Number)
- b) CAs with improved management effectiveness: Chimanimani CA (Number)
- c) CAs with improved management effectiveness: Marromeu Complex (Number)

- **Enhanced living conditions of communities in and around target conservation area landscapes**

Indicator 2: Number of direct beneficiaries receiving livelihood-support activities and services (of which are women, percent)

Indicator 3: Target landscapes with positive variation in local communities' perception of CAs' impact in wellbeing (Number)

Components

8. **As presented in the PAD, the project had three main components.** Component 1: Strengthening Capacity and Financial Sustainability of National Conservation Institutions (US\$15 million equivalent from IDA). This component aimed to enhance the capacity of ANAC, BIOFUND and FNDS; establish and train conservation professionals; increase financial sustainability of the CA system, and foster NBT. Activities focused on strengthening



technical and institutional capacity, contributing to MozBio Program pillar of governance and financial sustainability. Expected results included strengthened institutions, increased conservation funds, and trained conservation professionals. Component 2: Improving Conservation Areas Management in Target Landscapes (US\$17 million equivalent from IDA) aimed at enhancing biodiversity conservation management of target CAs by improving governance, human resources, infrastructure, human-wildlife coexistence, research, patrolling, environmental awareness, and strengthening CBOs. Activities align with CA management plans. Expected results included a 10 percent increase in Management Effectiveness Tracking Tool (METT) scores and maintaining or increasing key species populations. It directly contributed to the MozBio Program. Component 3: Promoting Conservation-compatible Rural Development and Integrated Landscape Management in Target Landscapes (US\$13 million equivalent from IDA) promoted conservation-compatible rural development in target landscapes by supporting sustainable value chains, land use planning, and capacity strengthening. It addressed constraints like limited credit, TA, and market access through integrated interventions, including spatial planning and habitat restoration. Expected results included improved livelihoods, increased sustainable value chains, and restored habitats. However, a 4th component Crisis Emergency Response Component (CERC) was added during AF due to COVID emergence. The CERC Component was not activated during project lifetime.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION

9. The project had been restructured shortly before the MTR, in March 2022, based on recommendations from previous implementation support missions, which called for 'strategic changes to ensure achievement of project objectives,' as noted in the Restructuring Paper. Changes were made to the Results Framework, Components and Costs, disbursement category allocations, and arrangements. An earlier restructuring in 2020 had already introduced Additional Financing from the GEF. The midterm review (MTR) held in May 2022 reassessed the implementation status and constraints and proposed necessary adjustments that were implemented during the remaining project duration.

Revised PDOs and Outcome Targets

10. The PDO was not modified by the restructurings and was maintained throughout the duration of the project.

Revised PDO Indicators

11. At the project restructuring in 2022, i) one of the three PDO indicators, "Species population maintenance and/or increase (yes/no)", became an intermediary outcome indicator; and ii) Four intermediary outcome indicators were deleted and consolidated as the following new PDO indicator: "Number of direct beneficiaries receiving improvement livelihood support activities and services (percent of which are women)".

Revised Components

12. Additional Financing (AF) was agreed in 2020 (GEF Grant number TF0B4075). It added a Contingency Emergency Response Component (CERC) of the parent project.

Other Changes

13. The 2020 AF added US\$23,115,776 of GEF7-financing and SEK 23,500,000 from MDTF. It maintained the same project design of the parent project while scaling up activities that specifically respond to dryland management pressures. Seven intermediary outcome indicators were added. At the 2022 project restructuring, two notable changes were made: a) the implementation arrangement was changed, redistributing procurement responsibilities between FNDS and BIOFUND by moving US\$11,046,887 from FNDS to BIOFUND; and b) e-visa system implementation was dropped, and its budget reallocated to strengthen infrastructure activities. US\$2,154,200 was moved from Component 1 to Component 2.

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

14. The level 2 restructuring of the MOzBio2 addressed the challenges (systematic delays and bottlenecks) identified through the prior implementation support missions. The restructuring adjusted institutional



arrangements, procurement responsibilities, and the Results Framework. The changes enhanced project management, optimized resource allocation, improved the overall effectiveness of the project in achieving the PDO.

II. OUTCOME

A. RELEVANCE OF PDO

Assessment of Relevance of PDOs and Rating

15. **The relevance of the project objectives is rated High.** The PDO of the MozBio2 is relevant to the country's priorities and development challenges specified in at least two Specific Objectives of the *Estratégia Nacional de Desenvolvimento 2025-2044* (ENDE, the National Development Strategy), and relevant to all three High-Level Outcomes of the CPF FY23-27, as described in the table below.

CPF or ENDE	PDO relevance
CPF High Level Outcome (i) <i>to strengthen the institutional foundation to enable the transition from resource-intensive to diversified economy</i>	The first part of PDO, <i>to improve CA Landscape management</i> entails strengthening central and CA-level institutions - ANAC BIOFUND, and FNDS. In turn, each of these institutions' core mandates relate to promoting nature-based economy.
CPF High Level Outcome (ii) <i>to create job opportunities for low-skilled labour outside subsistence agriculture</i>	The second part of PDO, <i>to enhance living conditions</i> entails supporting conservation-compatible value chain development through Small and Medium Enterprises (SMEs), Small Emerging Commercial Entrepreneurs (PECE) provide low-skilled job opportunities in line with CA conservation goals.
CPF High Level Outcome (iii) <i>to improve human capital and women's empowerment</i>	The PDO and its related activities incorporate strong dimensions for human capital development in the conservation and its related sectors and women empowerment at communities, schools, and institutions.
ENDE Specific Objective (i) <i>to boost economic growth by diversifying the production base</i>	The first part of PDO supports the ANAC and the three CA administrations to realize its institutional objective "for the CA system to contribute to the national economy". The second part of PDO supports enhancing living conditions by assisting conservation compatible value chains in the CA Landscape.
ENDE Specific Objective (ii) <i>to stimulate human development by strengthening science and technology, encouraging demographic transition and reducing inequalities.</i>	The first part of PDO supports a) Mozambique Program for Conservation Leadership (PLCM), an institutionalized program to administer and continue developing conservation professionals, b) strengthening CA administration to assist communities' basic education services. The second part of PDO supports living condition improvement through financial literacy and business development that can help new livelihoods.

16. The Mozbio2 activities aligns closely with Mozambique's National Biodiversity Strategy and Action Plan (NBSAP) and global biodiversity commitments. The NBSAP (2015-2035) emphasizes the conservation and sustainable use of biodiversity, recognizing its role in economic growth and community well-being. Mozbio2 directly supports these goals by improving conservation area management and enhancing local livelihoods through sustainable practices. On a global scale, Mozambique has committed to the Convention on Biological Diversity (CBD) and the Aichi Biodiversity Targets, which aim to reduce biodiversity loss and promote ecosystem resilience. Mozbio2 contributes to these objectives by protecting key landscapes of Marromeu, Chimanimani, and Elephant Coast, ensuring the preservation of critical habitats and species.



B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

17. **Achievement of PDO (Efficacy) - *Substantial*.** The PDO was complex and two-pronged, envisaging two major outcomes: (i) improving management of target CA landscapes, and (ii) enhancing the living conditions of communities in and around these landscapes. Efficacy of project activities takes into consideration the additional implementation complexities imposed by severe cyclonic events and the operational restrictions imposed by COVID-19, which led to a reduced scope, implementation delays, and the contribution of project funds to emergency support. The project's results framework, the targets achieved, and the key outcomes are in Annex 1.

Outcome 1. Improving management of target CA landscapes

18. The project successfully met or exceeded most of the key targets. Two PDO indicators' targets were met at 100 percent, and another one was surpassed by 9 percent (Number of direct beneficiaries receiving livelihood-support activities and services, percent of which are women).

19. **CAs with improved management effectiveness.** The project aimed to improve the management effectiveness of CAs in the target landscapes. The improvements were measured using the Management Effectiveness Tracking Tool (METT), widely used and endorsed by the World Bank. This tool evaluates planning, governance, resource management, and community engagement aspects of CA management. The maximum achievable score is 99 points. The baseline scores for Marromeu were 39, for Chimanimani – 47, and for Maputo – 59 points indicating different capacity development stages of each CA. The project's end target was achieved or overachieved (overall increase 10-point or more) in two CAs – Chimanimani National Park (improved by 12 points, up to 59) and Maputo National Park (improved by 17 points, up to 76) and slightly under-achieved at Marromeu National Reserve (improved by 8 points, up to 47). These improvements in overall management effectiveness were achieved due the project's targeted interventions, including in (i) planning and governance, through the establishment of formalized participatory management mechanisms, land use planning, stronger legal status, human resources and capacity building by financing salaries of key staff positions, provided training, and procured essential equipment for the CAs; (ii) constructing new and upgraded existing conservation infrastructure, such as park offices, staff housing, entrance gates, access roads, visitor centers, and surveillance systems; (iii) conservation activities such as biodiversity monitoring, habitat management, and translocations of wildlife; and (iv) involving local communities in conservation management, training, eco-jobs, environmental education programs, and community committees. The most significant outcomes include:

Three landscapes were brought under improved practices and management effectiveness, positively responding to the project interventions:

Three CAs improved their management, increasing METT scores by at least 10 points. All have established co-management partnerships and completed infrastructure projects to enhance sustainability. Co-management agreements were signed with experienced organizations for long-term support: Peace Parks Foundation (Maputo NP), Fauna & Flora (Chimanimani NP), and Frankfurt Zoological Society (Marromeu NR).

Management plans were developed and implemented for Marromeu Reserve, Chimanimani National Reserve, and Maputo NP. Critical infrastructure financed includes road rehabilitation, construction of ranger posts, staff houses, visitor centers, and office buildings in all three areas.

Maputo NP was reorganized by merging Maputo Special Reserve and Ponta do Ouro Partial Marine Reserve for unified management. The project facilitated wildlife translocations, improved infrastructure, and strengthened community-based conservation programs.

Nearly 5,000 animals were translocated to Maputo NP restoring the park's ecosystem. Biodiversity assessments showed maintained or increased populations of key species. Examples include the sustained



presence of *Olea chimanimani* at 85 individuals per km² and *Apalis chirindensis* in Chimanimani NP, stable elephant population at 400 individuals and increased reedbuck population from 2,600 to 4,012 individuals in Maputo Special Reserve, and growing buffalo population from 18,600 to 29,887 individuals and sable population increased from 936 individuals in 2019 to 969 individuals in 2024 - in Marromeu NR.

Communities were brought into CAs' planning and management:

Management Councils composed of various stakeholders were established to oversee conservation area management plans, including a park warden, district administrator, representatives of community natural resources management committees, representatives of the private sector and representatives of CSOs.

Participatory land use plans led to improved governance and land delimitation for communities. Borrower's report indicates that participatory process led to increased community governance and community land delimitation. The governance of 27 Natural Resources Management Committees (CGRNs) was improved through training organized by the project; and the land delimitation was completed for 12 communities, of these 6 were approved and have been implemented.

Capacity building and financing mechanisms were enhanced to ensure sustainability of improved management:

BIOFUND provided continued support through training, scholarships, research via the Mozambique Conservation Leadership Program (PLCM), and public awareness initiatives. PLCM attracted young professionals to biodiversity conservation through internships, scholarships, and awareness campaigns.

ANAC adopted CITES' electronic system for managing licenses and trade certificates for wildlife species, increasing efficiency and transparency. BIOFUND implemented fundraising strategies, raising \$2 million in direct endowment capitalization and \$2.5 million indirectly, with funds disbursed growing from \$0.7 million in 2019 to \$3.4 million by 2024.

Four tourism concessions secured for Maputo NP, focusing on factors needed for nature-based tourism. ANAC continues negotiations for a fifth concession planned in Chimanimani NP.

Outcome 2. Enhancing the living conditions of communities in and around these landscapes

20. **The project delivered multiple benefits that significantly improved living conditions of direct beneficiaries.** The project beneficiaries, summing up to 37,810 individuals, against the targeted 35,000 individuals, received a variety of benefits enhancing their living conditions and supporting conservation efforts. These benefits included access to improved infrastructure, such as upgraded schools and community facilities, participation in eco-jobs that provided employment opportunities, involvement in conservation-compatible businesses through grants, and engagement in environmental education programs, like girls' clubs and scholarships. Female beneficiaries summed up to 51 percent of total beneficiaries against the project target of 50 percent recording an overall improved living condition of total beneficiaries because (a) they received 20 percent of CA revenues, allowing their children to access a good primary school education, (b) their children, learnt about better environment and life issues in school clubs, while some have received scholarships, (c) they benefited from salaries, improved technical skills from various eco-job employment contracts with the CAs, (d) their jobs and skills were sustained, since their employer's tourism business survived the pandemic, (e) they benefited from a grant, or were associated with a grant, which allowed them to engage in new value-chain businesses, (f) they participated in the Rotating Saving Loans (PCR) which optimized their own household financing, (g) they received Gender Learning System (GALS) training which enhanced their life opportunities and of the other couples they trained.

21. Living conditions of local communities were improved through promoting sustainable conservation practices. Interviews conducted during the ICR mission indicated that communities who were not direct project beneficiaries expressed strong interest in the project's activities, recognizing the tangible improvements in livelihoods among beneficiary communities.



Improved participatory land use practices and sustainable conservation:

Improved landscapes' land use practices on 643,770 ha overachieved the target of 570,000 ha by 13 percent through systematic work with the local communities supporting their livelihoods, awareness and education, human-wildlife coexistence, and through enhanced patrolling of the conservation areas.

Eco-Jobs provided employment opportunities to 1,000 community members through fences and roads' maintenance, channels' dredging, removal of invasive species, fire control, ethno-botanical survey, and building concrete platforms for the tents.

Conservation-Compatible Businesses, supported 88 conservation-compatible businesses through grants, including 12 SME grants in wood transformation, honey outgrower schemes, solar energy, guano harvest, livestock, poultry, 44 PECE grants in tourism, fish farming, livestock, agriculture, bee keeping, 37 Emergency Covid Tourism (ECT) grants for small and medium enterprises in difficulty due to Covid, and 8 Biocomunidade grants in tourism, bee keeping, agriculture and fish farming.

Established tourism revenue sharing mechanisms:

Tourism Revenue Sharing supported the distribution of 20 percent of tourism revenues from CAs to registered community associations, benefiting 24,202 individuals, registered to Natural Resources Management Committees (CGRN). This mechanism provided direct financial benefits to local communities, improving their livelihoods and encouraging active participation in conservation activities.

