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IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA-55460, IDA-55890, IDA-D0110, IDA-H9940, IDA-H9950, TF-19023, TF-19022, TF-19021

ON

CREDITS

IN THE AMOUNT OF SDR7.8 MILLION (US\$11.7 MILLION EQUIVALENT) AND SDR21.4 MILLION  
(US\$31.0 MILLION EQUIVALENT), RESPECTIVELY TO THE REPUBLIC OF MOZAMBIQUE AND  
UNITED REPUBLIC OF TANZANIA

AND

GRANTS

IN THE AMOUNT OF SDR6.3 MILLION (US\$9.5 MILLION EQUIVALENT), SDR12.1 MILLION  
(US\$18.3 MILLION EQUIVALENT), AND SDR3.3 MILLION (US\$5.0 MILLION EQUIVALENT),  
RESPECTIVELY TO THE UNION OF THE COMOROS, REPUBLIC OF MOZAMBIQUE, AND INDIAN  
OCEAN COMMISSION

AND

GRANTS FROM THE GLOBAL ENVIRONMENT FACILITY TRUST FUND

IN THE AMOUNT OF US\$3.5 MILLION, US\$7.0 MILLION, AND US\$5.0 MILLION, RESPECTIVELY TO  
THE UNION OF THE COMOROS, REPUBLIC OF MOZAMBIQUE, AND UNITED REPUBLIC OF  
TANZANIA

FOR THE

SOUTH WEST INDIAN OCEAN FISHERIES GOVERNANCE AND SHARED GROWTH  
PROJECT 1

June 14, 2023

*[This ICR replaces the version published in the Board Operations System on May 31, 2023. In paragraph 38 on page 19, the new language refers to "bilateral fisheries agreements with non-SWIO economies" and adds a reference to Taiwan, China. In Annex 1 on page 46, a new reference is made to Taiwan, China.]*

## CURRENCY EQUIVALENTS

(Exchange Rate Effective September 30, 2022)

Currency Unit =	Special Drawing Rights (SDR)
SDR0.781323 =	US\$1
US\$1.279880 =	SDR1
Currency Unit =	Comoros Franc (KMF)
KMF505.467 =	US\$1
US\$0.00198 =	KMF1
Currency Unit =	Mauritius Rupee (MUR)
MUR43.8724 =	US\$1
US\$0.02152 =	MUR1
Currency Unit =	Mozambique New Metical (MZN)
MZN63.2 =	US\$1
US\$0.01551 =	MZN1
Currency Unit =	Tanzanian Shilling (TZS)
TZS2,322.44 =	US\$1
US\$0.00043 =	TZS1

## FISCAL YEAR

July 1 - June 30

## ABBREVIATIONS AND ACRONYMS

ADNAP	Mozambique National Fisheries Administration ( <i>Administração Nacional das Pescas</i> )
AIS	Automatic Identification System
CAS	Catch Assessment Survey
CCP	Community Fishing Council
CFMA	Collaborative Fisheries Management Area
CMU	Co-management Unit
COVID-19	Coronavirus-2019
CPF	Country Partnership Framework
CPS	Country Partnership Strategy
DGRH	Comoros Directorate General of Fishery Resources ( <i>Direction Générale des Ressources Halieutiques</i> )
DSFA	Tanzania Deep Sea Fishing Authority
EAF	Ecosystem Approach to Fisheries
EEZ	Exclusive Economic Zone
ESMF	Environmental and Social Management Framework
EU	European Union
FAO	United Nations Food and Agriculture Organization
FFP	Mozambique Fisheries Promotion Fund ( <i>Fundo de Fomento Pesqueiro</i> )
FIRR	Financial Internal Rate of Return
FIS	Fisheries Information System
FiTI	Fisheries Transparency Initiative
FMP	Fisheries Management Plan
GDP	Gross Domestic Product
GEF	Global Environment Facility
GRM	Grievance Redress Mechanism
ICR	Implementation Completion and Results Report
IDA	International Development Association
IFR	Interim Unaudited Financial Report
IOC	Indian Ocean Commission
IOTC	Indian Ocean Tuna Commission
ISR	Implementation Status and Results Report
IUU	Illegal, Unreported, and Unregulated
IW	International Waters
M&E	Monitoring and Evaluation
MACEMP	Marine and Coastal Environment Management Project
MBEF	Zanzibar Ministry of Blue Economy and Fisheries
MCA	Marine Conservation Area
MCS	Monitoring, Control, and Surveillance
MIMAIP	Mozambique Ministry of Sea, Inland Waters, and Fisheries ( <i>Ministério do Mar, Águas Interiores e Pescas</i> )
MLF	Mainland Tanzania Ministry of Livestock and Fisheries
MPA	Multiphase Programmatic Approach
MTC	Minimum Terms and Conditions

MTR	Mid-term Review
NGO	Non-government Organization
NPV	Net Present Value
OP/BP	Operational Procedure/Bank Procedure
PAD	Project Appraisal Document
PCR	Rotating Saving and Credit Scheme ( <i>Promoção de Grupos de Poupança e Crédito Rotativo</i> )
PDO	Project Development Objective
PIU	Project Implementation Unit
POM	Project Operations Manual
ProAzul	Mozambique Blue Economy Development Fund ( <i>Fundo de Desenvolvimento da Economia Azul</i> )
PSC	Project Steering Committee
RIU	Regional Implementation Unit
RSC	Regional Steering Committee
SIMAPE	Mozambique Fishing Activity Monitoring System ( <i>Sistema de Monitorização da Actividade Pesqueira</i> )
SOP	Series of Projects
SWIO	South West Indian Ocean
SWIOFC	South West Indian Ocean Fisheries Commission
SWIOFish	South West Indian Ocean Fisheries Governance and Shared Growth Project
SWIOFP	South West Indian Ocean Fisheries Project
TAFIRI	Tanzania Fisheries Research Institute
VFC	Village Fisheries Committee
VSL	Village Savings and Loan
WOP	Without Project
WP	With Project
WWF	World Wildlife Fund

Regional Vice President: Victoria Kwakwa

Country Director: Boutheina Guerhazi

Regional Director (Acting): Holger A. Kray

Practice Manager: Africa Eshogba Olojoba

Charlotte De Fontaubert, Enos E. Esikuri, Joao Moura

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**DATA SHEET**

**BASIC INFORMATION**

**Product Information**

Project ID	Project Name
P132123	AFCC2/RI-South West Indian Ocean Fisheries Governance and Shared Growth Project 1
Country	Financing Instrument
Eastern and Southern Africa	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

**Related Projects**

Relationship	Project	Approval	Product Line
Supplement	P132029-AFCC2/RI-South West Indian Ocean Fisheries Governance and Shared Growth Project 1	27-Feb-2015	Global Environment Project
Supplement	P145389-SWIOFish - SWIOFC Conversion to a Management Body		Global Environment Project
Supplement	P164144-IMPROVING FISHERIES STATISTICS IN THE SOUTH WEST INDIAN OCEAN		Recipient Executed Activities

**Organizations**

Borrower	Implementing Agency
Government of Comoros, Government of Mozambique, Indian Ocean Commission, United Republic of Tanzania	Deep Sea Fishing Authority (Tanzania), General Directorate of Fisheries Resources (Comoros), Ministry of Blue Economy and Fisheries (Zanzibar), Ministry of



Livestock and Fisheries (Mainland Tanzania), Ministry of Sea, Inland Waters and Fisheries (Mozambique)

**Project Development Objective (PDO)**

Original PDO

The Project Development Objective is to improve the management effectiveness of selected priority fisheries at regional, national and community level.

PDO as stated in the legal agreement

The Project Development Objective is to improve the management effectiveness of selected priority fisheries at regional, national and community level.

**FINANCING**

		Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
<b>World Bank Financing</b>				
P132123	IDA-H9950	5,000,000	5,000,000	4,518,540
P132123	IDA-H9940	18,300,000	18,297,813	16,780,872
P132123	IDA-D0110	9,500,000	9,499,647	8,792,966
P132123	IDA-55890	31,000,000	31,000,000	29,822,885
P132123	IDA-55460	11,700,000	11,700,000	10,992,128
P132029	TF-19021	5,000,000	5,000,000	5,000,000
P132029	TF-19023	3,500,000	3,330,733	3,330,733
P132029	TF-19022	7,000,000	6,998,298	6,998,298
<b>Total</b>		<b>91,000,000</b>	<b>90,826,491</b>	<b>86,236,422</b>
<b>Non-World Bank Financing</b>				
	Borrower/Recipient	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Project Cost</b>		<b>91,000,000</b>	<b>90,826,491</b>	<b>86,236,422</b>



**KEY DATES**

Project	Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
P132123	27-Feb-2015	22-Jun-2015	28-May-2018	30-Sep-2021	30-Sep-2022

**RESTRUCTURING AND/OR ADDITIONAL FINANCING**

Date(s)	Amount Disbursed (US\$M)	Key Revisions
02-Nov-2016	13.62	Reallocation between Disbursement Categories
19-Dec-2018	31.55	Change in Results Framework Reallocation between Disbursement Categories Change in Procurement
30-Sep-2020	58.40	Change in Results Framework
07-Jun-2021	64.55	Change in Results Framework Change in Loan Closing Date(s) Reallocation between Disbursement Categories
28-Sep-2021	66.82	Change in Results Framework Change in Components and Cost Change in Loan Closing Date(s) Reallocation between Disbursement Categories Change in Institutional Arrangements
29-Sep-2021	66.82	Change in Loan Closing Date(s) Reallocation between Disbursement Categories

**KEY RATINGS**

Outcome	Bank Performance	M&E Quality
Moderately Satisfactory	Moderately Satisfactory	Substantial

**RATINGS OF PROJECT PERFORMANCE IN ISRs**

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	25-Jun-2015	Satisfactory	Moderately Satisfactory	.97
02	24-Dec-2015	Moderately Satisfactory	Moderately Satisfactory	4.82
03	23-Jun-2016	Moderately Satisfactory	Moderately Satisfactory	13.06