Development and issuance of community concessions (or special licenses) for the Futi community conservancy. This allowed communities to manage and benefit from tourism activities directly. Six communities allocated land for a conservancy and received a special license from ANAC. Communities partnered with the NGO Global Conserve to manage the conservancy and develop tourism activities.

Improved environmental education, gender and financial literacy in the communities:

Environmental education activities financed construction and rehabilitation of schools and a successful EDUCA+ program for gender-sensitive development. Project completed construction of 14 classrooms, 14 teachers' houses, and 12 ablution blocks in Chimanimani National Park; and upgrading of 12 classrooms, 15 teachers' houses, and 3 boreholes in Marromeu Reserve. The environmental education program developed awareness, social values, knowledge, skills and attitudes for the conservation of the environment for 12,000 children from 29 rural schools; created 29 environmental and 16 girls' clubs; administered scholarships for 85 girls, of whom 16 have already graduated from vocational education in forestry, tourism, and agriculture: [link to video](#)¹. An environmental education guidance produced by the project is being used across Mozambique.

The co-managers of the 3 parks committed to continuing the environmental education activities, including scholarships to the girls who have not yet graduated. An impact evaluation was carried out which confirmed the success of the program and provided recommendations for future environmental education programs.

PCR Scheme created 109 saving and loan groups with 3,129 members, 64 percent of whom are women, resulting in cumulated savings of 12.3 million MZN and cumulated lending of MZN 15.4 million.

22. **In target landscapes, a positive change in local communities' perception of CAs' impact on their own wellbeing has been tracked.** The project aimed to improve the perception of CAs among local communities of their wellbeing. This was measured through the Social Assessment for Protected Areas (SAPA) surveys conducted in 2019 (baseline), 2022, and 2024 (end of project). The SAPA surveys provided valuable insights into the communities' perception of the costs and benefits of living near the CAs. The results indicated a positive variation in local communities' perception of the CAs' impact on their wellbeing in all three target landscapes:

- Chimanimani National Park saw a significant rise in positive community perception, from 35 percent in

¹ <https://youtu.be/fNREf3PrFn0?si=3dFUqrAXYnjXRJFj>



2019 to 65 percent in 2024, thanks to conservation efforts, capacity building, and eco-jobs.

- Maputo National Park's positive community perception increased from 40 percent in 2019 to 70 percent in 2024 due to environmental education, scholarships, and clubs for girls and the environment.
- Marromeu National Reserve showed a rise in perception from 45 percent in 2019 to 75 percent in 2024, driven by land use planning, land delimitation certificates, and conservation-compatible value chains.

Justification of Overall Efficacy Rating

23. The efficacy of the project is rated **Substantial**, based on the level of achievement of the intended outcomes, their quality and timeliness. The implementation of activities and delivery of outputs were largely consistent with the targets of the Results Framework and the PDO, as confirmed by the Implementation Status and Results Report (ISRs), Aide Memoires, and interviews during the ICR mission. The Substantial rating for efficacy was based on officially reported results, cross-checked with publicly available information, and stakeholder interviews. The rating is justified by the project's success in achieving or surpassing its objectives, including CA management effectiveness, infrastructure support, community engagement, and livelihood activities. These efforts have led to positive results at both the community and CA levels, while also strengthening national biodiversity conservation institutions.

24. During the implementation, several shortcomings were identified, including institutional challenges and capacity needs, which were supported by the project through significant recurrent and operating costs. ANAC faced challenges in becoming a reference conservation institution in southern Africa due to leadership rotations and long "acting" periods. The project team navigated through these issues by ensuring key roles such as a business director, and advisor to the director general are in place, funded by the project. The effective implementation of land use plans required continuous engagement from the line Ministry and other institutions. The new integrated landscape management approach was challenging, but adaptive management and flexibility produced tangible benefits. The COVID-19 pandemic significantly affected project implementation, requiring substantial adaptation. While technical work was achieved under the outcome 'CA financing system diversified,' the operationalization of mechanisms like payment for ecosystem services and biodiversity offsets faced slow intake.

25. The ICR team verified several additional sources of information on project outcomes, including Borrower's ICR, project M&E Dashboard and datasets, various assessments, analytical studies produced by the Project Implementation Units (PIUs), FNDs and BIOFUND, and publications as detailed in Annex 6. The ICR team has also administered an online survey during March 2025 with 167 individuals among key project stakeholders responding to the survey. Most of the responses were very positive: 89 percent of the responders strongly agree or agree that overall, the project was successful in improving the management of conservation areas, and 83 percent – in improving the living conditions of communities living in and around conservation areas. 82 percent of the responders agree that most of MozBio2's activities have a good chance of sustainability with engagement and development of the communities' livelihoods, basic education, and resource governance as sector's priorities. 75 percent of respondents expressed positive progress for ANAC and 84 percent – for BIOFUND's progress during MozBio2 period.

C. EFFICIENCY

Assessment of Efficiency and Rating

26. The efficiency of MozBio2 is rated **Substantial**. An ex-post economic analysis was conducted to assess the project's incremental net benefits by comparing the without-project (WOP) and with-project (WP) scenarios (see Annex 4 for details). Based on the quantified net benefits using a market price for value reduced GHG emissions, MozBio2 has shown high NPVs, a favorable BCR, largely surpassing the ex-ante estimates, and robust ERR and FRR. This is confirmed by sensitivity analysis, across different discount rates, and positive results even when excluding carbon benefits. While subproject execution faced delays, the project nonetheless demonstrated robust and rapid adaptability in implementation, particularly in enabling a swift recovery from the COVID-19 pandemic. A substantial



efficiency rating is also supported by non-quantifiable benefits, as well as by the sustainability of project impacts.

27. **Economic analysis.** Using the same carbon price as in the PAD (ranging between US\$8–10/tCO₂e, which reflects market-based realistic price) and a 20-year period, the ICR economic analysis confirms strong project viability: at a 6 percent discount rate, the Net Present Value (NPV) reaches US\$97.51 million, with a Benefit-Cost Ratio (BCR) of 1.94 and an Economic Internal Rate of Return (ERR) of 37 percent. These results are significantly stronger than those of the PAD (NPV: US\$35.53 million) and AF (NPV: US\$55.94 million), highlighting greater benefit realization over time despite higher costs captured in the ICR. No ERR was calculated at appraisal. Even at a 15 percent discount rate, the project remains viable, with an NPV of US\$31.32 million and a BCR of 1.48. Even when excluding carbon benefits, the ICR still reports a robust NPV of US\$71.2 million at a 6 percent discount rate and an ERR of 25 percent. By contrast, the PAD estimated an NPV of US\$4.37 million, and the AF showed a negative NPV of US\$ -0.72 million (for the details, see Annex 4). At 15 percent, without carbon benefits, the NPV calculated at completion remains positive at US\$17.33 million with a BCR of 1.27. These comparisons confirm the project's economic viability under both scenarios and demonstrate its long-term value, even without carbon benefits.

28. **Financial analysis.** A financial analysis was carried out at the ICR stage, which had not been conducted at either the PAD or AF stages. Using a 20 percent discount rate over a 20-year period, the NPV is estimated at US\$17.77 million with a Financial Rate of Return (FRR) of 39 percent, based on carbon prices ranging between US\$8–10/tCO₂e. Under the same conditions but excluding carbon benefits, the NPV decreases to US\$7 million, while remaining positive, with a FIRR of 26 percent.

29. **Distribution of benefits.** Tourism was the primary driver of the project's quantified benefits, accounting for 69 percent of total value, followed by livelihoods (12 percent), carbon benefits (13 percent), endowment fund interest (5 percent), and staff salaries (1 percent). Compared to the PAD and AF estimates, tourism-related benefits significantly outperformed initial projections, effectively offsetting lower-than-expected returns from carbon benefits. Livelihood-related NPVs remained broadly consistent between the ICR and PAD. Good results in tourism are largely attributable to the project's rapid and targeted response to the COVID-19 crisis, which played a critical role in enabling a swift recovery of tourism in key parks, particularly in Maputo National Park. Positive results have been recorded in Chimanimani, while in Marromeu tourism has remained negligible, due to its remoteness.

30. **Sustainability.** The results are robust from a sustainability standpoint, supported by the inclusion of long-term maintenance costs based on agreements with CMPs, covering the period beyond project closure. This reinforces the credibility of financial and economic analysis as it factors in actual post-project commitments. Given tourism's central role in generating benefits, a five-year shock scenario was incorporated—simulating a 50 percent decline in tourist arrivals followed by a gradual four-year recovery. The analysis confirmed the resilience of results even under adverse conditions such as pandemics or political instability.

31. **Additional financing.** AFs enabled a meaningful expansion of project outcomes, aligning effectively with the increased resources allocated and reinforcing the project's overall development impact. MDTF funding enabled a timely response to the COVID-19 crisis through emergency support to tourism enterprises, eco-jobs for informal workers, and education continuity. The GEF played a key role in supporting the APA, infrastructure, operations, and capacity building. Both sources significantly strengthened institutional capacities at park and national levels, reinforcing the project's development outcomes.

32. **Implementation.** MozBio2 showed strong adaptive capacity in response to major shocks such as COVID-19 and Cyclone Idai. The project quickly reallocated resources, launching the Tourism Emergency, Bio-Emergency Fund as well as the eco-jobs to preserve jobs and support communities across all three target landscapes. Despite institutional shifts—including ANAC's transfer between ministries and leadership changes—the project-maintained momentum and adapted effectively to evolving circumstances. However, implementation faced delays in key components. The BioComunidade grants were postponed due to contractor issues and relaunched later in the project cycle. Matching Grants were slowed by fiduciary and procurement constraints, and restoration activities



gained momentum only after being redesigned to include income-generating elements.

33. **Non-quantifiable benefits.** The project generated significant non-quantifiable benefits, indicating that the true rate of return is likely higher than the current estimate. These include lasting environmental gains—such as biodiversity preservation, ecosystem restoration, and soil and habitat improvements—as well as strengthened institutional and policy capacity, particularly within ANAC and park management systems. Investments in infrastructure, staff training, and operational systems have enhanced the sustainability of conservation efforts and positioned parks to generate ongoing tourism revenue. The project also delivered meaningful educational outcomes, helping to mitigate COVID-19 disruptions through school construction and remote learning support, thereby contributing to long-term human capital development essential for conservation and rural resilience.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

34. The overall outcome rating is **Satisfactory**. The rating was determined based on the High relevance of the project objectives, the Substantial efficacy, and the Substantial efficiency. Both outcomes of the PDO were achieved as measured by the three PDO and 14 intermediate indicators. Despite implementation difficulties, the project addressed a comprehensive and coherent set of activities both in terms of improved practices and enabling environment in three targeted landscapes. COVID-19 pandemic significantly affected the project implementation for more than a year, required substantial adaptive management and flexibility from the PIU and benefiting institutions to produce tangible results in this new operating environment. The current relevance of project objectives also remains High.

35. The project outcomes are consistent with the GoM's development priorities and international commitments on biodiversity, forests, and climate change, as well as the World Bank's CPF FY17–21. Improved practices of biodiversity conservation and CA management, involving participatory approach engaging local communities, were implemented across the three conservation landscapes. The project also improved engagement of the communities in resource management and use, sharing benefits generated by the CAS, and generated improved livelihoods, access to education and microfinance both for the communities and small business. Even though the project was restructured, a split evaluation was not applied as the project development objective or outcome targets were not formally revised nor was the scope changed. Addition of component 4 CERC through the AF ultimately did not result in its activation.

E. OTHER OUTCOMES AND IMPACTS

Gender

36. **The project implemented and achieved several gender-related actions aimed at promoting gender equality and empowering women.** These activities targeted around 12,000 children from 29 rural schools involved in the program's environmental education activities. Additionally, the project created and funded 29 environmental and 16 girls' clubs specifically for girls from vulnerable households; 85 girls were awarded with scholarships, of whom 16 have already graduated from vocational education in forestry, tourism, and agriculture. The project constructed 7 new schools, including refurbishing sanitary facilities and water tanks. The Gender Action Learning System (GALS) training was provided to members of CGRNs, which helped improve their governance and functions. These efforts collectively contributed to enhancing the capacity and opportunities for women and girls.

Institutional Strengthening

37. The project strengthened conservation institutions, leading to the preparation and adoption of key policies and legislation. ANAC prepared and facilitated the adoption of (a) Decree 16/2022 to adjust the duties, power, autonomy, management, budgetary regime, organization and administration of ANAC, and (b) Decree 52/2024 to approve the collaborative management partnership regulations. In addition, ANAC (a) in 2024, facilitated a Diploma: Guidelines for CCA (UNDP -financed) and (b) in 2022, adopted a National Action Plan for Community Development in Conservation Areas and their Buffer Zones in Mozambique (2023 – 2032). The National Directorate of Environment (DINAB) prepared a draft regulation on access and benefit sharing for genetic resources with the project's support.



Mobilizing Private Sector Financing

38. The project supported private tourism concessions like Membene Lodge in Maputo National Park. The Emergency Covid-19 Tourism (ECT) window, administered by BIOFUND, targeted private sectors in tourism, habitat restoration, and conservation, supporting 37 enterprises with 80 percent of their action plans. This window has been activated as part of the Matching Grant System (MGS) and has been operated outside the CERC Component. Additionally, through the MGS, the project was able to support 12 PME covering 60 percent of their business plans, and 85 percent of their business plan of 44 individual leaders. Supported investments included eco-tourism services, small-scale processing, restoration-linked enterprises, and sustainable agriculture. The model of private tourism concessions proved to be an effective way to attract private actors to CAs, thereby providing additional streams of financing for CA management. Furthermore, by promoting shade-coffee as one of the habitat restoration activities, the project helped to mobilize the interest of private sector to invest in coffee value-chain, including to organize themselves into an association.

Other Unintended Outcomes and Impacts

39. *Testing restoration methodologies.* The Project offered opportunities to try different restoration methodologies in different drylands (miombo and sandy forests), such as removal of invasive species, planting for agroforestry on degraded lands, and assisted natural regeneration. This offers future opportunities to monitor progress for comparison.

40. *Visibility for conservation.* The long continuity of the TFCA and MozBio programs raised awareness about the conservation agenda and its opportunities towards development at political level. The country's President inaugurated and led high visibility events to celebrate sector's milestones promoting the project's achievements. International media also featured Mozambique's CAs, which further boosted the national visibility of CAs and biodiversity values.