04	28-Dec-2016	Moderately Satisfactory	Moderately Satisfactory	13.79
05	23-Jun-2017	Moderately Unsatisfactory	Moderately Unsatisfactory	17.70
06	04-Jan-2018	Moderately Satisfactory	Moderately Satisfactory	22.52
07	10-Jul-2018	Moderately Unsatisfactory	Moderately Unsatisfactory	28.17
08	16-Oct-2018	Moderately Unsatisfactory	Moderately Unsatisfactory	30.42
09	25-Feb-2019	Moderately Unsatisfactory	Moderately Unsatisfactory	32.57
10	10-Sep-2019	Moderately Satisfactory	Moderately Satisfactory	42.02
11	07-Apr-2020	Moderately Satisfactory	Moderately Satisfactory	52.85
12	14-Dec-2020	Moderately Satisfactory	Moderately Satisfactory	60.93
13	29-Jun-2021	Moderately Satisfactory	Moderately Satisfactory	64.55
14	18-Feb-2022	Moderately Satisfactory	Satisfactory	67.28
15	01-Mar-2023	Moderately Satisfactory	Satisfactory	70.91

## SECTORS AND THEMES

### Sectors

Major Sector/Sector (%)

<b>Agriculture, Fishing and Forestry</b>	<b>100</b>
Fisheries	75
Public Administration - Agriculture, Fishing & Forestry	25

### Themes

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

<b>Private Sector Development</b>	<b>100</b>
Jobs	100
<b>Urban and Rural Development</b>	<b>36</b>
Rural Development	36
Rural Non-farm Income Generation	36



<b>Environment and Natural Resource Management</b>	<b>122</b>
Climate change	58
Adaptation	58
Renewable Natural Resources Asset Management	20
Biodiversity	20
Environmental policies and institutions	34
Water Resource Management	10
Water Institutions, Policies and Reform	10

**ADM STAFF**

Role	At Approval	At ICR
Regional Vice President:	Makhtar Diop	Victoria Kwakwa
Country Director:	Colin Bruce	Boutheina Guermazi
Director:	Paula Caballero	Holger A. Kray
Practice Manager:	Benoit Bosquet	Africa Eshogba Olojoba
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## I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

1. This Implementation Completion and Results Report (ICR) evaluates the South West Indian Ocean Fisheries Governance and Shared Growth Project 1 (SWIOFish1) – a first in the SWIOFish Series of Operations (SOP), with International Development Association (IDA) credits and grants and Global Environment Facility (GEF) grants to the Union of the Comoros (closed on December 31, 2021), Republic of Mozambique (closed on September 30, 2021), United Republic of Tanzania (closed on September 30, 2022), and Indian Ocean Commission (IOC, closed on September 30, 2021).

### A. CONTEXT AT APPRAISAL

#### Context

2. **Regional context.** At appraisal, the fisheries sector was a major contributor to nutritional health and food security in the South West Indian Ocean (SWIO) region.<sup>1</sup> The sector formally accounted for 0.5 to 30 percent of the Gross Domestic Product (GDP) of the region's countries, with seafood exports totaling approximately US\$1.3 billion in 2008. Small-scale and subsistence fisheries were an economic backbone of rural coastal communities whose size had been increasing rapidly, and who were often poor, marginalized, and highly exposed to climate change impacts. The region was experiencing resource depletion, with estimated 28 percent of the regional fish stocks overexploited or depleted and 40 percent fully exploited<sup>2</sup> because of industrial and artisanal overfishing and illicit and destructive fishing activities. The sector was underperforming economically and socially with an estimated annual economic rent loss of US\$225 million among SWIO coastal states. Industrial fishing activities targeting high-value fisheries resources were foreign-dominated and carried out mainly offshore, resulting in low local and national economic benefits. A weak investment climate, coupled with limited or underperforming infrastructure and services, constrained industrial and artisanal private sector development. Regional cooperation was seen as key to addressing these issues given the shared marine ecosystem, countries' ability to learn from each other, and the need to have a strong common voice representing their interests globally. However, the regional fisheries body, South West Indian Ocean Fisheries Commission (SWIOFC), lacked financial autonomy and was dependent on limited technical and financial support from the United Nations Food and Agriculture Organization (FAO), limiting its work.

3. **Country context.** In Comoros, most of the coastal fisheries were under heavy pressure and tuna was fished predominantly by foreign fleets. The legal and institutional framework, human capacity, and infrastructure for fisheries were weak, resulting in deficient management of small-scale fisheries and monitoring of offshore tuna fisheries. Weak governance and a poor investment climate also limited domestic and foreign investment, constraining the sector's growth. The knowledge of the environmental, social, and economic state of the fisheries was deficient and the capability for applied fisheries research was low. Mozambique's fisheries sector was constrained by weak management of shallow-water shrimp fisheries, and the artisanal fleet had sharply increased, risking overexploitation. An unattractive business climate, including poor access to investment capital and credit, resulted in low private sector investment and underdeveloped aquaculture and value chains. The development of Tanzania's fisheries sector was constrained by a weak legal and institutional framework, weak human capacity, and insufficient post-harvest infrastructure; limited knowledge of the environmental, social, and economic state of the fisheries; challenging business climate resulting in

<sup>1</sup> Twelve countries border the waters of the SWIO: the island nations of Comoros, La Réunion (France), Madagascar, Maldives, Mauritius, and Seychelles; and six mainland countries: Kenya, Mozambique, Somalia, South Africa, Tanzania, and Yemen.

<sup>2</sup> SWIOFC. 2011. Fourth Session's Proceedings on the Status of Resources, 2011. Mahe, Seychelles.



limited private investments; and inadequate maritime safety. Destructive fishing techniques, such as blast fishing because of insufficient enforcement, threatened small-scale fisheries and coastal tourism as they degraded reefs and critical habitats.

4. **Government strategies.** The countries looked to increase the fisheries sector's role in poverty reduction and food security by sustainably managing fisheries resources, improving human and institutional capacities, and developing sustainable aquaculture and fish production industries. The key guiding strategies were Comoros' Fisheries Development Strategy (*Stratégie d'Aménagement des Pêcheries*, 2007), Mozambique's Fisheries Master Plan (2010), the National Fisheries Sector Policy and Strategy Statement (1997) for Mainland Tanzania, and the Fisheries Sector Policy of Zanzibar (2002). Several policy and planning instruments targeted specific marine and fisheries resources, such as the Tanzania Prawn Fishery Management Framework of 2004.

5. **Rationale for World Bank involvement.** The World Bank had implemented the GEF-funded South West Indian Ocean Fisheries Project (SWIOFP, P072202) in 2007-2013, which operated in all SWIOFC member countries and had a regional integration focus mostly through research, and almost all the SWIO countries had past or ongoing World Bank engagements in fisheries, through analytical work, IDA-funded investment projects, International Finance Corporation investment in aquaculture, and grant-funded projects. These positioned the World Bank as the leading development partner in fisheries management in the region and provided regional and national baselines for continued support. The World Bank also had been involved in policy dialogue with other development partners to facilitate the implementation of fishery policy reforms and it administered several relevant partnerships, such as the Global Partnership for Oceans, the Global Program on Fisheries, and the Wealth Accounting and the Valuation of Ecosystem Services partnership, making it a strong partner to lead this project.

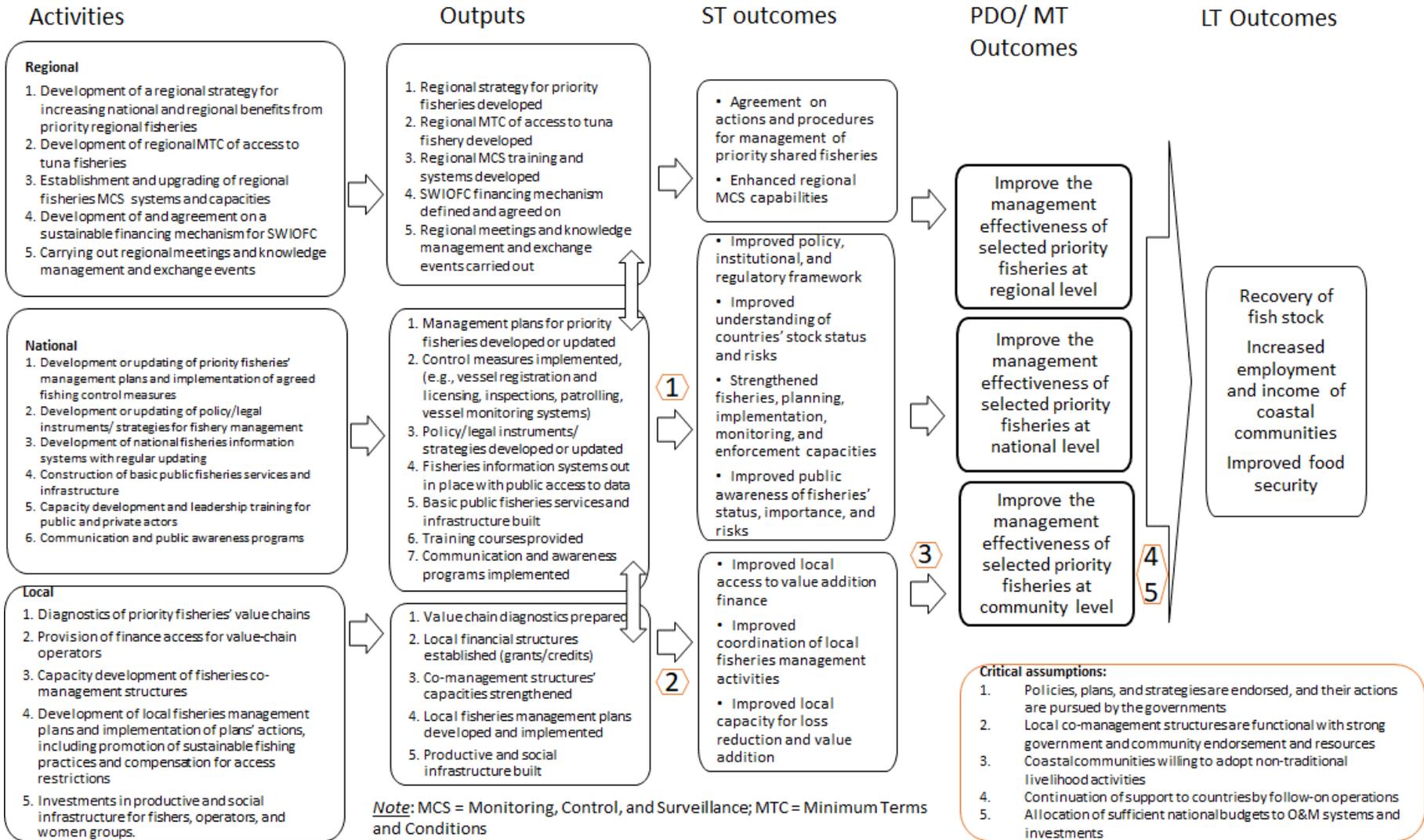
6. **Higher-level objectives to which the project contributed.** At the regional level, the project supported the World Bank 2008 Regional Integration Assistance Strategy for Sub-Saharan Africa (Report No. 43022), which emphasized management of shared natural resources and provision of regional public goods. The project was also consistent with the GEF's International Waters (IW) Focal Area strategies, particularly Objective IW-2: Catalyze Investments to Balance Competing Water-uses in the Management of Transboundary Surface and Groundwater and to Enhance Multi-state Cooperation, as the project supported regional cooperation in the SWIO transboundary marine environment. At the national level, the project supported Comoros' Country Partnership Strategy (CPS) for the Period FY2014-2017 (Report No. 82054) Pillar 1: Increased Public Sector Capacity, Results Area 3: Statistical Capacity Building and Pillar 2: Shared Growth and Increased Private Sector Employment, Results Area 2: Increased Employment and Income from Fisheries; Mozambique's CPS for the Period FY2012-2015 (Report No. 66813) Pillar III: Governance and Public Sector Capacity, Outcome 3.4: Greater Contribution of Wildlife Conservation to Economy; and Tanzania's Country Assistance Strategy for the Period FY2012-2015 (Report No. 60269) Objective One: Promote Inclusive and Sustainable, Private Sector-led Growth, Outcome 1.3: Enhanced sustainability and improved management of natural resources.

### Theory of Change (Results Chain)

7. Figure 1 depicts the theory of change based on the Project Appraisal Document's (PAD, Report No. PAD415) description of activities and outcomes. The regional, national, and local results chains were interlinked, whereby regional strategies, guidelines, and knowledge products were to inform national policies, fisheries management plans, and monitoring, control, and surveillance (MCS) actions and vice versa, and the latter were to direct local fisheries management actions, which in turn would inform and finetune national fisheries management regulations.



Figure 1: Project Theory of Change





## Project Development Objectives (PDOs)

8. The PDO and Global Environmental Objective, as articulated in the legal agreements<sup>3</sup> and the PAD, were to improve the management effectiveness of selected priority fisheries at regional, national and community level.

9. Comoros, Mozambique, and Tanzania participated in this first SOP because they had confirmed national IDA allocations. The priority fisheries were tuna, demersal (sea bottom) fisheries, lobster, and sea cucumber in Comoros; tuna, shrimp, demersal fisheries, deep-water crustaceans, and small pelagic (water column) fisheries in Mozambique; and tuna, octopus, shrimp, reef fish, small pelagic fisheries, and mariculture in Tanzania. The fisheries were selected by the governments based on social, economic, nutrition, and environmental criteria, as well as, in certain cases, the existence of a management plan for the fishery, prepared under SWIOFP. Community-level actions were to be implemented in the islands of Anjouan, Grande Comore, and Moheli in Comoros; Mozambique's coastal districts of Nampula, Sofala, and Zambezia provinces in Sofala bank; in the coastal districts of Bagamoyo, Chalinze, Lindi, Mkinga, Pangani, and Tanga City in Mainland Tanzania; and in three Marine Conservation Areas (MCAs) in Zanzibar: Menai Bay Conservation Area, Mnemba Island Conservation Area, and Pemba Channel Conservation Area. These locations were selected because they contained important fishing grounds.

## Key Expected Outcomes and Outcome Indicators

10. The key project outcomes and the indicators used to measure them were as follows:

### *Outcome 1: Improve the management effectiveness of selected priority fisheries at regional level*

- (a) (Regional Level) Number of new SWIOFC member country signatures to bilateral and/or multilateral agreements on fisheries (target: 6)

### *Outcome 2: Improve the management effectiveness of selected priority fisheries at national level*

- (b) (National Level) Number of priority Fishery Management Plans (FMP) with measures to control fishing activity implemented<sup>4</sup>
- Comoros: EAF<sup>5</sup> demersal fisheries management plan (target: 1)
  - Mozambique: Management plans for demersal line fisheries, coastal shrimp, and deep-sea crustaceans (target: 3)
  - Tanzania: Management plans for tuna/tunalike fish, octopus, reef fish, small pelagic, prawns, mariculture (target: 1)

### *Outcome 3: Improve the management effectiveness of selected priority fisheries at community level*

- (c) (Community Level) Number of community-based management units achieving at least 2 performance targets<sup>6</sup>
- Comoros (target: 6)
  - Mozambique (target: 30)
  - Tanzania (target: 7)

<sup>3</sup> Credit 5589-TZ; Grant 019021; Grant D011-KM and TF019023; Credit 5546-MZ, Grant H994-MZ, and Grant TF019022; and Grant 0995.

<sup>4</sup> Four measures were defined in the PAD.

<sup>5</sup> EAF stands for Ecosystem Approach to Fisheries - a risk-based management planning process that incorporates sustainable development principles.

<sup>6</sup> Four performance targets were defined in the PAD for Comoros and Mozambique, and for Tanzania, four were defined for Mainland Tanzania and four were defined for Zanzibar.



11. A fourth PDO-level Indicator measured the number of project direct beneficiaries:

(d) Number of direct project beneficiaries (of whom % are females)

- Comoros (target: 10,000, 27%)
- Mozambique (target: 60,000, 10%)
- Tanzania (target: 65,000, 50%)
- Regional (target: 50, 30%)

## Components

12. The project financed the following four components:

(a) **Component 1. Enhanced regional collaboration** (*Original allocation: US\$3.03 million IDA<sup>7</sup>; Actual cost: US\$2.88 million IDA*). This component was implemented by SWIOFC.<sup>8</sup> Financed activities were: (i) development of a regional strategy to increase national and regional benefits from priority regional fisheries; (ii) development of regional Minimum Terms and Conditions (MTC) of access to tuna fishery; (iii) joint fisheries MCS activities; (iv) development of a sustainable financing mechanism for SWIOFC; (v) preparation of SWIOFC policy positions on common fisheries-related subjects for international fora; and (vi) regional knowledge management and exchange events.

(b) **Component 2. Improved governance of priority fisheries** (*Original allocations: US\$39.16 million IDA and US\$15.5 million GEF; Actual cost: US\$24.6 million IDA and US\$15.24 million GEF*). The component had a national focus, financing: (i) development or updating of selected priority fisheries' management plans and implementation of plans' key fishing control measures; (ii) development or updating of policy or legal instruments or strategies for fishery management; (iii) development of national Fisheries Information Systems (FISs) and public dashboards to track the sector's performance; (iv) construction of basic public fisheries services and infrastructure, such as offices for government extension officers; (v) capacity development and leadership training for public and private actors on various fisheries management functions; and (vi) communication and public awareness programs on the countries' fisheries status, the economic, social, and environmental importance of priority fisheries and marine habitats, and the impacts of illegal fishing.

(c) **Component 3. Increased economic benefits from priority fisheries** (*Original allocation: US\$24.98 million IDA; Actual cost: US\$28.15 million IDA and US\$0.05 million GEF*). The focus of this component was fishing communities in the priority coastal locations in the three countries. Financed activities were: (i) establishment and strengthening of fisheries co-management units for joint (with the local administration) local fisheries management; (ii) support to the implementation of co-management agreements signed between co-management units and the local administration, including sustainable fishing practices, seasonal access closure, and community surveillance; (iii) development or strengthening of local financing schemes and market linkages for local value-chain operators interested in establishing or expanding their businesses; and (iv) investments in productive infrastructure, such as landing sites, fish markets, post-landing facilities, and social facilities for fishers, operators, and women groups.

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<sup>7</sup> Original allocations noted in this section include Project Preparation Advances and contingencies. Components' original and actual costs per borrower are available in the project's files.

<sup>8</sup> IOC was the regional recipient of project funds because SWIOFC did not have the required legal status and fiduciary capacity to receive IDA grant funding.



(d) **Component 4. Project management and coordination** (Original allocation: US\$8.33 million IDA; Actual cost: US\$15.28 million IDA and US\$0.04 million GEF). This component financed costs associated with regional and national project management and coordination, including the costs of a Regional Steering Committee (RSC) in SWIOFC, a Regional Implementation Unit (RIU) in IOC, and national Project Steering Committees (PSCs) and Project Implementation Units (PIUs).

**B. SIGNIFICANT CHANGES DURING IMPLEMENTATION**

13. The project underwent six Level 2 restructurings, each focusing on a specific country: on November 2, 2016 (Tanzania), December 19, 2018 (Mozambique and Tanzania), September 30, 2020 (Mozambique), June 7, 2021 (Comoros), September 28, 2021 (Tanzania), and September 29, 2021 (Comoros).