III. KEY FACTORS AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

41. Consistent with the stated PDO, the project design and project components were adequately stated and aligned with the two outcomes. The selection of indicators and targets for the Results Framework was mostly adequate, except for the indicators that were not well suited to track the improvements in institutional capacity of ANAC, BIOFUND and FNDs. The lessons from past projects TFCA 1, TFCA2, and MozBio1 were crucial in shaping the design of MozBio2. The TFCA program, initiated in 1999, laid the groundwork by establishing policy, legislation, institutions, and management modalities for CAs in Mozambique. TFCA2, which ran from 2009 to 2014, adopted new policies and legislation, and promoted tourism as the main economic driver for the biodiversity conservation sector. MozBio1, from 2015 to 2019, built on this foundation by strengthening key institutions like ANAC and BIOFUND demonstrating the benefits of collaborative management partnerships. These experiences highlighted the importance of capacity building, effective management, and community engagement, which were all incorporated into the design and implementation of MozBio2 to enhance conservation efforts and improve the living conditions of communities in and around the target landscapes. However, retrospectively, they possibly could have had clearer operational logic with incorporated factors related to timing and sequencing requirements. The Project was prepared in a short time, overlapping the first year of implementation with the last year of MozBio1 under the same project implementation team.

B. KEY FACTORS DURING IMPLEMENTATION

42. Project implementation was affected by several factors outside the project control. The project was affected by three major severe weather events. Two strong tropical cyclones - Idai and Kenneth - hit the country in the same season during March-April 2019, by what is the worst natural disaster that hit southern Africa in at least two decades. Cyclone Freddy followed in 2023 and lasted 36 days, making it the longest-lasting tropical cyclone. Millions of people, public infrastructure, and businesses across the country, including in the project areas (Chimanimani landscape), have been



affected. Cyclones affected the project implementation through delayed or stopped activities, weakened communities, and efforts refocused towards emergency operations. Further, major restrictions on normal project implementation processes were imposed by the COVID-19 pandemic as well, such as closed borders, suspended public gathering and social distancing measures with announced state of emergency in March 2020 for about 150 days. The country experienced up to five waves of COVID-19 between September 2020 and June 2022, which considerably limited all project activities, particularly key interactions with project beneficiaries at the field level. The pandemic also triggered emergency initiatives that offered opportunities for simplified procedures to matching grants and improved structure to wage labor opportunities for communities as 'eco-jobs'. In a context where external shocks could have severely disrupted implementation, the PIU demonstrated strong adaptive management, though this came at the cost of increased staff workload and operating expenses.

43. The project was able to proactively tackle the bottlenecks and sought solutions towards the outcomes. The team assisted the CA administrations with connecting Educa+ scholarship beneficiaries to vocational schools, identified a replacement of the withdrawn Co-Management Partner for Marromeu landscape and brought in another reputable partner. The project successfully resolved challenges in streamlining preparation and implementation of procurement within the FNDS that was implementing up to nine investment operations and had shared fiduciary capacity at the time. MGS activities had challenges in safeguards and procurement resulting in unreasonable delays in their implementation. Despite these and other challenges, compliance was achieved and activities implemented with 100 percent disbursement of funds. This contrasts with other FNDS-implemented projects that recently closed with cancellation of a total US\$29 million total, or 20 percent of total approved Project costs².

44. Factors subject to Government control were mostly satisfactory, such as coordination, commitment and governance. The presence of CMPs proved to be an important factor for implementation and outcome, demonstrated in the results of Component 2. The project enabled synergies with other projects through the FNDS LMU. Examples included smallholder farmers of Sustenta project who benefitted from a solar-powered refrigeration facility installed by a local company financed through MozBio2, and a coffee producer supported by MozRural project who was connected to a community association engaged by MozBio2 project to restore degraded lands with coffee.

45. However, fiduciary particularly procurement delays, severely affected implementation of the project activities. While FNDS as the 'institutionalized-PIU' demonstrated add-value to the project implementation and outcomes, the FNDS specialists were overstretched and could not provide effective cross-project support. The changes made to the safeguards unit by FNDS had considerable implications for implementation. Procurement suffered from pooled staff that led to partially transferring fiduciary responsibilities to BIOFUND during the project restructuring.

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

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

M&E Design

46. The design of the project M&E system leveraged the experience from the previous project, utilizing baseline data, focused on reporting key performance inputs, outputs, and outcome indicators. This included targeted data collection and surveys (using a Dashboard), qualitative participatory assessments, and support for project evaluations. The Results Framework incorporated indicators with gender-disaggregated data on beneficiaries. Baseline data collection, adequate resources, and specific arrangements for M&E implementation were clearly defined.

M&E Implementation

47. The project successfully established a functional system for M&E activities. Standardized and simple tools were developed for the regular collection, transfer, and consolidation of field data at the national level for decision-making,

² World Bank projects that closed in 2023 and 2024 with cancelled amounts of 16 percent (US\$ 6 million, P149620) and 23 percent (US\$ 23 million, P164551).



planning, and timely periodic reporting using a comprehensive Dashboard. Project annual and bi-annual progress reports were submitted on time, with high standards of substance information and using effective communication and graphic tools. Geographic real-time information accessible to project management was effectively implemented. M&E implementation demonstrated extensive efforts to collect disaggregated and qualified data for each indicator. Of the 17 indicators in the results framework, 10 indicators collected disaggregated data. All indicators are substantiated in the annual reports with qualified data. Quality data was ensured by training conducted by SAPA methodology developers for Project M&E and community specialists, and the mobilization of species-specific monitoring and teams.

M&E Utilization

48. The M&E information was provided in a timely manner. This information was instrumental in informing assessments and decisions by regular project supervision, the MTR, restructuring, and the end-of-project assessments conducted as part of the ICR. The robust M&E system, METT, and SAPA methodologies demonstrated extensive contributions to inform decision-making and allowed the project to be agile and responsive to significant disruptions outside the project's control, such as the Covid-19 pandemic. Furthermore, monitoring different windows of PLCM and matching grant programs was also used to make modifications, such as broadening the eligibility of participants to promote the uptake of specific windows.

Justification of Overall Rating of Quality of M&E

49. The overall quality of the project's M&E is rated **Substantial**. Despite weaknesses in the selection of some indicators and the difficulties in data collection, the system was designed and effectively implemented to monitor project progress and achievements, enabling effective utilization.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

Environmental and Social safeguards

50. Overall, the project complied with all triggered safeguards policies. The project is a Category B project (partial assessment) with safeguard function and accountability entrusted to FNDS. MozBio2 adopted specific safeguard instruments all cleared prior to effectiveness (see list below). MozBio2 triggered six of the World Bank's Safeguard Policies³. The project safeguard instruments, consistent with these policies, were approved by the World Bank at the time of effectiveness in 2018 and subsequently improved/reapproved with the AF in 2020. The safeguard performance was initially satisfactory although the lack of sufficient staff, inadequate personal protective equipment, poor waste management, lack of written contracts/agreements between beneficiaries, and delayed worker salaries were noted as not compliant with the ESMF, immediate corrective measures were recommended to address these shortcomings and ensure alignment with the framework's requirements. Most subprojects were categorized as B, with some as C, and detailed Environmental and Social Management Plans (ESMPs) were made publicly accessible. The GRM effectively resolved all grievances, and the Bank's E&S team provided ongoing training and support to ensure compliance. In 2021, the rating was degraded due to the lack of staff at two sites and at FNDS in general resulting in limited coordination impacting the whole FNDS portfolio⁴. The situation improved with the recruitment of more staff and safeguards have been rated Moderately Satisfactory from May 2022 to November 2024. A noticeable improvement in the GRM was noted in 2023. The grievances registered related to delivery of project benefits were effectively addressed and reached 97 percent at the project closing date. A civil work contract was started without an approved ESMP in 2021, which was identified and redressed promptly; all infrastructure was implemented and supervised based on an approved ESMP. The guidelines for worker safety were applied. Except for the late reporting of a minor work accident, there were no worker safety issues. A gender-based violence (GBV) case was reported and effectively addressed by the PIU in the closing months of the project, with the action plan completed and GBV Guidelines for the Protected Areas developed. The case was addressed

³ OP 4.01 Environmental Assessment, OP 4.04 Natural Habitats, OP 4.36 Forestry, OP 4.09 Pest Management, OP 4.11 Cultural Heritage and OP 4.12 Involuntary Resettlement

⁴ MozBio2, MozFIP, Sustenta, MozNorte, SREP, ERPA and Mozland.



transparently and closed by November 2024.

51. The World Bank safeguards team carried out environmental and social safeguards trainings to the PIU, which were then replicated by the project safeguards team to service providers, partners, and beneficiaries. The World Bank environmental and social specialists regularly supported the implementation missions during the lifetime of the project, and the mission findings and recommendations were recorded in the respective Aide Memoires. See the project's full task team members in Annex 2.

Financial Management

52. The project's Financial Management (FM) arrangements were rated as moderately satisfactory due to satisfactory performance by BIOFUND and moderately unsatisfactory performance by FNDS at project closure. Both FNDS and BIOFUND had adequate accounting staff throughout the project, except for internal audit units that were not adequately established. FNDS project accounts were audited by the National Auditor at the Administrative Tribunal from 2019 to 2022 and by Ernst & Young in 2023, with delays in submission to the World Bank. Most audit opinions were unqualified, except for one qualified report in 2020. BIOFUND project accounts were audited by private auditors, with timely submissions to the World Bank and all unqualified opinions.

Procurement

53. Procurement of the project activities was implemented in accordance with the World Bank's Procurement Regulations, provisions were stipulated in the Financing Agreement for the project, the Project Procurement Strategy for Development (PPSD) was approved and a Project Procurement Manual developed. The project benefited from the already formed procurement team at FNDS and BIOFUND from MozBio1 project. FNDS experienced substantial staff rotation, as well as an increased workload due to additional projects affecting the procurement processes of the project activities. All FNDS-procured contracts also require clearance from the Administrative Tribunal. These are the main reasons for the procurement delays. On MGS specifically, beneficiaries faced frustration due to the complex procurement method and delays in obtaining clearances from central project team, which could have been mitigated by the World Bank providing a commercial procedure and decentralizing clearances to the district level. However, the team had missed the opportunity of the 2 restructuring efforts to address this issue. The World Bank considered the procurement arrangements and performance Moderately Satisfactorily consistently throughout the project lifetime, with only six months period of Moderately Unsatisfactory rating during November 2021 to May 2022 as recorded in the ISRs and Aide Memoires. The WB team and the PIU made significant efforts to properly and timely document the completion of project activities in the Systematic Tracking of Exchanges in Procurement (STEP) tool. The Borrower showed full commitment and resolved these issues during the grace period and fully documented the project activities in STEP.

C. BANK PERFORMANCE

54. **Quality at Entry.** The World Bank's support for Mozambique's biodiversity conservation and tourism has been consistent over the past 25 years, significantly contributing to the sector's transformation. The World Bank's efforts in 2017 and 2018 to support the GoM prepare and implement MozBio2 ensured a smooth transition from MozBio1, avoiding disruptions in staffing, programming, and funding. During the project's preparation, the World Bank prioritized pragmatism over strategic planning, which limited the potential efficiency of this substantial investment. While the World Bank successfully incorporated lessons learned into MozBio2's design, its focus on local impact became diluted. The project budgeted more for recurrent costs than investments, addressed CA integration at a district scale beyond CA influence areas, and adopted MGS heavy on processes and transaction costs.

55. **Quality of Supervision.** Formal implementation support missions were regularly organized, at least on a semiannual basis. In general, comprehensive and informative Aide Memoires and ISRs were produced and filed. In addition to supervision missions, technical field missions were conducted by the World Bank staff from the country office to supervise specific project activities or locations. The composition of the supervision team reflected the technical and



fiduciary requirements, with locally based specialists from FM, procurement, and safeguards participating in all missions.

56. The three task team leaders (TTLs) responsible for supervision allocated adequate time to proactively deal with and resolve project issues. This facilitated regular contact with the FNDS, other agencies, and beneficiaries. Effective collaboration between the World Bank team and the PIU, the dialogue arising from these missions, and the close monitoring of the World Bank's recommendations were all factors that benefited project performance. It also ensured proactive management of project issues and resolving the bottlenecks. However, FNDS-wide challenges with implementation of the matching grants, including those from other projects, were not timely addressed. The high turnover of consultants and TTLs, each with varying approaches to project support, could be partly responsible.

Justification of Overall Rating of Bank Performance

57. The Overall Bank Performance is assessed to be **Moderately Satisfactory**. While the World Bank ensured the operation's quality at entry and supported effective implementation through appropriate supervision, shortcomings were observed in addressing the fiduciary issues and FNDS-wide implementation challenges of the MGS, as detailed in the section on quality of supervision.

D. RISK TO DEVELOPMENT OUTCOME

58. The most promising element to buffer against various sustainability risks is the three CMP agreements formalized by the project for the CAs. The partner institutions will provide technical and financial assistance to maintain the continuity of many of the CA management and investment programs that were supported by MozBio2. Programs implemented through central institutions are variable: a) ANAC is undertaking institutional reform; b) activities implemented through BIOFUND were designed to be part of the fund's own programs and therefore have secure continuity; the fund's programs supporting ANAC (Basket Fund and PLCM SNAC-window) are anticipated to improve; and c) FNDS and LMUs are now operational where other projects are still active, for example, MozRural.

59. The integrated landscape management approach that was spearheaded by the LMU requires continued support. This entails providing active support to a) district administrations on land use planning that integrated conservation and development priorities, and b) SMEs, entrepreneurs and community entities that have been supported with value chain development. Systematic and strategic approaches to incorporate these functions into the CAs and the CMPs will be needed. However, the ownership of the land administration and allocation of their staff to support further the development and implementation of the Land use planning offers an opportunity of continuation of what has been initiated by the MozBio2 project.