**Revised PDOs and Outcome Targets**

14. The PDO was not revised. The December 2018 restructuring increased the end target of Outcome 2 from five fisheries management plans to ten alongside an increase to Tanzania’s breakdown target from one fisheries management plan to six; and the direct project beneficiaries’ end target was reduced from 135,050 to 105,050 following a 30,000 reduction in the number of beneficiaries in Mozambique. A 31 percent overall female beneficiary rate breakdown indicator was added, which correlated with countries’ original female beneficiary rates.

**Revised PDO Indicators**

15. Changes to the PDO-level Indicators are summarized in Table 1:

**Table 1: Changes to Project PDO-level Indicators**

Original PDO-level Indicator	Restructuring Date / Changes Made
(National Level) Number of priority Fishery Management Plans (FMP) with measures to control fishing activity implemented <ul style="list-style-type: none"> <li>- Comoros: EAF demersal fisheries management plan</li> <li>- Mozambique: Management plans for demersal line fisheries, coastal shrimp, and deep-sea crustaceans</li> <li>- Tanzania: Management plans for tuna/tunalike fish, octopus, reef fish, small pelagic, prawns, mariculture</li> </ul>	<p><b>December 2018:</b> Indicator revised to Fisheries Management Plans implemented Mozambique implementation criteria revised from 1. fishing units (vessels above 10 meters in length and fishing gears) registered and licensed as per law in targeted countries; 2. fishing units operating in targeted fisheries are regularly inspected; 3. a satellite based fishing vessel monitoring system is operational; and 4. a fisheries monitoring center is equipped and functional in targeted countries – to implementation of industrial and semi-industrial fishing capacity measures.</p> <p><b>September 2021:</b> Overall target increased from 5 to 10 fisheries management plans Tanzania breakdown indicator revised to Tanzania: Fisheries management plans (FMP) consulted, approved and implemented Tanzania breakdown target increased from 1 to 6 fisheries management plans</p>
(Community Level) Number of community-based management units achieving at least 2 performance targets <ul style="list-style-type: none"> <li>- Comoros</li> <li>- Mozambique</li> </ul>	<p><b>December 2018:</b> Indicator revised to (Community Level) Co-management units achieving at least 2 performance targets (2) Mozambique performance targets revised from 1. Community Management Agreement between administration and CCP<sup>9</sup> in place; 2. CCP participate in district</p>

<sup>9</sup> CCP stands for Community Fisheries Councils (*Conselhos Comunitários de Pesca*).



<ul style="list-style-type: none"> <li>- Tanzania</li> </ul>	<p>Co-management Committee meetings at least twice a year; 3. at least 80 percent of vessels, static gears, and commercial aquaculture operations registered for each CCP; and 4. at least 74 percent of fishing units (gears), static gears, and aquaculture operations licensed for each CMU<sup>10</sup> as per law - to 1. regular meetings of CCPs, 2. agreements between Districts and CCPs, 3. CCP represented at all meetings of the District Co-management Committee, and 4. annual rate of licensed fishing gear vis-à-vis the most updated census above 74 percent.</p> <p><b>September 2021:</b> Tanzania breakdown indicator revised to Tanzania: Proportion (%) of targeted community-based management units achieving at least 2 performance targets Tanzania breakdown target revised from 7 units to 92.5% of units</p>
<p>Number of direct project beneficiaries (of whom % are females)</p> <ul style="list-style-type: none"> <li>- Comoros</li> <li>- Mozambique</li> <li>- Tanzania</li> <li>- Regional</li> </ul>	<p><b>December 2018:</b> Indicator revised to Direct project beneficiaries Overall target decreased from 135,050 to 105,050 beneficiaries Mozambique breakdown target decreased from 60,000 to 30,000 Overall female beneficiary disaggregation indicator added with 31% target Female beneficiary disaggregation indicators added to country and regional breakdown indicators</p>

### Revised Components

16. The September 2021 restructuring (Tanzania) dropped two activities from Tanzania’s Component 3 - the provision of grants for Village Savings and Loan (VSL) schemes and a feasibility study for semi-industrial tuna fleet activities. In addition, US\$1.2 million of GEF grant resources were shifted from Component 3 to components 2 and 4.

### Other Changes

17. **Other results framework changes.** Several Intermediate Result Indicators (IRIs) were revised, as follows:

**Table 2: Changes to Project IRIs**

Component / Original IRI	Restructuring Date / Revised, New, Dropped IRI
<b>Component 2</b>	
<p>At least one key policy or legal instrument for fishery management developed or updated for each country</p> <ul style="list-style-type: none"> <li>- Comoros: Fisheries law application texts adopted (<i>Arrêtés d’application</i>) (target: yes)</li> <li>- Mozambique: (i) Mid-term review of the Fisheries Master Plan and update (target: yes); (ii) Aquaculture strategy reviewed and updated (target: yes)</li> <li>- Tanzania: Fisheries Act revised, consulted and submitted to cabinet (target: yes)</li> </ul>	<p>At least one key policy or legal instrument for fishery management developed or updated for each country (unchanged)</p> <ul style="list-style-type: none"> <li>- <b>December 2018:</b> Mozambique breakdown indicator added: (iii) The Sea and Policy Strategy (target: yes)</li> <li>- <b>June 2021:</b> Comoros breakdown indicator revised to Comoros: Fisheries law application texts adopted (target: yes)</li> </ul>
<p>Control of fishing activity</p> <ul style="list-style-type: none"> <li>- Comoros: Vessels inspected, as a percentage of the motorized fleet (target: 10%)</li> </ul>	<p>Control of fishing activity (unchanged)</p> <ul style="list-style-type: none"> <li>- <b>December 2018:</b> Mozambique breakdown indicator revised to: Mozambique: Actual days of patrols in the target area, disaggregated by (i) land patrols (ii) coastal patrols (target: 600)</li> </ul>

<sup>10</sup> CMU stands for co-management Unit.



<ul style="list-style-type: none"> <li>- Mozambique: Serious infractions committed by licensed fishing unit as a proportion of licensed fishing unit controls (target: 35%)</li> <li>- Tanzania: % of noncompliance incidences as per patrol effort (target: 50%)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mozambique: Actual days of land patrols in the target area (target: 360)</li> <li>▪ Mozambique: Actual days of coastal patrols in the target area (target: 240)</li> <li>- <b>September 2021:</b> Tanzania breakdown indicator revised to: Tanzania: % of noncompliance incidences in a year (target: 50%)</li> </ul>
	<ul style="list-style-type: none"> <li>- <b>December 2018:</b> Addition of: Mozambique: Situation Plan elaborated and submitted for approval to the relevant authority (target: yes)</li> </ul>
<p><b>Component 3</b></p>	
<p>Number of target community individuals participating in value chain enhancement through project initiatives</p> <ul style="list-style-type: none"> <li>- Comoros: Number of value-chain operators benefitting from business and value-chain development training (target: 600)</li> <li>- Mozambique: Participants in Rotating Saving and Credit Scheme (PCR) cycles (target: 1,800)</li> <li>- Tanzania: Village Savings Loan Scheme recipients (target: 2,200)</li> </ul>	<p>Number of target community individuals participating in value chain enhancement through project initiatives (unchanged)</p> <ul style="list-style-type: none"> <li>- <b>December 2018:</b> Mozambique breakdown target revised to 3,000</li> </ul>
<p>Operational fisheries infrastructure</p> <ul style="list-style-type: none"> <li>- Comoros: Number of operational fisheries infrastructure (target: 8)</li> <li>- Mozambique: Fishing ports managed by the autonomous fishing port authority (target: yes)</li> <li>- Tanzania: Operationalized business plans for MACEMP<sup>11</sup> built landing sites (target: 3)</li> </ul>	<p>Operational fisheries infrastructure (unchanged)</p> <ul style="list-style-type: none"> <li>- <b>December 2018:</b> Mozambique breakdown indicator revised to: Mozambique: Infrastructures to support artisanal fisheries completed and operational (target: 8). <b>September 2020:</b> target revised to 6</li> <li>- <b>June 2021:</b> Comoros breakdown target revised to 14</li> <li>- <b>September 2021:</b> Tanzania breakdown indicator revised to: Tanzania: Operationalized targeted fisheries management infrastructure (target: 3)</li> </ul>
<p>At least one target fishery value chain enhanced per country</p> <ul style="list-style-type: none"> <li>- Comoros: Fish export from Comoros (target: yes)</li> <li>- Mozambique: Tuna exports from Mozambique (target: yes)</li> <li>- Tanzania: At least one recommendation is implemented for each priority fish value chain study for economic benefits (target: 3)</li> </ul>	<p>At least one target fishery value chain enhanced per country (unchanged)</p> <ul style="list-style-type: none"> <li>- <b>December 2018:</b> Addition of: Mozambique: Targeted value chain actors receiving support from the FFP<sup>12</sup> Matching Grants Scheme, disaggregated by (i) individual family applicants and (ii) commercial businesses (target: 416) <ul style="list-style-type: none"> <li>▪ Mozambique: individual family applicants receiving support from FFP's Matching Grants Scheme (target: 400)</li> <li>▪ Mozambique: Commercial Businesses receiving support from FFP's Matching Grants Scheme (target: 16).</li> </ul> </li> <li>- <b>September 2020:</b> Overall target of above indicator revised to 405 and disaggregation targets revised to 400 and 5, respectively.</li> <li>- <b>June 2021:</b> Comoros breakdown indicator dropped</li> </ul>
<p><b>Component 4</b></p>	
<p>Number of semi-annual Project Progress reports submitted</p>	<ul style="list-style-type: none"> <li>- <b>December 2018:</b> indicator dropped</li> </ul>

<sup>11</sup> MACEMP stands for Marine and Coastal Environment Management Project (P082492/P084213, 2005-2011), the predecessor fisheries project in Tanzania.

<sup>12</sup> FFP stands for Fisheries Promotion Fund (*Fundo de Fomento Pesqueiro*).