V. LESSONS AND RECOMMENDATIONS

60. **Lesson 1. Continuous Institutional Capacity Building and Strengthening institutions like ANAC and BIOFUND are crucial for sustainable conservation efforts.** Supporting personnel, enhancing management systems, and increasing staff exposure to best practices by MozBio2 led to improved management effectiveness and financial sustainability of conservation areas. Adaptive management and flexibility in responding to external disruptions was also crucial in maintaining the implementation momentum and achieving project goals. This finding is reinforced by the stakeholder survey, where respondents recognized the significant progress made by ANAC and BIOFUND in enhancing institutional capacity and delivering on strategic objectives. Future projects should prioritize ongoing training and resource provision to ensure these institutions can effectively manage conservation areas, implement policies, and engage with communities.

61. **Lesson 2. Conservation depends on formal and effective community engagement and long-term engagement in the landscape approach.** Training community members, supporting local governance structures, and ensuring equitable benefit-sharing from conservation efforts supported by MozBio2 led to increased community participation and ownership of conservation initiatives. Survey responses also highlighted community engagement as a key contributor to MozBio2's success. Future projects should adopt participatory approaches, provide clear guidelines for community involvement, ensure that benefits from conservation efforts are shared and monitored equitably, and design long-term engagement by



securing multi-year funding, establishing robust partnerships, and continuously monitoring and adapting strategies.

62. **Lesson 3. Land use planning is another core factor in conservation efforts.** Facilitating preparation of Integrated District Development Plans (PDUT) and Community Land Use Plans (PCUT) aligning conservation goals with local development priorities was instrumental in identifying priority value chains and setting development priorities. This approach helped ensure that land use decisions promoted sustainable agricultural practices and protected critical habitats while providing a framework for community governance and land management. Budget constraints limited the inclusion of all communities though. Future projects should ensure adequate sustainable funding and capacity building for effective land use planning and implementation.

63. **Lesson 4. Collaborative Management Partnership (CMP) model in Mozambique helped integrate local communities, private entities, and NGOs into enhanced biodiversity conservation.** It fosters local ownership, ensures long-term sustainability, and allows adaptation to socio-economic and environmental challenges. CMPs encourage active community participation, promote conservation-related economic activities, and establish strong governance structures. Key factors include the importance of financial sustainability, stakeholder collaboration, and adaptive management. The project strengthened CMPs by improving governance, promoting sustainable livelihoods, securing long-term funding, and enhancing local capacity through training programs. It helped conservation areas remain ecologically resilient and economically viable while benefiting communities. The CMP model offers a solid foundation for future conservation areas' management, ensuring effective conservation strategies that balance environmental protection with socio-economic development, ultimately creating a sustainable pathway for Mozambique's biodiversity conservation efforts.

64. **Lesson 5. Simplifying procurement processes and decentralizing clearances was crucial in MGS.** Beneficiaries faced challenges with the complex procurement method and delays in obtaining clearances from Maputo, requiring close assistance from FNDS field teams. These issues could have been alleviated by adopting a commercial procedure and decentralizing clearances to the district level. Additionally, clear communication and adequate training for beneficiaries on procurement processes can further enhance the effectiveness and satisfaction of the MGS, ultimately leading to better project outcomes. By addressing these challenges, the project can improve efficiency, reduce frustration, and ensure that beneficiaries receive the support they need in a timely manner, fostering private sector engagement in the conservation areas. Future projects should be adopting simplified procurement procedures, decentralizing key decision-making processes, and investing in early capacity-building measures.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS FRAMEWORK

PDO Indicators by Outcomes

Management improvements of target conservation area landscapes								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
CAs with improved management effectiveness (Number)	0.00	Sep/2018			3.00	Nov/2024	3.00	Nov/2024
	Comments on achieving targets		Target was achieved. Results reflect at least 10 points increase in METT scores as measured in October 2024.					
CAs with improved management effectiveness: Maputo Special Reserve (Number)	59.00	Sep/2018			70.00	Nov/2024	76.00	Nov/2024
	Comments on achieving targets		Target was overachieved by 6 point (108 percent).					
CAs with improved management effectiveness : Chimanimani CA (Number)	47.00	Sep/2018			59.00	Nov/2024	59.50	Nov/2024
	Comments on achieving targets		Target was achieved at 100 percent.					
CAs with improved management effectiveness: Marromeu National Reserve (Number)	39.00	Sep/2018			47.00	Nov/2024	47.00	Nov/2024
	Comments on achieving targets		Target was slightly under-achieved. at 96 percent.					
Direct beneficiaries receiving livelihood-support activities and services (% of which are women)								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Number of direct beneficiaries receiving livelihood-support activities and services (% of which are women) (Number)	0.00	Sep/2018			35,000.00	Nov/2024	37,810	Nov/2024
	Comments on achieving targets		Target was achieved at 108 percent. This indicator aggregates the number of beneficiaries of activities, including conservation-compatible businesses, savings and revolving credit groups, seasonal jobs and jobs maintained through the BIO-Emergencies Fund, restoration activities, community land use plans, environmental clubs and					



			girls' clubs, scholarships, rehabilitated schools, and 20 percent of revenue from the conservation area. Marromeu landscape is a positive outlier in this indicator, contributing with 74 percent of the overall result.					
Percentage of direct beneficiaries who are women (Percentage)	0.00	Sep/2018			50.00	Nov/2024	50.00	Nov/2024
	Comments on achieving targets		Target was achieved at 100 percent.					
Living conditions of communities in and around target conservation area landscapes enhanced								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Target landscapes with positive variation in local communities' perception of CAs' impact in wellbeing (Number)	0.00	Sep/2018			3.00	Nov/2024	3.00	Nov/2024
	Comments on achieving targets		Target was achieved. Improvements in the capacity of the CA to mitigate HWC contributed significantly for the improvement in perception of the communities, particularly in Matutuine Landscape. In Marromeu and Chimanimani most important factors were the livelihoods subprojects supported by the Project.					

Intermediate Indicators by Components

Component 1: Strengthening Capacity and Financial Sustainability of National Conservation Institutions								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
People trained by the Conservation Leadership Initiative (of which % of women) (Number)	0.00	Sep/2018			445.00	Nov/2024	563	Nov/2024
	Comments on achieving targets		Target was achieved at 127 percent. The number of beneficiaries who are already working in the system of conservation areas increased considerably due to the change of focus from BIOFUND who under the resistance of ANAC staff targeted private sector operated CA.					
% of women trained by the Conservation Leadership Program (Number)	0.00	Sep/2018			26.00	Nov/2024	38	Nov/2024
	Comments on achieving targets		Target was overachieved (146 percent).					
Co-Management Agreements in target CAs signed by the relevant authority (Number)	1.00	Sep/2018			3.00	Nov/2024	3.00	Nov/2024
	Comments on achieving targets		All three targeted conservation areas have secured long-term co-agreements with highly experienced organizations, thus ensuring long-term technical and financial support. Peace Parks Foundation for Maputo National Park; Fauna and Flora for Chimanimani National Park; Frankfurt Zoological Society for Marromeu National Reserve.					
	0.00	Sep/2018			2,900,000.00	Nov/2024	\$13,558,800	Nov/2024



Amount of non-World Bank funds disbursed by BIOFUND to ANAC and the CA Network (of which amount disbursed to the three target CAs) (Amount(USD))	Comments on achieving targets		The end target was overachieved at 430 percent.					
Amount disbursed to the three target CAs (Amount(USD))	0.00	Sep/2018			300,000.00	Nov/2024	3,408,157.48	Nov/2024
	Comments on achieving targets		The end target was overachieved 11 times.					
Value of non-GEF Contributions to the Endowment Fund (Amount (USD) (Amount(USD))	0.00	Mar/2020			5,000,000.00	Nov/2024	2,000,000.00	Nov/2024
	Comments on achieving targets		The end target was not achieved; reasonable fundraising efforts were implemented by BioFund (Implementing Agency). The project generated a considerable in-kind contribution from the benefitted communities and institutions, estimated at around \$19.3 million, which is almost 4 times the end target.					
Component 2: Improving Conservation Areas Management in target landscapes								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
CAs’ Management Councils functional (Number)	0.00	Sep/2018			3.00	Nov/2024	3.00	Nov/2024
	Comments on achieving targets		Target was overachieved. It includes the Management Council of the Maputo Environmental Protected Area (APA).					
Target landscapes with basic infrastructure established under the project (Number)	0.00	Sep/2018			3.00	Nov/2024	3.00	Nov/2024
	Comments on achieving targets		The end target was achieved at 100 percent of infrastructure completion.					
New private tourism concessions (Number)	0.00	Sep/2018			4.00	Nov/2024	4.00	Nov/2024
	Comments on achieving targets		Target was achieved.					
New private tourism concessions: Elephant Coast CA (Number)	0.00	Sep/2018			3.00	Nov/2024	3.00	Nov/2024
	Comments on achieving targets		Target was achieved.					
New private tourism concessions: Chimanimani NR (Number)	0.00	Sep/2018			1.00	Nov/2024	1.00	Nov/2024
	Comments on achieving targets		Target was achieved.					
Number of community management plans implemented (Number)	0.00	Mar/2020			6.00	Nov/2024	6.00	Nov/2024
	Comments on achieving targets		The end target was achieved at 100 percent.					



Species population maintenance, and/or increase (Yes/No)	Yes	Sep/2018			Yes	Nov/2024	Yes	Nov/2024
	Comments on achieving targets		Yes, the end target was achieved.					
Key Species population maintenance, and/or increase: Maputo Special Reserve (1.Elephant, 2.Reedbuck, 3.Serranidae family) (Yes/No)	Yes	Sep/2018			Yes	Nov/2024	Yes	Nov/2024
	Comments on achieving targets		The end target was achieved. The project invested into organizing participatory conservation and management, better protection of habitats and wildlife, investments in conservation infrastructure and reducing anthropogenic pressure of the three conservation landscapes, which resulted in measurable improvements of CAs' management and maintained or increased wildlife populations.					
Key Species population maintenance, and/or increase. Chimanimani NP (1.Apalis chirindensis (Passerine Bird); 2.Olea Chimanimani (Olive shrub) (Yes/No)	Yes	Sep/2018			Yes	Nov/2024	Yes	Nov/2024
	Comments on achieving targets		The end target was achieved. The project invested into organizing participatory conservation and management, better protection of habitats and wildlife, investments in conservation infrastructure and reducing anthropogenic pressure of the three conservation landscapes, which resulted in measurable improvements of CAs' management and maintained or increased wildlife populations.					
Key Species population maintenance, and/or increase. Marromeu NR (1. Buffalo, 2. Sable) (Yes/No)	Yes	Sep/2018			Yes	Nov/2024	Yes	Nov/2024
	Comments on achieving targets		The end target was achieved. The project invested into organizing participatory conservation and management, better protection of habitats and wildlife, investments in conservation infrastructure and reducing anthropogenic pressure of the three conservation landscapes, which resulted in measurable improvements of CAs' management and maintained or increased wildlife populations.					
Component 3: Promoting conservation-compatible rural development and integrated landscape management in target landscapes								
Indicator Name	Baseline		Closing Period (Original)		Closing Period (Current)		Actual Achieved at Completion	
	Result	Month/Year	Result	Month/Year	Result	Month/Year	Result	Month/Year
Grievances registered related to delivery of project benefits effectively addressed (Percentage)	0.00	Sep/2018			90.00	Nov/2024	100.00	Nov/2024
	Comments on achieving targets		The end target was overachieved at 111 percent.					
Grievances registered related to delivery of project benefits effectively addressed, disaggregated: Elephant Coast CA (Percentage)	0.00	Sep/2018			90.00	Nov/2024	100.00	Nov/2024
	Comments on achieving targets		The end target was overachieved at 111 percent.					
Grievances registered related to delivery of project benefits effectively addressed,	0.00	Sep/2018			90.00	Nov/2024	100.00	Nov/2024
	Comments on achieving targets		The end target was overachieved at 111 percent.					



disaggregated: Chimanimani CA (Percentage)								
Grievances registered related to delivery of project benefits effectively addressed, disaggregated: Marromeu Complex (Percentage)	0.00	Sep/2018			90.00	Nov/2024	100.00	Nov/2024
	Comments on achieving targets		The end target was overachieved at 111 percent.					
Number of conservation-compatible businesses under implementation (Number)	0.00	Sep/2018			36.00	Nov/2024	88	Nov/2024
	Comments on achieving targets		The end target was overachieved at 244 percent.					
Share of conservation-compatible businesses under implementation led by women (Percentage)	0.00	Sep/2018			30.00	Nov/2024	47.00	Nov/2024
	Comments on achieving targets		The end target was overachieved 157 percent.					
Area restored (Hectare(Ha))	0.00	Mar/2020			6,700.00	Nov/2024	6,700	Nov/2024
	Comments on achieving targets		The end target was achieved at 100 percent.					
Area of landscapes under improved practices (excluding protected areas) (Hectare(Ha))	0.00	Mar/2020			520,000.00	Nov/2024	643,770.00	Nov/2024
	Comments on achieving targets		This is an indicator added to reflect the GEF financed activities. The end target was over achieved at 124 percent.					
Emissions avoided from reduced deforestation (Metric tons/year)	0.00	Mar/2020			542,262.00	Nov/2024	589,935	Nov/2024
	Comments on achieving targets		Target was overachieved at 106 percent.					



B. KEY OUTPUTS

Management improvements of target conservation area landscapes	
PDO Indicators	OI1. CAs with improved management effectiveness
Key Outputs (linked to the achievement of the PDO Outcome)	<i>Quantitative and qualitative information on key outputs</i> 1. METT score improvement: METT scoring was conducted in each CA, led by the CA administration team with participation from central institutions (ANAC, BIOFUND, FNDS). 2. Management Plan activities implemented: CA produced annual report monitoring the implementation of their Management Plans. (PPF publishes consolidated annual report for all 4 CAs that it co-manages, including PNM). 3. CA with operational Earth Ranger law enforcement software: 1. For PNC and RNM, Earth Ranger was purchased in 2024.
Direct beneficiaries receiving livelihood-support activities and services (% of which are women)	
PDO Indicators	OI2. Number of direct beneficiaries receiving livelihood-support activities and services Percentage of direct beneficiaries who are women
Key Outputs (linked to the achievement of the PDO Outcome)	<i>Quantitative and qualitative information on key outputs</i> 1. Beneficiaries of Educa+ i.e., rehabilitation, club, scholarship 2. Beneficiaries of 20% of CA revenue sharing scheme(*)(**) 3. Beneficiaries of restoration activities(*) 4. Beneficiaries of eco-jobs(**) 5. Beneficiaries of strengthening community governance i.e., planning of land use and/or business plan(*) 6. Beneficiaries of Sustenta Bio 7. Beneficiaries of Biocomunidade(*) 8. Beneficiaries of PCRs 9. (*) = the indicator measures the entire community – including those not (yet) having tangible direct benefits such as those that can materialize after a long time (restoration and land use plan), excluding double counting. 10. (**) = the indicator is result of multiple funding sources, which need to consider the Project attributability.