18. **Change in institutional arrangements.** The December 2018 restructuring formally shifted Mozambique’s project coordination responsibilities from the Directorate of Studies, Planning, and Infrastructure (DEPI) to the FFP, reduced the number of executing agencies in Mozambique from ten to six, and shifted agencies’ internal accountability structures from lower-level focal points to the director level.<sup>13</sup> The September 28, 2021 restructuring changed Zanzibar’s Implementing Agency from Ministry of Agriculture, Livestock and Fisheries to the new Ministry of Blue Economy and Fisheries (MBEF).

19. **Change in closing date.** The closing date of the Comoros Financing Agreement was extended twice – in June 2021 and in September 2021 – for a total of six months, from June 30, 2021 to December 31, 2021. The closing date of the Tanzania Financing Agreement was extended in September 2021 by twelve months, from September 30, 2021 to September 30, 2022. The closing dates of the IOC and Mozambique Financing Agreements were not extended.

20. **Reallocation between disbursement categories.** The November 2016 restructuring defined new expenditure categories for Tanzania’s Financing Agreement and reallocated IDA proceeds between categories. The December 2018 restructuring defined a new expenditure category for Mozambique’s Financing Agreement and reallocated IDA and GEF proceeds between categories, including some GEF resources to IDA categories. The June 2021 restructuring reallocated Comoros’ IDA proceeds between categories; the September 28, 2021 restructuring reallocated Tanzania’s IDA and GEF proceeds between categories; and the September 29, 2021 restructuring reallocated Comoros’ GEF proceeds to several IDA categories.

21. **Change in procurement.** The December 2018 restructuring defined Mozambique’s matching grants mechanism as an eligible expense and added community-based procurement as an eligible procurement method to the Financing Agreement.

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

22. **Changes to the results framework.** The phrasing of the national PDO-level Indicator that measured implementation of priority fisheries management plans was adapted to the corresponding Corporate Results Indicator, and the adjustment to the implementation criteria in Mozambique made the measurement nondiscretionary (using numerical fishing capacity targets) and focused them on what the borrower considered the main fishing activity control element, namely control of the fishing capacity. The phrasing of the Tanzania breakdown indicator was revised to add key milestones prior to the implementation of a fisheries management plan and the target was increased from one to six to denote a separate management plan for each priority fishery. The phrasing of the local PDO-level Indicator changed from “community-based management units” to “co-management units” to more accurately reflect the project’s intention to support joint management by communities and the fisheries administration. The change to co-management units’ performance targets in Mozambique looked to reflect the main functions of the country’s co-management units more accurately; and the shift in Tanzania from measuring the number of functioning co-management units to measuring their proportion among the total number of supported units looked to reflect better the efficacy of the project’s support. The change to the phrasing of the PDO-level Indicator that measured the number of project beneficiaries aligned it with the corresponding Corporate Results Indicator and added structure to the monitoring of female beneficiaries. Its target reduction (overall and in Mozambique) reflected corrections to the expected beneficiary count.<sup>14</sup>

<sup>13</sup> This change is not noted in the ICR Datasheet because it was not triggered in the system when the restructuring paper was prepared.

<sup>14</sup> On the one hand, the exclusion of Cabo Delgado Province from the project area as agreed during project preparation and, on the other hand, addition of beneficiaries that were not included in the counting at appraisal.



23. At the intermediate result level, changes were made to measure new or expanded activities, such as a Sea Policy Strategy, marine spatial planning, and a matching grants scheme in Mozambique and additional fisheries infrastructure in Comoros; reduction of activities' scale, such as fisheries infrastructure in Mozambique; and dropping of activities, such as support to exports from Comoros and Mozambique. The change in Mozambique's fishing activity control measurement (from measuring the rate of serious infractions to measuring the number of patrols) was made because the borrower could not foresee the scale of surveillance support impact and with the understanding that more surveillance effort may increase the number of reported infractions before decreasing it. These changes were made in response to emerging government priorities with increased focus on artisanal fisheries' infrastructure to demonstrate visible local results, budget constraints experienced by the countries, and new information on activities required to achieve the project's outcomes. Some changes were made to clarify and specify indicators' measurements and methodologies, and the indicator measuring the submission of progress reports was dropped because it did not measure a project result.

24. **Changes to components and costs.** The dropping of two Component 3 activities in Tanzania and their cost redistribution reflected a decision to focus on building the capacity of community groups instead of providing them with grant resources to enhance their sustainability. The resources were used instead to bridge a financing gap experienced during the construction of fisheries management facilities under Component 2 and cover logistic and management expenses incurred by the borrower under Component 4 due to the relocation of the Ministry of Livestock and Fisheries from Dar es Salaam to Dodoma in 2017 and the closing date extension.

25. **Changes to institutional arrangements.** The shift of project coordination responsibilities from DEPI to the FFP and the reduction in the number of implementing agencies in Mozambique in December 2018 reflected a change in the country's implementation strategy following the project's mid-term review (MTR) to enhance implementation progress, effectiveness, and efficiency. The September 2021 change to Zanzibar's implementing agency reflected preceding institutional changes in the archipelago.

26. **Closing date extension.** The extensions were authorized to allow completion of delayed activities, particularly operationalization of fisheries infrastructure and alternative livelihoods in Comoros and national governance activities in Tanzania.

27. **Reallocations and procurement change.** The definition of new expenditure categories allowed the separation of allocations to different implementing agencies instead of components and separate allocations of IDA and GEF-financed expenditures within components, enhancing the borrower and World Bank disbursements and monitoring abilities. The reallocations ensured that activities had sufficient resources following shifting government priorities and identified financing gaps. The December 2018 inclusion of a matching grants mechanism in Mozambique's Financing Agreements followed the government's confirmation of moving ahead with this activity during the MTR mission.

28. See Section III for more information on factors leading to the restructurings.

29. **Changes' implication on the original theory of change.** The changes overall scaled up outcome 2 with a larger number of fisheries management plans and policy documents and the addition of marine spatial planning in Mozambique. The scale of outcome 1 did not change as no changes were made to its PDO-level and intermediate result indicators, and the scale of outcome 3 did not change because fisheries infrastructure's scale down in Mozambique was offset by an increase in Comoros and upscaling of the participation on Mozambique's PCR. The reduction in the number of direct beneficiaries reflected enhanced measurement accuracy with no impact on the three outcomes.



## II. OUTCOME

### A. RELEVANCE OF PDOs

#### Assessment of Relevance of PDOs and Rating

Rating: High

30. **Global relevance.** The project is highly relevant to the World Bank Group's 2021 Blue Economy Strategy (Report No. 169624)<sup>15</sup>, Pillar 1: Improved Fisheries Governance. Likewise, since 2018, the GEF has addressed the depletion of national and shared fisheries by supporting regional governance goals and efforts of countries to improve management of vital fisheries. The Eighth GEF Replenishment (negotiated in June 2022) supports sub-regional and national marine conservation initiatives under a Blue and Green Islands Integrated Program in Small Island Developing States and a Clean and Healthy Ocean Integrated Program, with joint action to support the blue economy and advance sustainable fisheries management.<sup>16</sup> The project directly supported these objectives at the regional, national, and local levels: at the regional level, it established a common access regime for foreign fishing of tuna and tuna-like species in the SWIOFC region and developed regional MCS capabilities and systems; at the national level, it developed and updated policy and legal frameworks, developed and updated key fisheries management plans with access control measures, and developed fisheries information systems and MCS capacities of countries; and at the local level, it establishes and strengthened local co-management units with legal status and capacities to manage their resources.

31. **Regional relevance.** In August 2021, SWIOFC member countries held their 11<sup>th</sup> session, underlying the importance of cooperation in the management of their shared marine resources, particularly by jointly implementing the MTC for Access of Foreign Fisheries to the SWIOFC Region - a key project result, adopted by the member countries in 2019. The project is also relevant to the World Bank Group's Regional Integration and Cooperation Assistance Strategy for 2021–2023 (Report No. 154458-AFR)<sup>17</sup> Pillar 2: Promoting Trade and Market Integration, and its focus on harmonizing regulations and trade facilitation, by developing the MTC. Further demonstrating the relevance of this project to the region has been the expansion of SWIOFish to additional SWIO countries through additional SOPs: SWIOFish2 in Madagascar and IOC (P153370, 2017-2023), SWIOFish3 in Seychelles (P155642/P158137/P163800, 2017-2023), SWIOFish4 in the Maldives (P157801, 2017-2022) and the recently approved SWIOFish5 with regional activities through IOC and in the Maldives (P179242).

32. **Country relevance.** The PDO remains highly relevant to the World Bank Group's priorities in the three countries and their respective development strategies:

- (a) Comoros' Country Partnership Framework (CPF) for the Period FY2020-2024 (Report No. 145699-KM) supports improved fisheries management under its two Focus Areas. Under Focus Area I: Crisis Response and Building Resilience, Objective 2: Disaster Recovery and Resilience, the CPF prioritizes rehabilitation and construction of climate-smart fisheries infrastructure for coastal communities damaged by the April 2019 Cyclone Kenneth, and under Focus Area II: Economic Recovery and Inclusive Growth, Objective 3: Improving Business Environment

<sup>15</sup> World Bank Group. 2021. Riding the Blue Wave: Applying the Blue Economy Approach to World Bank Operations.

<http://documents.worldbank.org/curated/en/099655003182224941/P16729802d9ba60170940500fc7f7d02655>. PROBLUE is a global trust fund launched in 2018 to support the blue economy, defined as the integrated and sustainable development of oceanic sectors in healthy oceans (see <https://www.worldbank.org/en/programs/problue>).

<sup>16</sup> [https://www.thegef.org/sites/default/files/2023-01/GEF-8\\_Programming\\_Directions.pdf](https://www.thegef.org/sites/default/files/2023-01/GEF-8_Programming_Directions.pdf).

<sup>17</sup> World Bank Group. 2020. Supporting Africa's Recovery and Transformation: Regional Integration and Cooperation Assistance Strategy - Update for the Period FY21–FY23. Washington, DC.



and Governance, the CPF calls to reinforce further fisheries' value chains. The CPF's declared vision is "to help the Government accelerate the transformation of agriculture and fisheries, fostering productivity, sustainability, transparency, resilience, and inclusion by completing and strengthening selected value chains in the fisheries sector and assisting fisherfolk communities and strengthen sectoral governance". The government's Medium Term Development Strategy for 2020-2030 (approved in 2019) names Blue Economy as one of five Strategic Pillars, with three other pillars, namely tourism and crafts; modernized agriculture for food security; and Industrial niches to diversify the economy also prioritizing the fisheries sector. Comoros' new 2030 Development Plan (*Plan Comores Émergent 2030*) puts strong emphasis on the development of fisheries infrastructures in coastal areas to support value chains, reduce post-harvest losses, and promote local fisheries product trade.

- (b) Mozambique's CPF for the Period FY2017-2021 (Report No. 104733-MZ) Focus Area 1: Promoting Diversified Growth and Enhanced Productivity, Objective 2: Increasing Agriculture Growth, looks to unlock the agriculture (including fisheries) sector's potential by providing access to markets and training, promoting value chains, and strengthening institutions' service delivery; and Focus Area 3: Enhancing Sustainability and Resilience, Objective 11: Improving Management of Climate Risk and Natural Resources, calls to invest in climate-smart fisheries management practices and promote local employment opportunities in the sector to facilitate sustainable use and generate income streams. The Government Plan for 2020-2024 (*Plano Quinquenal do Governo*), approved in 2020, Priority III: Strengthen the Sustainable Management of Natural Resources and the Environment, prioritizes the project's key interventions, namely the preparation of a national marine spatial plan, restructuring of the sector's licensing system, and strengthening the country's MCS system.
- (c) Tanzania's CPF for the Period FY2018-2022 (Report No. 121790-TZ), Focus Area 1: Enhance Productivity and Accelerate Equitable and Sustainable Growth, Objective 1.1. Strengthen the Business Environment for Job Creation, notably in Manufacturing, Agribusiness, and Tourism, recognizes SWIOFish1 as a key tool for adding value in fisheries and promoting access to markets and job creation; and Objective 1.3: Manage natural resources for resilient economic growth, relies on the project for addressing fisheries management best practices and the sustainability of fishing stocks. The Tanzania Development Vision 2025 (approved in 1999) and the Third Development Plan for 2021/22 – 2025/26 (approved in 2021) emphasize the need to enhance the value-addition of the fisheries sector through diversification, and environmental protection through community-based natural resource management and enforcement of legislation against harmful extractive techniques. Zanzibar's Development Vision 2050 (approved in 2020) Pillar I: Economic Transformation, 1.4: Blue Economy, looks to effectively coordinate and manage the development of the ocean and its endowments through industrial value addition, sustainable exploitation of marine-related resources and products, and continued support of regional and international blue economy institutions and initiatives.

33. The high relevance of the PDO to the countries is also demonstrated in the preparation and implementation of follow-on blue economy support projects in the three countries and IOC, discussed further in Section IV.D. During implementation, the World Bank continuously aligned activities' scope with countries' emerging priorities for the sector through the restructurings to ensure continued relevance, for example, Comoros' expanded focus on artisanal fisheries' value addition as per its 2030 Development Plan and Mozambique' shift from fisheries to blue economy development, as noted. Finally, the project's theory of change remained valid at closing.



## B. ACHIEVEMENT OF PDOs (EFFICACY)

### Assessment of Achievement of Each Objective/Outcome

Rating: Substantial

34. The efficacy analysis is structured around the three outcome statements of the PDO using the project’s final set of indicators, as well as other relevant results attributed to the project that were not measured by the results framework. As per World Bank guidance for ICR for Investment Project Financing Operations, since the PDO was not revised and the scope of the project became overall more ambitious with the restructurings, a split evaluation was not carried out. Annex 1 provides specific details on achievements, while sections III.A and III.B explain, respectively, the key design and implementation factors behind outcomes’ achievement levels.

### Outcome 1: Improve the management effectiveness of selected priority fisheries at regional level

Table 3: Outcome 1 Target and Result Summary

Indicator	Target	Result
PDO-level Indicator: (Regional Level) Number of new SWIOFC member country signatures to bilateral and/or multilateral agreements on fisheries (Number)	6	11
IRI: Minimum Terms & Conditions (MTC) for access to tuna fishery agreed at technical regional level	Yes	Yes
IRI: SWIOFC sustainable regional financing mechanism agreed	Yes	Yes

35. **Outcome 1 was substantially achieved thanks to regional agreement on MTC for access to tuna fisheries, joint resolutions on tuna fisheries, and enhanced dialogue between the SWIO countries.** The key improvement to the management effectiveness of shared priority fisheries was the joint adoption of guidelines for access to tuna and tuna-like fisheries in the SWIOFC region by the member countries during the 9<sup>th</sup> Session of SWIOFC, held in October 2018 in Cape Town, as intended. Consistent with international and regional instruments<sup>18</sup>, the guidelines established a common access regime for foreign fishing of tuna and tuna-like species by containing uniform provisions for pre-inspection, licensing, operation, data management, and reporting of foreign fishing vessels by the countries; financial compensation to the countries; allowed fishing zones; authorized gear; landing and handling procedures for catch and by-catch, and other provisions.<sup>19</sup> In 2021, IOC assessed how well the MTC guidelines were implemented by the SWIOFC member countries, finding a substantial level of legislative implementation and use of the guidelines to improve access agreements’ conditions. To achieve this result, the project financed the costs of regional technical meetings and consultancies with co-financing from the World Wildlife Fund (WWF).

36. Regional fisheries management also improved thanks to (i) the submission of joint resolutions on tuna conservation and management measures by SWIOFC member countries to the Indian Ocean Tuna Commission (IOTC) for consideration, resulting in IOTC adopting eight of these<sup>20</sup>; (ii) countries’ joint sea and aerial patrols in collaboration with the EU, Southern African Development Community, and WWF; (iii) establishment of a Regional Observer Scheme – a pool of regionally-recognized fisheries observers available for deployment to inspect licensed vessels fishing in

<sup>18</sup> Including the United Nations Convention on the Law of the Sea of December 10, 1982, the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of December 10, 1982, the 1995 FAO Code of Conduct for Responsible Fisheries, and the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

<sup>19</sup> The guidelines are available at <https://www.commissionoceanindien.org/portfolio-items/swiofish1/?portfolioCats=27>.

<sup>20</sup> IOC’s completion report recorded stakeholders’ sense of being empowered to take a more active role in engaging with the IOTC and ensuring their unique concerns were considered and discussed at international fisheries management fora.



countries' Exclusive Economic Zones (EEZs); and (iv) development of a regional strategy for tuna fisheries and studies to inform a future Regional Fisheries Framework Agreement. SWIOFC and its member countries also participated in regional and international meetings and workshops to discuss common interests, and several studies and communication products were produced to increase awareness of the region's fisheries and SWIOFish.<sup>21</sup> These activities informed countries' fisheries legislation and MCS capacities. For example, the World Bank reported that the participation of Comoros Directorate General of Fishery Resources (*Direction Générale des Ressources Halieutiques*, DGRH) and Mozambique Ministry of Sea, Inland Waters, and Fisheries (*Ministério do Mar, Águas Interiores e Pescas*, MIMAIP) staff in the regional meetings informed the updating of their fisheries management plans, laws, and regulations (see more below), and the participation of Comoros and Tanzania in the joint patrols enhanced their staff's capacity for EEZ compliance inspections.

37. Important steps were taken to secure sustainable cooperation. In October 2019, agreement was reached by SWIOFC and its Statutory Bodies<sup>22</sup> on a regional financing mechanism for SWIOFC as planned. The agreement was to set up a multilateral trust fund to receive voluntary funding from members countries and donors to support the implementation of SWIOFC's work plans. This followed a study that proposed several financing mechanisms, namely the upgrade of SWIOFC's status from an Article VI Commission (fully integrated within FAO and funded by FAO's Regular Program) to an Article XIV Commission (autonomous with a budget financed by mandatory contributions); minimal financial contributions from member countries; and the trust fund option. To project supported this agreement by financing the preparation of the options study, which relied on three prior project-financed studies<sup>23</sup>, and regional consultations. At project closing, SWIOFC members countries were yet to capitalize the trust fund, reportedly because of budget prioritization toward Coronavirus 2019 (COVID-19) recovery.

38. The operation provided SWIOFC member countries with information and technical advice that informed the signing of eleven bilateral fisheries agreements among themselves and with non-SWIO economies, exceeding the target of six. The agreements were (i) between Comoros and the EU (later frozen on account of an EU Red Card); (ii) between Madagascar and Japan; (iii) between Mauritius and Seychelles; (iv) between Mauritius and Japan; (v) between Mozambique and Namibia; (vi) between Mozambique and Malawi; (vii) between Mozambique and Japan; (viii) between Seychelles and Taiwan, China; (ix) between Seychelles and China; (x) between Seychelles and Japan; and (xi) between Seychelles and South Korea. In addition, four Fisheries Partnership Agreements were signed between France (Réunion), Madagascar, Mauritius, and Seychelles and the EU, allowing EU vessels to fish in their EEZs and setting capacity and fee rules. In addition, Comoros signed several partnerships agreements in the region with SWIOFC members, including with the Tanzania Fisheries Research Institute (TAFIRI)<sup>24</sup> and Madagascar's Fisheries and Marine Sciences Institute (*Institut Halieutique et de Sciences Marines*) for research and stock assessments, and with France (La Réunion) on safety at sea measures. The project supported these result by financing travel and discussion expenses of countries' representatives, meetings of technical group members, and a variety of national-level capacity building activities and studies informing countries of their fish stocks prior to negotiating the agreements. While in line with the indicator's definition, this result

<sup>21</sup> See, for example, <https://www.youtube.com/watch?v=C6VDg8x318Q>.