Living conditions of communities in and around target conservation area landscapes enhanced	
PDO Indicators	OI3. Target landscapes with positive variation in local communities' perception of CAs' impact in wellbeing
Key Outputs (linked to the achievement of the PDO Outcome)	<i>Quantitative and qualitative information on key outputs</i> 1. SAPA Actions Plan produced with the initial assessment for all three landscapes – enabling the CA Administrations to prioritize actions needed to improve the living conditions. 2. Follow-up surveys carried out: 2022 and 2024, each with about 1,500 people from 36 villages across all three landscapes. 3. SAPA follow-up provided platform for engagement between CA administration and communities. But there is no systemic monitoring mainstreamed into CA Management Planning.
Component 1: Strengthening Capacity and Financial Sustainability of National Conservation Institutions	
Intermediate Results Indicators	IOI1.1. People trained by the Conservation Leadership Initiative (of which % of women) IOI1.2. Co-Management Agreements in target CAs signed by the relevant authority IOI1.3. Amount of non-World Bank funds disbursed by BIOFUND to ANAC and the CA Network (of which amount disbursed to the three target CAs) IOI1.4. Value of non-GEF Contributions to the Endowment Fund (Amount (US\$))
Key Outputs (linked to the achievement of the Component)	<i>Quantitative and qualitative information on key outputs</i> 1. ANAC capacity needs assessment: 1, not implemented; 61 of 300 original target (HQ and CA staff) benefitted in PLCM. 2. Update of ANAC Strategy Plan 2015-2024: dropped due to Director General decision. 3. CA CMP agreements renewed or newly signed: 3, all need to be revised due to approval of Decree No. 52/2024 “CMP Regulation”. 4. BIOFUND Consultancy for Fundraising Support for Endowment: 1 (2024) 5. Internships completed (190 persons) led to about 1/3 finding job in conservation, according to the impact evaluation report.
Component 2: Improving Conservation Areas Management in target landscapes	
Intermediate Results Indicators	IOI2.1. CAs' Management Councils functional IOI2.2. Target landscapes with basic infrastructure established under the project IOI2.3. New private tourism concessions



	IOI2.4. Number of community management plans implemented IOI2.5. Species population maintenance, and/or increase
Key Outputs (linked to the achievement of the Component)	<i>Quantitative and qualitative information on key outputs</i> 1. Management Councils functional: 3 plus 1 (APA). “Functional” if one annual meeting is held. None have yet to demonstrate an effective management decision or action. 2. Basic infrastructure: The investment into infrastructure can be questioned in terms of their internal rate of return. One notable investment – game loop in PNM seems to have been dropped. This game loop would have had high IRR by significantly improving accessibility for tourism. 3. New private tourism concessions in target CAs: 4. Original target was 1 in PNC and 3 in PNM: final achievement was 4 only in PNM, due to delay in signing of 1 expected in PNC. 4 signed in PNM. 4. “Community management plans (village land use plans, <i>PCUT</i>)” <i>implemented</i>: 6. In Project design, these were to be developed early on and guide the conservation-compatible value chains. In reality, all 6 were approved in April 2024 and their <i>implementation</i> cannot yet be verified. 5. Species population monitoring completed: 19 surveys were conducted to monitor 7 indicator species across the three CAs. Of the 19 unique surveys conducted, 6 confirmed increase, 11 confirmed maintenance, 2 confirmed decline/absence.
Component 3: Promoting conservation-compatible rural development and integrated landscape management in target landscapes	
Intermediate Results Indicators	IOI3.1. Grievances registered related to delivery of project benefits effectively addressed IOI3.2. Number of conservation-compatible businesses under implementation IOI3.3. Share of conservation-compatible businesses under implementation led by women IOI3.4. Area restored IOI3.5. Area of landscapes under improved practices (excluding protected areas) IOI3.6. Emissions avoided from reduced deforestation
Key Outputs (linked to the achievement of the Component)	<i>Quantitative and qualitative information on key outputs</i> 1. Conservation compatible businesses comprise the following: 81 unique beneficiaries ranging from SMEs, individual entrepreneurs (PECE). One notable observation is the lack of evidence to demonstrate “<i>conservation-compatibility</i>” in some of the subprojects. 26 apiculture PECE, 2 pisciculture PECE, 4 in livestock and avicultura PECE, 6 agriculture / processing, 13 tourism services PECE, and in total 12 small-medium enterprises in various trades including livestock,



	agriculture, apiculture, etc., and 25 tourism service businesses that received support through the emergency window. Women beneficiaries exceeded the plan of 30%, by reaching 47%. 2. Area restored exceeded target of 6,700 hectare, by reaching 7,230 hectare in total. However, this indicator is problematic in terms of monitoring the <i>restoration outcome</i>. What is measured and reported is the <i>hectare in which a restoration activity has been implemented</i>. 3. Area of landscape under improved practices excluding protected areas exceeded the target of 520,000 hectares, by reaching 643,770 hectare in total. However, this indicator is problematic in terms of monitoring the <i>improved management outcome</i>. What is measured and reported includes in large part district planning that contribute great number of hectarage. The hectare of land areas that are proactively implementing action on the ground through restoration actions (planting, invasives removal, herding, assisted natural regeneration) – this amounts to roungly 40,000 hectare in total. 4. Emissions avoided from reduced deforestation did not meet target in Marromeu landscape, which faces heavy pressure in the Coutadas (hunting areas) that surround the MNR. Generally, the attributability to the Project is low.
Component 4: Contingency Emergency Response	
Intermediate Results Indicators	
Key Outputs (linked to the achievement of the Component)	Not applicable



ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Andrew Zakharenka	Team Leader
Joao Tinga	Financial Management Specialist
Sheila Lucrecia Francisco Pene Neves	Financial Management Specialist
Amos Martinho Malate	Procurement Specialist
Antonio Laquene Chamuco	Procurement Specialist
Paulo Jorge Temba Sithoe	Environmental Specialist
Rodolfo Tello Abanto	Social Specialist
Erika Ella Auer	Social Specialist
Juliana Arsenio Come	Social Specialist
Mariana Margarita Montiel	Counsel
Maria Nhassengo-Massingue	Procurement Team
Manuel Leonel Jacinto Mutimucuio	Procurement Team
Mohammad Ilyas Butt	Procurement Team
Madalena Candida Manjate	Team Member
Hasinarijaona Laza Rakotondrasoa	Team Member
Amelia Jose Cumbi	Team Member
Carmen Lahoz Rallo	Team Member

B. STAFF TIME & COST

Stage of Project Cycle	Staff Time & Cost	
	No. of Staff Weeks	US\$ (including travel and consultant costs)
Preparation		
FY18	0.145	1,022.42



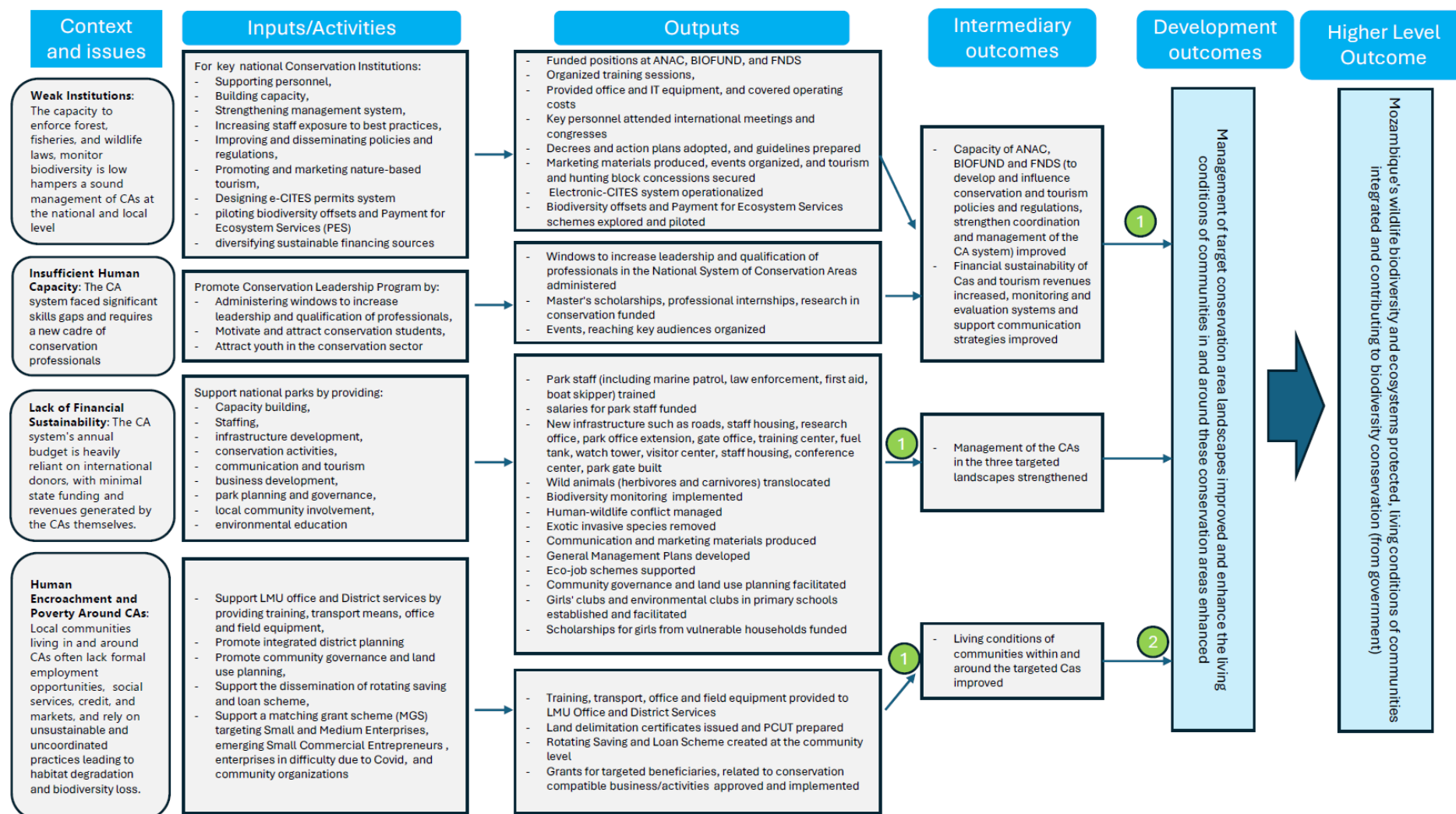
FY19	24.731	160,156.39
FY20	11.152	73,158.80
Total	36.03	234,337.61
Supervision/ICR		
FY20	19.892	127,180.38
FY21	48.175	164,866.58
FY22	22.600	133,312.64
FY23	42.525	292,507.86
FY24	26.958	140,323.04
FY25	24.375	205,051.15
Total	184.52	1,063,241.65

**ANNEX 3. PROJECT COST BY COMPONENT**

Component	Amount at Approval (US\$M)	Actual at Project Closing (US\$M)
Component 1: Strengthening Capacity and Financial Sustainability of National Conservation Institutions	27.7	32.1
Component 2: Improving Conservation Areas Management in target landscapes	24.5	22.3
Component 3: Promoting conservation-compatible rural development and integrated landscape management in target landscapes	21.4	13.7
Component 4: Component 4: Contingency Emergency Response	0.0	0.0



ANNEX 4. Theory of Change





ANNEX 5. EFFICIENCY ANALYSIS

A. Methodology and Results at Appraisal and Additional Financings

1. At appraisal in 2018, using the “with-project” (WP) “without-project” (WOP) method, the NPV and BCR were calculated over the life of the project and for a total period of 20 years (2019-2039), with 3 percent, 6 percent, and 15 percent discount rates. No Economic Rate of Return (ERR) was calculated at appraisal. Project costs were derived from the budget presented in the PAD, while benefits were grouped into three main streams: a) Tourism benefits, based on projected changes in tourist arrivals, spending, and length of stay; b) Livelihood benefits, reflecting increased income, employment, and revenues from economic activities; and c) Net emission reductions, resulting from avoided deforestation and landscape restoration.

Tourism Benefits

2. Tourism benefits were estimated using assumptions related to the number of tourist arrivals, average daily spending (set at US\$235), and average length of stay (2–4 days). The PAD projected annual baseline tourist numbers at 30,000 for the Maputo landscape, 500 for Chimanimani, and 2,000 for Marromeu. It then assumed a 5 percent increase in overall tourism spending, driven by a combination of increased arrivals, higher spending, and longer stays. It is worth noting that the PAD assumed the full 5 percent increase in tourism spending would materialize in the first year of implementation and then remain constant throughout the 20-year period.

Crucially, the PAD—developed in 2018—could not have foreseen the emergence of the COVID-19 pandemic, which had a profound and unexpected impact on global tourism. In Mozambique, international tourist arrivals declined sharply, falling by 75.4 percent in 2020 and 65.8 percent in 2021^[1]. As a result, both the ex-ante situation described in the PAD and the linear growth trajectory it assumed becomes difficult to apply meaningfully in this ex-post assessment, given the profound disruption caused by the pandemic.

Livelihood Benefits

3. The PAD projected that the project would reach 8,000 households, representing approximately 40,000 rural beneficiaries. It further assumed a 10 percent increase in per capita income over the baseline of US\$375. As with the tourism assumptions, the PAD posited that this increase would occur in the first year and persist at that level throughout the project’s lifetime and beyond.

Emission Reductions

4. Emission reductions were estimated using figures provided in Annex 5 of the PAD. For a more conservative approach, the PAD halved the projected emissions reductions and applied discounts of 22 percent and 40 percent to the carbon price, depending on the scenario. In these calculations, the PAD assumed this reduced level would be achieved annually starting from the first year of implementation.

Cost Assumptions at Appraisal

5. Costs were based exclusively on the project’s budget as outlined. The analysis did not include post-project operational and maintenance costs that would be necessary to sustain project results. Moreover, the PAD did not account for additional funding potentially provided by NGOs or other partners active in the project areas, which may have contributed to the overall outcomes of the project.