<sup>22</sup> Working Group on Data and Statistics, Working Group on Demersal Fishery, Working Group on Pelagic Fishery, Scientific Committee, Minimum Terms Conditions Task Force, and Working Party on Collaboration and Cooperation in Tuna Fisheries Task Force.

<sup>23</sup> 1. J Swan 2017. Legal, Policy, Institutional and budgetary implications of formulating, adopting and implementing a regional fisheries cooperation and coordination agreement by the South West Indian Ocean range states; 2. JR Payet 2017. Processing with technical discussions on the framework Agreement for Cooperation on fisheries of common interest for the South West Indian Ocean (SWIO) countries and fisheries accord for share stocks (African Union/WWF) under the common process and driven by SWIOFish1/SWIOFC; and 3. S Sweenarain 2018. Cost-Benefit Analysis and sustainable financing of a Regional Fisheries Framework Agreement for the shared tuna fisheries resources in the South West Indian Ocean Basin.

<sup>24</sup> See [https://www.youtube.com/watch?v=WAVzR\\_y4J4c](https://www.youtube.com/watch?v=WAVzR_y4J4c).



is less pertinent to the achievement of Outcome 1 because the agreements were mostly between SWIO and non-SWIO countries.

**Outcome 2: Improve the management effectiveness of selected priority fisheries at national level**

**Table 4: Outcome 2 Target and Result Summary**

Indicator	Target	Result
<b>PDO-level Indicator: Fisheries Management Plans implemented</b>	<b>10</b>	<b>11</b>
- Tanzania: Fisheries management plans (FMP) consulted, approved and implemented	6	7
- Mozambique: Management plans for demersal line fisheries, coastal shrimp, and deep-sea crustaceans	3	3
- Comoros: EAF demersal fisheries management plan	1	1
<b>IRI: Fisheries Information System (FIS) / Dashboards operational</b>	<b>N/A</b>	<b>N/A</b>
- Tanzania: Fisheries Information System publishes data regularly with updated data	Yes	Yes
- Mozambique: Dashboard in place and made public with regularly updated data	Yes	Yes
- Comoros: Dashboard in place and made public with regularly updated data	Yes	No
<b>IRI: At least one key policy or legal instrument for fishery management developed or updated for each country</b>	<b>N/A</b>	<b>N/A</b>
- Tanzania: Fisheries Act revised, consulted and submitted to cabinet	Yes	Yes
- Mozambique: Aquaculture Strategy reviewed and updated	Yes	Yes
- Mozambique: Midterm review of the Fisheries Master Plan and update	Yes	Yes
- Mozambique: The Sea and Policy Strategy	Yes	Yes
- Comoros: Fisheries law application texts adopted	Yes	Yes
<b>IRI: Control of fishing activity</b>	<b>N/A</b>	<b>N/A</b>
- Tanzania: % of noncompliance incidences in a year	50%	45%
- Comoros: Vessels inspected, as a percentage of the motorized fleet	10%	25.2%
- Mozambique: Actual days of patrols in the target area, disaggregated by (i) land patrols (ii) coastal patrols	600	992
▪ Mozambique: Actual days of land patrols in the target area	360	695
▪ Mozambique: Actual days of coastal patrols in the target area	240	297
IRI: Mozambique: Situation Plan elaborated and submitted for approval to the relevant authority	Yes	Yes

39. **Outcome 2 was substantially achieved thanks to the development of priority fisheries’ management plans and the implementation of their key management measures, establishment of updated data systems, enhancement of countries’ legislative frameworks for fisheries management, and improvement of countries’ fishing activity control capabilities.**

The fisheries management plan implementation target was achieved in Mozambique and partially achieved in Comoros and Tanzania.

40. *Comoros’ 2013 Demersal Fisheries Management Plan* was evaluated and expanded to a new National Coastal Fisheries Management Plan that was adopted in December 2020 as a framework for the development and management of demersal and pelagic coastal fisheries, consistent with FAO’s EAF approach. The plan was partially implemented<sup>25</sup> with

<sup>25</sup> Defined for Comoros as all motorized vessels registered and licensed as per law, fishing units operating in targeted fisheries are regularly inspected, a satellite-based fishing vessel monitoring system is operational, and a fisheries monitoring center is equipped and functional.



67 percent vessel registration (2,104 of 3,000 vessels) compared to a 100 percent target with close engagement of targeted local communities and a minimal licensing rate (19 vessels reported in 2021). Vessels were regularly inspected through land and sea patrols with 25.2 percent of vessels inspected at closing compared to a 10 percent target. A fisheries monitoring center was built, equipped, and made functional, housing the country's existing satellite-based fishing vessel monitoring system that monitors and communicates with licensed industrial vessels operating in the EEZ, as planned. The project financed a consultancy, technical assistance from FAO, and consultation and validation workshops to review, expand, and validate the management plan, a consultancy that designed the vessel registration system, development of a computerized registration database with cloud-based software and hardware, training of national and local registration personnel, registration campaigns in the three islands, construction of the fisheries monitoring center and its equipment, the vessel monitoring system's software license cost, and training of staff.

41. In *Mozambique*, a Deep Sea Crustaceans Management Plan (2021-2025) was developed and the 2014-2018 Sofala Coastal Shrimp Management Plan and Demersal Fisheries Management Plan were updated for 2021-2025. The plans were approved and implemented as planned<sup>26</sup>, resulting in licensing capacity within maximum thresholds established in the plans on the basis of stock assessments and in close collaboration with targeted local communities. In 2022, 34 licenses were provided for coastal shrimp compared to a maximum quota of 39 licenses; 23 licenses were provided for deep-sea crustaceans compared to a maximum quota of 27 licenses; and no licenses were provided for demersal line fisheries compared to a maximum quota of four licenses. The project financed consultancies and stock assessments to develop and update the management plans, technical assistance for strengthening the licensing information system and making information public online, MCS activities, such as patrols to enforce the licensing, and technical assistance to MCS agencies.

42. In *Mainland Tanzania*, management plans for octopus, prawn, and small pelagic were consulted, approved, and substantially implemented.<sup>27</sup> In 2022, all vessels were registered in collaboration with local communities, but only 58 percent of them were licensed compared to a 100 percent target (5,547 of 9,563 vessels), and vessels were inspected on a quarterly basis by the MCS Department as planned. In *Zanzibar*, management plans for octopus, reef fisheries, and small pelagic fisheries were consulted, approved, and substantially implemented: in 2022, all vessels were registered but only 50 percent of the vessels were licensed (3,998 of 7,942 vessels); and vessels were quarterly inspected by the MCS Department as planned. Zanzibar also developed a Fisheries Master Plan with a five-year action plan to inform its new Blue Economy Strategy. Tanzania's *Deep Sea Fishing Authority* (DSFA, responsible for the management of Tanzania's EEZ) developed a Tuna Fishery Management Plan and submitted it for the approval of the Ministry of Livestock and Fisheries (MLF) and MBEF in August 2022; however, the plan is yet to be approved. Despite its pending approval, the plan has been implemented by tuna fisheries management stakeholders. For example, WWF and DSFA have been using the plan to communicate Tanzania's allocation of the tuna fishing effort to IOTC. Vessels entering Tanzania's EEZ are registered and licensed (30 vessels in 2022) and are regularly inspected through on-boarding on vessels as planned. A fisheries monitoring center with a state-of-the-art vessel monitoring system (Themis Web System with an Automatic Identification System [AIS]) and standard operating procedures was established at the DSFA, allowing authorized officers from Mainland Tanzania, Zanzibar, and DSFA to securely access MCS functions and data. The center and system are operated by DSFA. The project financed consultancies and data collection activities to prepare the management plans, stakeholder meetings and workshops to review and validate them, administrative costs of registration, licensing, and inspection (fuel,

<sup>26</sup> Defined for Mozambique as the implementation of industrial and semi-industrial fishing licensing capacity measures.

<sup>27</sup> Defined for Tanzania as all motorized vessels over 11 meters registered and licensed as per law, fishing units operating in targeted fisheries are regularly inspected, a satellite-based fishing vessel monitoring system is operational, and a fisheries monitoring center is equipped and functional.



motorcycles, on-boarding boat, phones), the center's refurbishment costs, and the vessel monitoring system's software, hardware, license, training, and standard operating procedures' preparation.

Operational Fisheries information systems/dashboards were established in Mozambique and Tanzania but not in Comoros.

43. In *Comoros*, at closing a FIS was developed at DGRH with data routinely collected in various zones and a public dashboard on the DGRH website that was updated annually until 2021.<sup>28</sup> The FIS featured a modern statistical data collection and transmittal system using Open Data Kit Interface, replacing previously used paper forms, with data on artisanal fisheries, octopus fisheries, fishing effort, and contribution of the fishing sector to GDP. The data were aggregated in a central database at the DGRH for analysis with simplified stratification of data on demersal fish and tuna. The project financed the participation of key staff in FAO's international course on sample-based statistics for artisanal fisheries and data collection campaigns.

44. In *Mozambique*, the project financed the establishment of an integrated FIS (*Sistema de Informação Integrado do Mar, Águas Interiores e Pescas*, SIIMAIP<sup>29</sup>) with a public dashboard<sup>30</sup>, and the FIS is regularly updated. The project financed the hiring of a consulting firm that developed the SIIMAIP and dashboard, consultancy and operating costs of data collection campaigns and equipment, such as motorbikes, computers, and laptops, and an update of the 2014-2018 Statistics Master Plan for 2017-2021.