Additional Financings

6. The economic analysis for the AFs maintained the same methodological framework and 20-year time horizon as the original PAD. The only adjustment was an increase in the number of beneficiaries. However, this adjustment did not fully align with the beneficiary target introduced under the AFs: the analysis considered 55,000 beneficiaries, while the new target was set at 35,000. Including 20,000 more beneficiaries than the target, the benefits stemming from the stream of improved livelihoods are likely inflated. Moreover, although the COVID-19 pandemic had already emerged by the time of the AFs, no adjustments were made to reflect its potential impacts. As a result, the analysis for the AFs carries the same limitations as the original PAD in this regard. No ERR was calculated at AF.

A. Methodology at Completion

7. For this analysis, the ICR compared the WOP and WP scenarios to quantify the incremental net benefits. This approach enabled a comprehensive comparison between the actual outcomes of the project's implementation and the counterfactual scenario of what would have occurred in its absence. By employing this method, the analysis could capture the added value and benefits directly attributable to the project across various dimensions. For the economic analysis, the same discount rates of 5 percent, 10 percent, and 20 percent used in the PAD were applied. For the financial analysis, a 20 percent discount rate was considered. The following is a detailed description of the benefits and costs included in the completion analysis.

Benefits

I. Tourist-related benefits

8. The ex-post analysis relied on actual data on tourist arrivals to estimate tourism-related benefits over time. In contrast to the PAD, which assumed a fixed 5 percent increase in tourist spending from the first year of implementation sustained throughout the 20-year analysis period, the ex-post approach applied a year-by-year assessment based on observed data. For Chimanimani and Maputo, average daily expenditure and length of stay were maintained in line with the PAD. In the Coutadas within the Marromeu landscape, however, different parameters were applied to reflect the specific nature of tourism in those areas. The analysis considered hunting safaris, characterized by a higher average expenditure—estimated at around US\$500 per person per day—and a typical stay of approximately 10 days. This better reflects the distinct spending patterns of visitors engaging in hunting-related tourism.

9. Regarding tourist arrivals, in Marromeu, only entries recorded in the Coutadas²³ were considered, given that tourism activity within the National Park itself remained negligible during the period under review, due to its remoteness and difficult accessibility. In Chimanimani, estimates were based on recorded park entries. For Maputo National Park, tourist arrivals included both park entries and participation in marine and coastal activities in the Ponta do Ouro area—such as diving, ocean safaris, dolphin encounters, and recreational fisheries. While it would have been possible to incorporate tourism data from additional locations such as Malongane, Santa Maria, and Inhaca (etc.), the analysis adopted a conservative approach to ensure a reasonable degree of attribution and thus focused only on Ponta do Ouro, where a concentration of project-supported initiatives—such as the Emergency Tourism Window, installation of gazebos, communication boards, and lifesaving infrastructure—suggests a credible linkage to tourism outcomes observed in the area.

10. In constructing the counterfactual scenario, the use of the 2018 baseline as a “without-project” reference point was deemed insufficient, as it would not account for the significant and widespread disruption caused by the COVID-19 pandemic. Rather than assuming a continuation of pre-pandemic trends, the analysis aimed to estimate how tourism might have evolved in the absence of the project, while incorporating the actual external conditions brought about by the pandemic. To approximate this, national-level trends in tourism decline were applied to the 2018 baseline data for the project areas, simulating how tourist arrivals would have changed with the onset of COVID-19, but assuming no project



intervention. The applied decline rates are 75.4 percent reduction in 2020 and a 65.8 percent reduction in 2021.²⁴ In the phased recovery trajectory, tourism returned to 43 percent of pre-pandemic levels in 2022, 58 percent in 2023, and 65 percent in 2024.⁷

11. The baseline used in the completion analysis differs from that adopted in the PAD, as some of the assumptions made at appraisal—particularly for Marromeu and Chimanimani—appear to have overstated the actual level of tourism activity at the time. In the surrounding Coutadas targeted by the project, visitor numbers were also very low, with only 21 entries recorded in Coutada 14, and 84 in Coutada 11²⁵. These figures suggest that the baseline assumptions made at the appraisal may not have fully reflected the limited tourism infrastructure and activity in these specific areas at the time. In Chimanimani, entry gate data for 2018 show only 166 visits, against the 500 assumed as baseline in the PAD. By contrast, Maputo landscape figures are broadly in line with PAD assumptions: in 2018, an estimated 25,500 tourists visited the area, including those engaged in park visits and related activities in Punta do Ouro such as diving, ocean safaris, dolphin encounters, and recreational fisheries, as explained in the previous paragraph. The baseline for the ex-post analysis was constructed using actual data recorded in 2018.

12. A key element of the analysis concerns the projection of tourism trends beyond the project's completion. On the one hand, the infrastructure investments and capacity-building efforts supported by the project—potentially further reinforced by future initiatives under the CMPs—are expected to continue generating positive outcomes in the coming years. To reflect this continued momentum, a conservative annual growth rate of 2 percent in tourist arrivals was incorporated. At the same time, assuming uninterrupted growth through 2039, as was done in the PAD's ex-ante analysis, would appear overly optimistic in light of the risk of exogenous shocks that can abruptly reverse progress, as dramatically demonstrated by the COVID-19 pandemic. This vulnerability was again illustrated by the impact of political instability in late 2024 and early 2025, which affected the tourism season, as confirmed by stakeholder interviews conducted during the ICR mission. To account for such risks, the analysis introduced a recurring shock scenario, whereby a major external disruption is assumed to occur every five years. Each shock results in a 50 percent decline in tourist numbers relative to the preceding year, followed by a four-year recovery period during which arrivals gradually return to pre-shock levels. This shock-and-recovery pattern was applied equally to both the “with-project” and “without-project” scenarios to ensure consistency and comparability in the results.

13. In addition to the benefits generated by tourist arrivals, this analysis also includes the revenues from the four tourism concessions signed in Maputo National Park—assessed over a five-year period—which were not accounted for in the PAD.

II. Livelihood benefits

14. Unlike the PAD, which assumed a 10 percent increase in livelihoods across the beneficiary population, the ex-post analysis could not adopt the same methodology due to the absence of a dedicated survey to quantify the incremental income generated by the project. Recognizing the limitations imposed by the lack of household-level data, the ICR analysis sought to fill this gap and still account for this important benefit stream by focusing on a set of measurable livelihood-related outcomes:

15. **Eco-jobs created:** The project led to the creation of eco-jobs that provided income to individuals who were previously unemployed,—thus representing a full and directly attributable increase in income. These seasonal jobs represent a direct and fully attributable increase in income. It is reasonable to expect that many of these positions will be sustained beyond the project's closure, given existing agreements with the CMPs. For instance, in Marromeu and Maputo, ongoing activities planned by FZS and PPF respectively are likely to generate continued—and possibly expanded—employment opportunities. In Chimanimani, construction activities have concluded, so while some road maintenance may continue, the number of eco-jobs there is expected to decline. Overall, the number of eco-jobs is projected to fluctuate between 700 and 1,000 per year, with an average of approximately 850 jobs annually.



16. Emergency fund beneficiaries: Additional income earned by recipients of the Tourism Emergency Fund and the Bio Emergency Fund was also included as a benefit. Given the lack of evidence-based ex-post surveys, this was calculated on the basis of the simulations conducted in the evaluation report conducted by FNDS.

- Matching Grant Schemes and BioComunidade: To capture the benefits generated by SMEs, PECE, and Biocomunidade, the analysis used net profit projections drawn from their approved business plans, as the delays in implementation, with these activities only progressing toward the end of the Project, undermined the possibility of collecting ex-post data. To ensure a conservative estimate, the profit projections were reduced by 25 percent. To reflect the potential volatility of local economies—particularly those tied to tourism—a five-year shock scenario was applied to these livelihood benefits. Each shock was modeled as a 50 percent decline in net profit compared to the previous year, followed by a four-year recovery period during which earnings gradually return to pre-shock levels.
- Agroforestry: Revenues for rural households generated through agroforestry activities (banana, cashew, and coffee) undertaken as part of the project's restoration efforts are also considered. While banana and coffee began yielding in 2024—allowing the use of actual data—cashew harvesting will start only in 2027 and is therefore estimated based on comparable plantations. To adopt a conservative approach, it is assumed that agroforestry activities lead to a 20 percent increase in household income compared to the without-project scenario.

III. Emission Reductions

17. Carbon benefits were calculated on the basis of actual reductions achieved by the project. This was done using the same carbon price adopted at the PAD (ranging between US\$8–10/tCO₂e), which aligns with market-based valuations for reduced GHG emissions that could realistically be applied. In addition to this, another assessment was conducted using the shadow price of carbon set at US\$50 per tCO₂e for 2019 with an annual growth of 2.25 percent, as indicated in the World Bank guideline (low price trajectory)⁵.

IV. Endowment fund

18. In addition to the revised assumptions in the three main benefit streams identified in the ex-ante assessment, the completion analysis also incorporated the annual revenues generated by the endowment capital invested through BIOFUND (US\$12 million), which experienced a growth of approximately 48 percent over the life of the project. Future revenues were projected based on an assumed annual interest rate of 6.5 percent, which is the target expected by BIOFUND.

V. Project-funded staff salaries

19. Salaries paid to individuals through project-funded positions were also included. However, given the likelihood that these individuals were previously employed, only 10 percent of the salary value was considered as an incremental benefit—reflecting a conservative estimate of the additional income attributable to the project.

Costs

20. The analysis included all project-related costs, covering the full contributions made by IDA, GEF, and the MDTF. To avoid underestimating the total cost of the project, the contributions provided by the CMPs during implementation were

⁵ World Bank (WB). 2024. “2024 Guidance Note on Shadow Price of Carbon in Economic Analysis”.



also taken into account, as these resources directly supported park operations and contributed to achieving project outcomes. Beyond the implementation phase, the completion analysis also addressed the issue of sustainability—specifically, who would bear the financial responsibility for maintaining the results once the project ends. This was particularly relevant for assessing the long-term viability of investments. In this context, it is noteworthy that all three CMPs signed agreements with the respective parks to continue financing key activities post-project. Accordingly, the yearly estimated costs associated with this continued commitment have been included in the analysis for the period 2025 to 2039. For the without-project scenario, costs were estimated based on the operating expenditures of national parks in 2018.

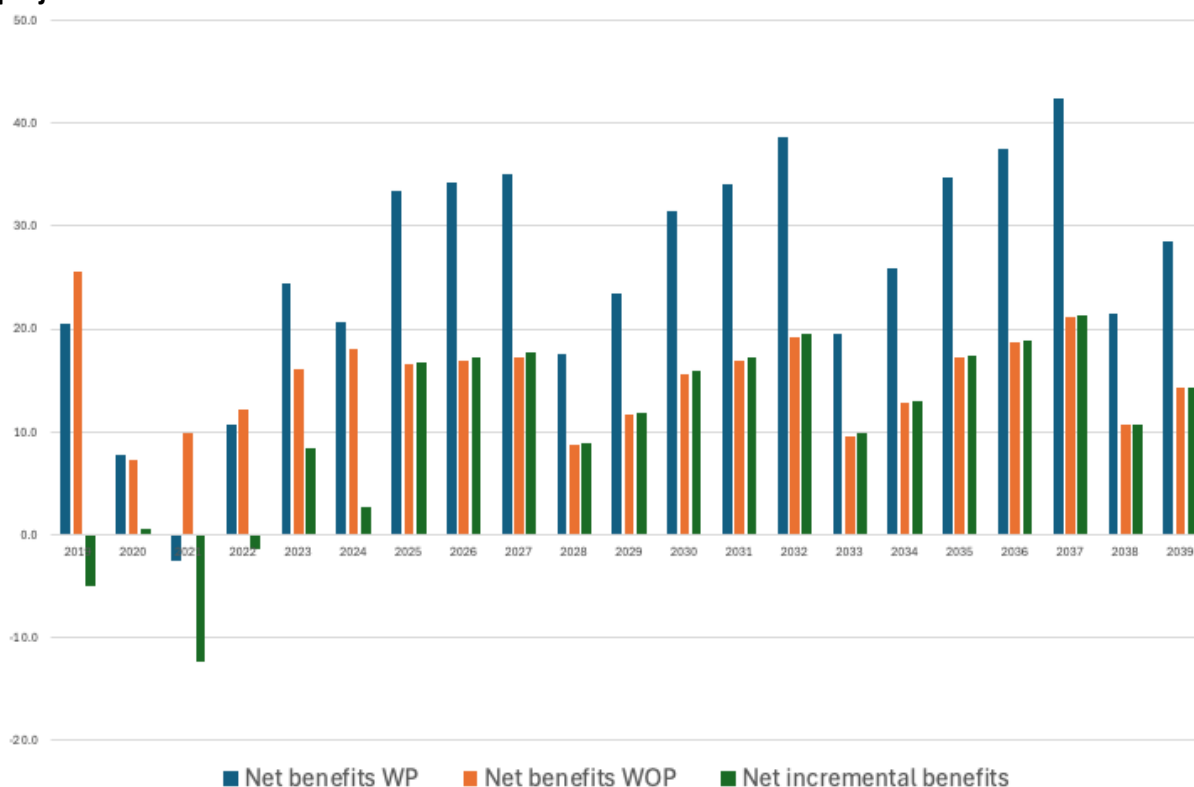
21. Contributions from the GEF and the MDTF played a pivotal role in expanding the project's scope and outreach. Notably, the MDTF grant was crucial to manage the COVID-19 pandemic and economic recession in Mozambique's CAs, to mitigate the socio-economic impacts. MDTF financing was instrumental in supporting the Tourism Emergency and Bio-emergency fund activated during the COVID-19 pandemic across the three target landscapes, providing opportunities for job retention and a 'lifeline' for enterprises to continue their business operations, guaranteeing the least possible disruption. Additionally, the grant financed the so-called eco-jobs, employing informal workers. The GEF contribution was particularly critical for supporting the development of the APA, financing key investments such as infrastructure, equipment, technical assistance for planning and operations, and human resource development. It also supported essential recurrent costs, including salaries, utilities, fuel, patrol operations, communication materials, and the maintenance of infrastructure and equipment. GEF contributed to the endowment of BIOFUND as illustrated above. Beyond these targeted investments, both GEF and MDTF funding contributed significantly to strengthening institutional capacities within the parks, as well as at the national level through ANAC and BIOFUND. They also played a central role in supporting the project's education and awareness-raising components—especially in the areas of environmental education and remote learning—in all three project-supported parks. This support proved crucial to mitigate the impact of Covid on education outcomes. Overall, the additional financing enabled a meaningful expansion of project outcomes, aligning effectively with the increased resources allocated and reinforcing the project's overall development impact.

B. Results at Completion

22. Following the methodological approach described above, the ICR analysis applied the WP/WOP approach to estimate the net benefits generated by the intervention. This counterfactual analysis isolates the incremental contribution of the project by comparing the estimated flow of net benefits with project implementation (WP) to a baseline scenario in which the project had not been implemented (WOP). The figure below illustrates the annual net benefits under both scenarios. The green bars represent the net incremental benefits, calculated as the difference between the WP and WOP net benefits in each year. The graph shows that, after initial fluctuations, particularly in 2020–2022 where net incremental benefits are negative due to upfront investments and the impacts of COVID-19, the project begins to generate consistently positive net incremental benefits from 2023 onward. From that point, WP benefits steadily outpace WOP benefits



Graph 1: Comparison of net benefits with project (WP), without project (WOP), and net incremental benefits of the project



Note: Carbon benefits are computed using the same price used in the PAD.

23. Following this methodological approach, an economic analysis was conducted. To compute GHG benefits while deviating as little as possible from the original analysis, the same price as in the PAD was used, which applied a 22 percent discount. This price ranged between US\$8 and US\$10 per tCO₂e, aligning with market-based valuations for reduced GHG emissions that could realistically be applied. Applying a 6 percent discount rate over 20 years with the same carbon price as in the PAD, the project yields an NPV of US\$97.51 million and a BCR of 1.94, indicating strong economic viability, with an ERR standing at 36.74 percent. Even under a sensitivity analysis for varying discount rates, the project remains economically viable. At a 15 percent discount rate, the NPV over 20 years stands at US\$ 31.32 million with a BCR of 1.48. The program also remains viable without accounting for the social value of carbon, with an NPV of US\$71.2 million with a 6 percent discount rate, and an ERR standing at 24.89 percent. With a 15 percent discount rate, excluding carbon benefits, the project yields a positive NPV of US\$ 17.33 million and a BCR of 1.27.

Table 1. Economic analysis: NPV and BCR at completion – over 20 years

	6 percent discount rate	15 percent discount	3 percent discount rate
	<i>Same carbon price as in the PAD</i>		
NPV, US\$ million	97.51	31.32	146.05
BCR	1.94	1.48	2.16
ERR	36.74 percent		
	<i>No carbon benefits</i>		



	6 percent discount rate	15 percent discount	3 percent discount rate
NPV, US\$ million	71.2	17.33	111.52
BCR	1.69	1.27	1.88
ERR	24.89 percent		

24. Given the significant difference between the carbon price used in the PAD and the estimated value of carbon storage in forests, a higher carbon price was also considered. To maintain a conservative approach, the analysis applied the low-carbon price trajectory, using a baseline value of US\$50 per tCO₂e for 2019 and an annual growth rate of 2.25 percent, in line with the World Bank guideline (low price trajectory)⁶. Under this scenario, the NPV increases substantially: at a 6 percent discount rate, the NPV reaches US\$236.84 million, and at a 15 percent discount rate, it declines to US\$104 million.

25. Unlike the ex-ante analysis, which showed a positive NPV even when limited to the project implementation period, the ICR analysis finds that the NPV for the 2019–2024 period is negative. Using the same carbon price as in the PAD, the NPV is estimated at US\$ -7.47 million with a 3 percent discount rate, US\$ -7.6 million with a 6 percent rate, and US\$ -7.57 million with a 15 percent rate. This difference is primarily driven by the fact that, unlike the ex-ante analysis which considered only project costs, the ICR also includes, for completeness, the contributions made by CMPs, thereby increasing the total cost base during the implementation period. However, this does not raise concern, as projects of this nature are designed to generate benefits over the long term. Assessing returns over a 20-year horizon is both appropriate and aligned with the time required for economic impacts to fully materialize. Additionally, as shown in Graph 1, net incremental benefits turn positive from 2023 onward and remain consistently positive thereafter.

26. A financial analysis was carried out at the ICR stage, which had not been conducted at either the PAD or AF stages. Using a 20 percent discount rate over a 20-year period, the NPV is estimated at US\$17.77 million with a FIRR of 38.8 percent, based on carbon prices included and quantified at the PAD's discounted rate. Under the same conditions but excluding carbon benefits, the NPV decreases to US\$7 million, while still remaining positive, with a FIRR of 25.78 percent. Naturally, as in the economic analysis, applying a baseline carbon price of US\$50 per tCO₂e in 2019 with an annual growth rate of 2.25 percent results in a significantly higher NPV of US\$73.35 million.

Table 2. Comparison of NPV and IRR between PAD, AF and ICR

	PAD	AF	ICR	
	Economic, 6 percent discount rate			Financial 20 percent discount rate
	Same carbon price as in the PAD			
NPV, US\$ million	35.53	55.94	97.51	17.77
IRR	Not calculated	Not calculated	36.74 percent	38.8 percent
	No carbon benefits			
NPV, US\$ million	4.37	-0.72	71.2	7
IRR	Not calculated	Not calculated	24.89 percent	25.78 percent

27. When compared with ex-ante analyses, ICR results demonstrate that the project delivered substantial economic and financial returns. As indicated in Table 2, under the economic analysis with carbon benefits valued at the PAD carbon price and a 6 percent discount rate, the ICR analysis shows a significantly higher NPV (US\$97.51 million) compared to both the PAD (US\$35.53 million) and the AF (US\$55.94 million). The ICR also provides a robust ERR of 36.74 percent, not

⁶ World Bank (WB). 2024. "2024 Guidance Note on Shadow Price of Carbon in Economic Analysis".

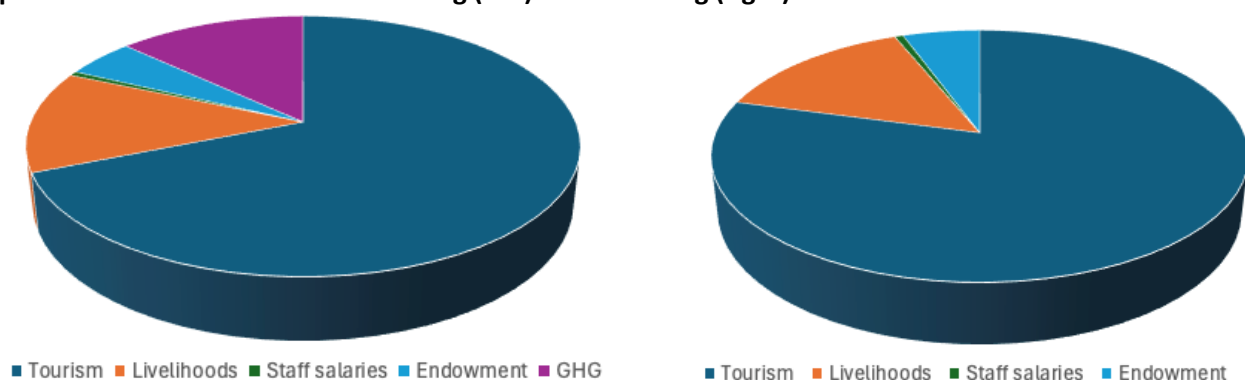


previously calculated in the PAD or AF stages. This increase reflects improved benefit realization over time, as well as the inclusion of broader benefit streams in the ICR analysis, despite higher costs computed in the ICR. When excluding carbon benefits, the contrast is even more striking: while the PAD still showed a modest NPV of US\$ 4.37 million, the AF recorded a negative NPV (US\$ -0.72 million). In contrast, the ICR analysis, which integrates actual implementation data and longer-term benefits, reports a much higher NPV of US\$ 71.2 million and a solid ERR of 24.89 percent, demonstrating that the project remains economically viable even without monetizing carbon.

Assessment of the results: distribution of benefits and comparisons

28. The project's significant benefits are primarily driven by tourism-related activities, along with improvements in livelihoods and reductions in deforestation. Based on the quantified net benefits, using a 6 percent discount rate, the distribution is as follows: 69 percent is attributed to tourism, 12 percent to livelihood improvements, 1 percent to staff salaries, 5 percent to interest generated by the endowment fund, and 13 percent to emission reductions valued at the PAD carbon price. When carbon benefits are excluded, the share of tourism increases to 79 percent, while livelihood benefits rise to 15 percent. The graph below illustrates this distribution.

Graph 2: Distribution of benefits including (left) and excluding (right) carbon benefits



Note: Carbon benefits are computed using the same price used in the PAD with applied a 22 percent discount rate. A 6 percent discount rate is applied.

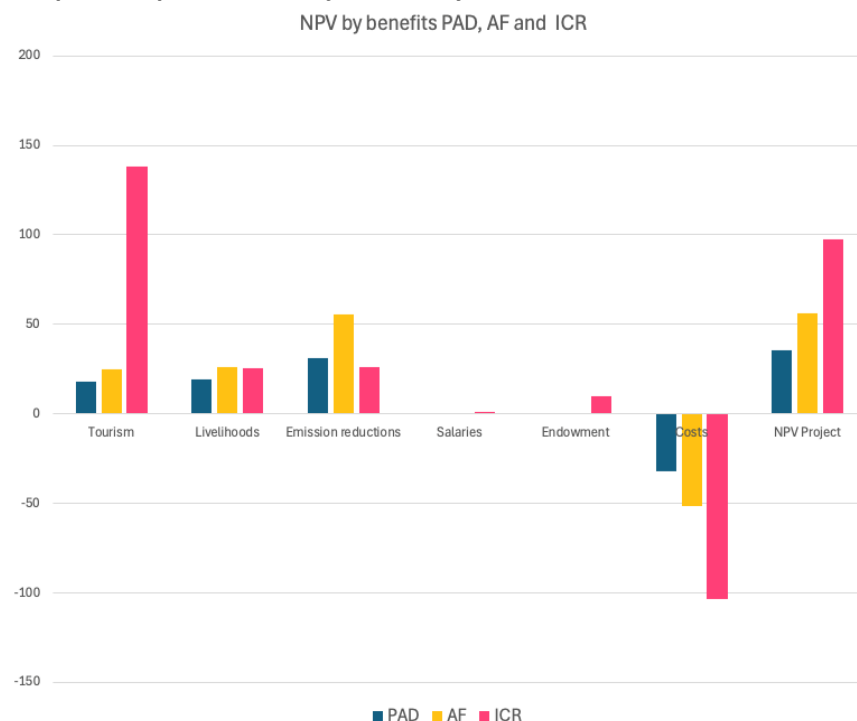
29. When the benefits calculated in the ICR are compared with those estimated at the PAD and AF stages, it is evident that tourism-related activities outperformed initial expectations. This outcome is all the more remarkable considering that, at appraisal, the project included a substantial investment in the development of an electronic visa system—expected to boost tourist arrivals—which was subsequently dropped during the mid-term review. Despite the removal of this activity, tourism revenues exceeded projections, highlighting the strong performance of this sector. Livelihood benefits remained relatively stable across all three stages, confirming their steady contribution to the project's overall value. For GHG ERs, the value reported in the ICR is broadly aligned with the PAD estimate. This reflects the PAD's conservative assumption that only half of the targeted reductions would be achieved—an assumption that closely matched the actual outcome. In contrast, the AF projected a significantly higher volume of GHG reductions, which explains its higher estimate for this benefit stream. Salaries and endowment fund returns appear only in the ICR, as they were not included in the PAD or AF.

30. When the comparison is extended to costs, project expenditures reported in the ICR are higher, reflecting a broader and more comprehensive cost coverage than that adopted in the PAD and AF. Two elements were not previously considered and were included in the ICR to reflect project implementation. First, the ICR accounts for contributions made by CMPs during project implementation. Second, it incorporates future maintenance costs that CMPs are expected to cover under already signed agreements. These post-project costs were not included in the PAD and AF, which limited



their scope to expenditures incurred during the implementation period. Despite the expanded cost base, the ICR records a higher overall project NPV, largely due to the stronger-than-anticipated performance of tourism-related activities.

Graph: Comparison of Project NPV by Benefits and Costs across PAD, AF, and ICR

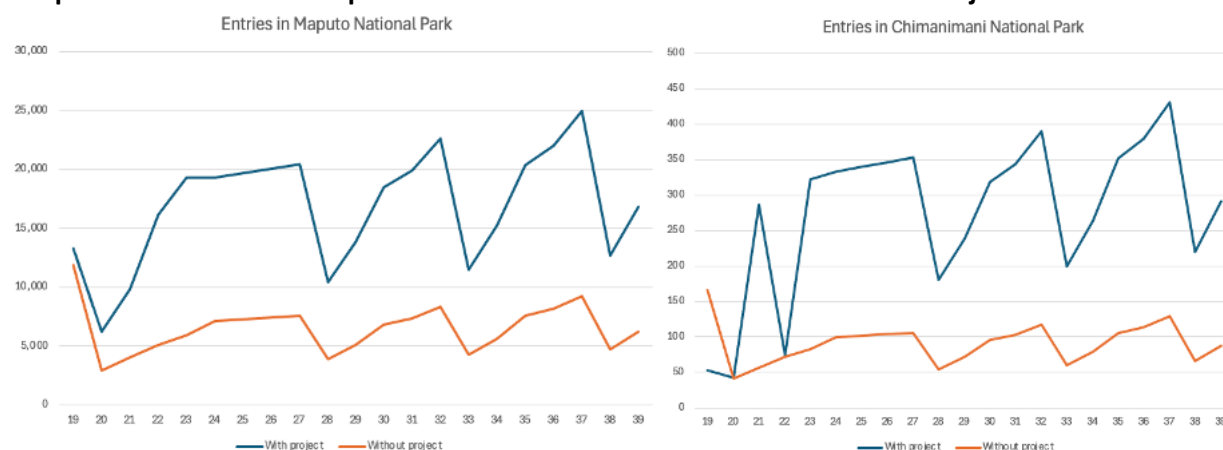


Note: Emission reductions are computed using the same price used in the PAD, which applied a 22 percent discount rate. A 6 percent discount rate is applied.

31. As described above, tourism benefits significantly outperformed initial expectations. Even when considering only the implementation period (2019–2024), and excluding projected post-project impacts, revenues generated from tourist arrivals under the project far exceeded those in the WOP scenario—well beyond what was assumed ex-ante. While the PAD understandably did not account for the unforeseen COVID-19 shock, it is precisely this major disruption—and the project’s swift and targeted response—that helps explain the strong divergence in outcomes. The project’s timely support played a key role in enabling a rapid and full recovery of tourism activities in the targeted parks, contributing directly to the strong NPV estimated at completion. In Maputo National Park, visitors have already surpassed pre-COVID levels by 2022, with Chimanimani National Park following suit in 2023. As shown in the graph below, under the ICR’s methodology, this recovery would not have been possible without the project, clearly demonstrating its contribution to accelerating the rebound. In 2024, Maputo recorded 19,283 entries compared to 11,898 in 2018—an increase of 62 percent. Chimanimani National Park showed an even more striking improvement, with entries more than doubling—a 101 percent increase over 2018 figures—despite its smaller contribution to total revenue. Visitor numbers also rose by 90 percent in Coutadas 11 and 14, although no significant change was observed in Marromeu National Park, whose contribution to tourist activities has remained negligible.



Graph: Visitor Entries in Maputo and Chimanimani Parks: With vs. Without Project Scenarios



32. Given the significant weight of tourism-related benefits in the overall assessment, the question of attributability warrants particular attention in this analysis. In general, attributing changes in tourism performance to a specific project is inherently difficult due to the influence of multiple external factors, such as market trends, infrastructure developments, and the activities of other donors or private actors. This challenge is particularly relevant in sites like Maputo National Park, where tourism outcomes are shaped by a combination of donor-funded interventions, the impact of road infrastructure, and broader developments along the coast, making it difficult to isolate the project's specific contribution. For this reason, in line with the conservative approach outlined above, only Ponta do Ouro—alongside entries into the National Park—was included in the analysis. In contrast, in Chimanimani National Park, tourism improvements can be more confidently linked to the project, as interventions were more concentrated and, aside from a complementary initiative by Agence française de développement (AFD), the project was the main actor. In Marromeu National Park, the project was the sole driver of investment, but as detailed above the impact on tourist activities in the park itself is negligible. In the Coutadas, the situation is more complex, as these areas already had established hunting and tourism operations. However, interviews conducted during the ICR mission suggest that the project's support was instrumental in helping Coutadas quickly recover from the impacts of the COVID-19 pandemic.

Sustainability assessment

33. The outcomes are robust when evaluated through the lens of future sustainability. As noted earlier, the project design explicitly incorporated maintenance costs, based on formal agreements established with the CMPs. By including these commitments in the cost structure, the project ensured that long-term operational needs were realistically accounted for, rather than deferred or overlooked. This approach strengthens the credibility of the financial and economic analysis, making the results more robust and grounded in actual implementation arrangements.

34. The development of core infrastructure in national parks—including visitor facilities and lodges—together with enhanced management capacities, particularly in Chimanimani and Maputo, establishes a strong foundation for enriching the visitor experience and sustaining long-term tourism revenue. The centrality of tourism in the project's benefit stream is further underscored by the inclusion of a conservative scenario featuring a five-year tourism shock. This sensitivity analysis reinforces the robustness of the results by testing project performance under adverse conditions. Assessing the sustainability of future tourism activity is particularly important given the sector's exposure to external shocks, and its role as one of the project's most substantial and enduring sources of benefits.



C. Efficiency of Project's Design and Implementation

35. MozBio2 demonstrated strong adaptive capacity, particularly in the face of external shocks such as the COVID-19 pandemic and Cyclone Idai. The project swiftly reallocated resources and adjusted implementation plans to protect development gains and maintain momentum during periods of disruption. Notably, building on the AF, the project launched the Tourism Emergency and Bio-Emergency Fund across all three target landscapes. This timely intervention provided much-needed support to mitigate the socio-economic impacts of the pandemic, including the preservation of jobs in conservation-linked sectors. The introduction of Eco-Jobs is a key example of how COVID-response measures were successfully embedded within the broader restoration agenda. Likewise, in line with the objective to improve livelihoods in and around conservation areas, project support played an important role in offsetting the negative impact of COVID-19 on education outcomes. Overall, the additional financing enabled the project to expand its scope meaningfully, translating increased resources into greater development impact.

36. The project also demonstrated strong implementation efficiency despite significant shifts in institutional arrangements. The transfer of ANAC between ministries triggered a realignment of roles and responsibilities, which temporarily affecting coordination and operations both at the central level and within CAs. Compounding this were changes in leadership, with ANAC undergoing three director transitions during the project period—each posing challenges to institutional continuity and slowing decision-making during critical junctures. Nonetheless, the project remained agile and responsive, adapting to evolving institutional landscapes and maintaining steady progress toward its objectives.

37. However, the project also encountered delays in the implementation of key subprojects. Many struggled to gain traction until the final stages of the project. The BioComunidade grants—originally designed to support community conservation through a participatory process led by a contracted service provider—were delayed due to the provider's poor performance. Following the cancellation of the contract in 2023, the PIU developed a new operational framework and successfully launched the grants. Most were nearly implemented by project closure, though their effectiveness remained untested. Similarly, the MGS was hindered by complex fiduciary procedures that slowed disbursements and limited their potential to generate meaningful economic impacts within the project timeframe. Despite these delays, the project demonstrated adaptive management by developing tailored responses to prevent these challenges from undermining the overall outcomes. Restoration activities further illustrate the project's learning-by-doing approach. Initially designed as standalone conservation interventions, they achieved limited community engagement and sustainability. Midway through implementation, the strategy was revised to integrate restoration with income-generating opportunities, such as agroforestry and the harvesting of non-timber forest products. While this shift significantly improved uptake and relevance, it was introduced late in the project cycle, leaving insufficient time for the benefits to fully materialize by closure.

D. Additional Non-Quantifiable Benefits

38. While the analysis accounts for all project costs and other external contributions, it does not fully capture several significant benefits, indicating that the true rate of return is likely higher than the current estimate. Among these benefits are long-term environmental improvements, including the preservation and restoration of biodiversity and ecosystems that generate sustained ecological services well beyond the project timeline, soil erosion, and expansion of wildlife habitats, and restoration.

39. Beyond its environmental achievements, the project made important contributions to policy and institutional strengthening. While structural challenges within ANAC remain, and it would be unrealistic to expect the project alone to fully resolve these, it nonetheless supported meaningful improvements in institutional capacity. The project also led to notable advancements in the management of conservation areas through targeted capacity building, operational reinforcement, and the introduction of systems and practices that foster more sustainable and inclusive conservation. Protected area staff benefited from improved training, equipment, and logistical support, enabling conservation areas to sustain core operations and management activities more effectively. Additionally, the development of essential infrastructure in national parks—such as roads, visitor facilities, and monitoring systems—will continue to support park



operations, ensuring that tourism benefits, which represent a major source of long-term value, can continue to materialize and grow over time.

40. Additionally, the project contributed to broader educational outcomes, playing a key role in mitigating the impacts of the COVID-19 pandemic by supporting the continuity of learning and facilitating the construction and rehabilitation of schools. These investments have generated lasting benefits for children and communities in and around conservation areas, enhancing both access to and the quality of education. In doing so, the project has supported long-term human capital development—an essential foundation for both effective conservation and sustainable rural development

E. Overall Rating

41. **The efficiency of MozBio2 is rated substantial.** Based on the quantified net benefits using a market price for value reduced GHG emissions, MozBio2 has shown substantial efficiency with high NPVs, a favorable BCR, largely surpassing the ex-ante estimates, and robust ERR and FRR. This is confirmed by sensitivity analysis, across different discount rates, and positive results even when excluding carbon benefits. While subproject execution faced delays, the project nonetheless demonstrated robust and rapid adaptability in implementation, particularly in enabling a swift recovery from the COVID-19 pandemic. A substantial efficiency rating is also supported by non-quantifiable benefits—including capacity building, institutional strengthening, and educational and environmental outcomes—as well as by the sustainability of project impacts, confirmed by the robustness of results under conservative shock scenarios.



ANNEX 6. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

MozBio was a 10-year program proposed by the Government of Mozambique sought to harmonize biodiversity conservation, tourism development and poverty reduction. The MozBio2 project provided significant contribution to improving management efficiency and enhance the living conditions of communities in and around Chimanimani NP, Maputo NP, and Marromeu National Reserve.

The project successfully focused its interventions in three components: 1 strengthening capacity and financial sustainability of national conservation institutions; 2 improving conservation areas management in target landscapes; and 3 promoting conservation-compatible rural development and integrated landscape management in target landscapes.

Even facing unexpected challenges of extreme weather events and pandemics, the project was implemented at a steady pace and in compliance with World Bank fiduciary requirements. The implementation largely followed the plan, disbursed nearly 100% of the funds and constructed a solid management and M&E system. At closing, it can be confidently stated that the Project has achieved its PDO.

The solid approach to gender balancing, allowed not only to reach female percentage targets, but also use sensitive tools which have lasting impact on female capacity and family equilibrium. The adoption of co-managers for the target Conservation Areas, and the promotion of private sector and other partners around these areas, were important actions that helped to ensure greater sustainability of the interventions both within the CAs as well as in the landscape.

The sustainability of outcomes depends on institutions. BIOFUND has significantly increased its financing capacity. Each of the three CA landscapes (meaning the CA and its buffer) are now managed in well-funded and qualified partnerships. A significant contribution was made to ANAC, although due to its high turnover of General Directors, it will still face important needs to increase its functional capacity.

The Project design was adequate, incorporating lessons learned from past projects. Nevertheless, an issue that deserves further attention in the future includes the capacity of FNDS to handle safeguards and procurement of an increased portfolio of projects and responsibilities.



ANNEX 7. SUPPORTING DOCUMENTS

Key Bank documents

❖ MozBio1 ICR / ICRR

MozBio1 Implementation Completion and Results Report (29 May 2020). Implementation Completion and Results Report for a Conservation Areas for Biodiversity and Development Project. Report No: ICR00005043 (Official Use Only).

MozBio1 Implementation Completion Report Review (30 November 2020). IEG Review Team. *Mozambique - MozBio Program - Phase 1 (English)*. Washington, D.C. : World Bank Group. <http://documents.worldbank.org/curated/en/767531606767437327>

❖ MozBio2 PAD / PP

Project Appraisal Document (29 August 2018). *Mozambique - Second Phase of the Conservation Areas for Biodiversity and Development Project (English)*. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/183911537673432887>

Project Paper for Additional Financing (14 August 2020). *Mozambique - Second Phase of Conservation Areas for Biodiversity and Development Project : Additional Financing (English)*. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/223601597418962726>

Project Paper for Restructuring (09 May 2022). *Mozambique Conservation Areas for Biodiversity and Development - Phase 2 - P166802: Disclosable Restructuring Paper (English)*. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/099335005102215653>

❖ MozBio2 ISRs

Disclosable Version of the Implementation Status and Results Reports. Implementation Status & Results Reports. Sequence No. 01: 2019.02, Sequence No. 02: 2019.09, Sequence No. 03: 2020.03, Sequence No. 04: 2020.09, Sequence No. 05: 2020.12, Sequence No. 06: 2021.06, Sequence No. 07: 2021.12, Sequence No. 08: 2022.06, Sequence No. 09: 2023.01, Sequence No. 10: 2023.06, Sequence No. 11: 2023.12, Sequence No. 12: 2024.06, Sequence No. 13: 2024.11. <https://projects.worldbank.org/en/projects-operations/document-detail/P166802?type=projects>

Borrower ICR

FNDS / MOZBIO2 Unit (2024). *Mozambique Biodiversity Program MOZBIO Phase 2 2019-2024 Completion Report* (Draft as of 30 November 2024).

Datasets used to assess outcomes

MozBio2 Results Framework: 2019, 2020, 2021, 2022, 2023, 2024

MozBio2 Costab: 2018, 2019, 2020, 2021, 2022 (Mid-Term Review), 2023, 2024, 2025 (End of Project)

SAPA reports: 2020, 2022, 2024 (Summary)

METT reports: 2019, 2020, 2021, 2022, 2023, 2024

ANAC functional capacity assessment report: 2018, 2024

Analytical studies related to the Project

❖ Analytical studies and assessments

Child, Brian et al. (2024). *Feasibility Assessment for the establishment of a Community Conservation and Game Farm in the region of the Futi Corridor Region, in the Elephant Coast Landscape*.



- Jordan, Matthew (2024). Avaliação de Viabilidade para o Desenvolvimento de Modelos de Negócios de Conservação para a Região de Licuáti, na Paisagem da Costa do Elefantes em Maputo. English title: Feasibility Assessment for the Development of Conservation Business Models for the Licuáti Region, in the Elephant Coast Landscape in Maputo.
- La Grange, Mike (2023). Principal requirements to determine extent and impact of Human Wildlife Conflicts, current control methods and managing the perception of involved communities.
- Massicame, Zacarias Elias (2020). Estudos Veterinários dos Búfalos do Complexo de Marromeu. English title: Veterinary Studies of Buffaloes of the Marromeu Complex.
- Southern Africa Wildlife College (2021). Diagnostic of ANAC training needs and priorities.

❖ *Biological surveys*

- FNDS / MOZBIO2 Unit (2020), Marromeu Complex Wildlife Census Report.
- FNDS / MOZBIO2 Unit (2024), Aerial Census Report for Maputo National Park.
- FNDS / MOZBIO2 Unit (2024), Marromeu Complex Wildlife Census Report.
- Harith, Farooq (2021). Herpetological survey at Chimanimani Mountains, Mozambique.
- Monadjem, Ara (2021). Mammals of Chimanimani National Park, Mozambique – Biological Diversity Survey Report.
- Pohlen, Z. & C. Gesmundo (2021). Birds of Chimanimani National Park, Mozambique, Biodiversity Survey Summary – from the Mufomodzi Plateau Expedition.

Impact evaluations

- Brouwer, Roland (2024). External Evaluation of The Mozambique Conservation Leadership Program for BIOFUND, MOZBIO2.
- Mamudo, Allend (2024). Impact Assessment of Rotating Savings on the Landscapes of the Marromeu and Chimanimani Complex.
- Reis, Deolinda (2024). Assessment of initiatives financed by the Sustenta Bio and Emergência Turismo calls (for matching grants).