45. FISs are available in Mainland Tanzania, Zanzibar, and DSFA, publishing data regularly with updated data. In *Mainland Tanzania*, the previous Catch Assessment Survey (CAS, using Microsoft Access) database was converted into an electronic CAS database system (eCAS database<sup>31</sup>) with features that include a mobile phone application to facilitate data transfer and sharing and real-time data availability, housed by MLF. The eCAS produces reports following internationally accepted FAO quality standards.<sup>32</sup> In *Zanzibar*, a fishery catch database (SAMAKIS<sup>33</sup>) was developed and is operational in all ten districts. Data collection applies a new catch sampling protocol in all of Zanzibar's landing sites by MBEF's Statistics Unit. The SAMAKIS operates on any device with internet access, and it processes, analyzes, and produces social, economic, and scientific reports, including on catch/production by specie, value, and catch per unit effort on a periodic basis for decision making. A public fisheries dashboard website was available at closing, and is presently being expanded to present a wider range of blue economy data. In *DSFA*, a decentralized FIS was developed<sup>34</sup>, supported by a mobile phone-based platform for data collection and update. The FIS is linked to the vessel monitoring system to allow comparison of vessel data with fish catch locations. The FIS is used to inform the IOTC on tuna catch per unit effort and frequency size, used to determine Tanzania's yellowfin tuna quotas. DSFA uses the FIS to publish data regularly, including semi-annually to the IOTC and quarterly to MLF and MBEF. Information is also made available to SWIOFC and the public upon request in addition to hard-copy newsletters available to visitors and distributed during national and international meetings.<sup>35</sup> The project financed the development and installation of the three systems through a joint consultancy, training of agencies' staff on the operation of the systems, mobile phones for data inputs, and motorbikes for data collection in Mainland Tanzania's landing sites. At closing, initiatives were underway to link the three databases

<sup>28</sup> No operating links are available for the FIS and the public dashboard.

<sup>29</sup> Available on ADNAP's website at [adnap.gov.mz](http://adnap.gov.mz) with access user code and password.

<sup>30</sup> <https://siimaip.mimaip.gov.mz/siimaip/public/dashboard>.

<sup>31</sup> <https://smartcas.net/>.

<sup>32</sup> Available at <https://www.mifugouvuvu.go.tz/publications/66>.

<sup>33</sup> <http://167.71.187.181/samakissamakiss.php>.

<sup>34</sup> [Fis.dsfa.go.tz](http://fis.dsfa.go.tz).

<sup>35</sup> See, for example, <https://www.yumpu.com/en/document/read/63584637/jodari-newsletter>.



with a gateway connection/linkage; however, the connection was not established because of software differences (the FIS uses MySQL while the SAMAKIS and eCAS use php software), requiring expertise and funds which the borrowers are yet to allocate.

The three countries developed key policy and legal instruments for fishery management as planned.

46. In *Comoros*, the 2007 Fisheries Law was revised and promulgated by the President in April 2020, and 18 implementation texts, decrees, and ministerial orders of the Fisheries Law were adopted, related to institutional arrangement for fisheries, MCS, fisheries management, fish quality and hygiene, and sanitary conditions. Additional texts are currently being prepared and are under various stages of discussion (none adopted yet): (i) Order on tuna fisheries and compliance with IOTC resolutions, (ii) Joint order with the Ministry of Finance on the collection of various fees, (iii) Order on the organization of fishery product collection activities, (iv) Decree on artisanal and traditional fishing, (v) Decree on industrial fishing, (vi) Revised decree establishing the National Center for Fisheries Control and Surveillance (*Centre National de Contrôle et de surveillance de Pêche*), (vii) Text on technical specifications of gear and fishing methods, and (viii) Text on the rates, methods of collection, and distribution of proceeds from duties, taxes, royalties, fines, and confiscations.

47. In *Mozambique*, a 2020-2030 National Aquaculture Development Strategy was developed and approved by the Council of Ministers in 2020; a Mid-term Review and an update of the Mozambique's Fisheries Master Plan (2010) were prepared and approved by MIMAIP in 2019, resulting in the preparation of a new master plan that reflects the government's priorities; and a Policy and Strategy of the Sea was developed and approved in 2018 by the Council of Ministers, all as planned. In addition, the government updated the 2013 Maritime Fisheries Regulation (approved in 2020 by the Council of Ministers), revised the 1986 Law of the Sea (approved in 2019 by the Assembly), revised the legal framework of the Maritime Courts Law (enacted by the President in 2022), prepared a National Strategy and Action Plan for Mangrove Management (2018-2023, approved by the Council of Ministers in 2018), developed a New Fisheries Statistics Master Plan (2017-2021, approved by MIMAIP in 2017), and developed a new Fisheries Products Quality Control Regulation (approved in July 2020 by the Council of Ministers). A Maritime Spatial Planning Plan was prepared and approved by the Council of Ministers in November 2021 as planned. It includes a framework and a methodology, diagnosis, proposal, a monitoring and evaluation (M&E) plan with indicators for measuring and evaluating zoning and planning measures, and a public participation process. In conjunction with the 2019 Law of the Sea and 2018 Policy and Strategy of the Sea, the Plan will support the development of the country's Blue Economy Roadmap, which will guide sustainable coastal and marine management and efficient mobilization of investments. The project financed the development of this plan.

48. In *Mainland Tanzania*, MLF reviewed the Fisheries Act (2003) and proposed revisions on day fishing, consulted with stakeholders (government agencies, communities, non-government organizations and community-based organizations), and submitted the revised Act to a Cabinet Parliamentary Committee that approved it in 2022 as planned. MLF also reviewed and revised the Marine Park Reserve Unit Act (1994), approved by the Cabinet in 2022; and drafted and approved a Fisheries Policy and amendments to fisheries Regulations (GN. 383 of 2019 and GN.492 of 2020) in 2020. *Zanzibar's* Fisheries Act (2010) was revised by MBEF and approved by a Principal Secretary Steering Committee, while the Fisheries Policy (2014) was revised and approved by a President Committee in 2022. *DSFA* drafted a new Deep Sea Fishing Policy and a Deep-Sea Fisheries Management and Development Act and Regulations, and these were approved in 2020 and 2021 by the Zanzibar Revolutionary Council and Mainland Tanzania Ministers Cabinet and Parliament, respectively.



49. In all three countries, the project supported these results by financing the preparation of fisheries studies, consultancies to provide technical inputs to the implementing agencies, and costs of stakeholder consultation and validation workshops and meetings.

The control of fishing activity targets was exceeded in all three countries.

50. In Comoros, 25.2 percent of motorized vessels were inspected at closing (756 of 3,000 vessels), more than twice the target. This was thanks to project-financed reinforcement of inspectors’ capacity through training, purchase of inspector cars, participation in regional patrols, and operating costs; construction of a new building for the Fisheries Monitoring Center and its staff, maintenance of a functional vessel monitoring system to monitor foreign industrial fishing vessels and industrial fishing vessels, and signing of cooperation agreements between the fisheries administration and other entities engaged in MCS activities, such as the Coast Guard.

51. In Mozambique, MIMAIP carried out 695 days of land patrols and 297 days of coastal patrols in the target areas in Sofala bank at closing in 2021, exceeding the end targets, and throughout the project, it carried out 2,300 days of land patrols and 1,029 days of coastal patrols. The increased patrol effort translated in 2020 to an increase in artisanal gear inspections, illegal gear and catch confiscation or destruction, and fines, followed by a decrease in 2021. For example, 1,400 fishing gear items (boats, fishing nets, and other fishing equipment) were destroyed in 2020 while 111 were destroyed in 2021. Over the course of the project, more than 4,500 illegal fishing gear were destroyed. To achieve this result, the project financed the development of an MCS strategic study for industrial, semi-industrial, and artisanal fisheries, updating of the National Action Plan for Illegal, Unreported, and Unregulated (IUU) Fishing Prevention (consultancies and validation workshops), surveillance activities’ costs (vehicles, equipment, participation in regional patrols, and operating costs), and trainings of MCS staff.

52. In Tanzania, there was an overall 45 percent noncompliance rate at closing compared to a 50 percent target, reflecting the total rate of non-licensed vessels in 2022: 42 percent in Mainland Tanzania (4,016 out of 9,563 vessels), 50 percent in Zanzibar (3,944 out of 7,942 vessels), and full compliance in the EEZ (all 30 vessels). To achieve this result, the project financed inspection activities (purchase of patrol and on-boarding boats, air patrols, operating costs (fuel), and training of inspectors), the DSFA-based Fisheries Monitoring Center and Vessel Monitoring System, and a boat slipway at Fumba (completed and handed over in January 2022). Tanzania also reported full elimination of blast fishing in its coastal regions since 2019 with only one incident taking place in 2021 compared to 27,971 blast fishing incidents in 2016. This result was independently verified and recorded by the Tanzania Blast Fishing Monitoring Network, a coalition of several local and international non-government organizations (NGOs), including Sea Sense and WWF.

**Outcome 3: Improve the management effectiveness of selected priority fisheries at community level**

**Table 5: Outcome 3 Target and Result Summary**

Indicator	Target	Result
<b>PDO-level Indicator: (Local Level) Co-management units achieving at least 2 performance targets (2)</b>	<b>N/A</b>	<b>N/A</b>
- Tanzania: Proportion (%) of targeted community-based management units achieving at least 2 performance targets	92.5%	78%
- Mozambique	30	43
- Comoros	6	6
<b>IRI: Number of target community individuals participating in value chain enhancement through project initiatives</b>	<b>N/A</b>	<b>N/A</b>
- Tanzania: Village Savings Loan Scheme recipients	2,200	17,949



- Mozambique: Participants in Rotating Saving and Credit Scheme (PCR) cycles	3,000	17,546
- Comoros: Number of value-chain operators benefitting from business and value chain development training	600	2,134
<b>IRI: Operational fisheries infrastructure</b>	<b>N/A</b>	<b>N/A</b>
- Tanzania: Operationalized targeted fisheries management infrastructure	3	23
- Comoros: Number of operational fisheries infrastructure	14	13
- Mozambique: Infrastructures to support artisanal fisheries completed and operational	6	5
<b>IRI: At least one target fishery value chain enhanced per country</b>	<b>N/A</b>	<b>N/A</b>
- Tanzania: At least one recommendation is implemented for each priority fish value chain study for economic benefits	3	7
- Mozambique: Targeted value chain actors receiving support from the FFP Matching Grants Scheme, disaggregated by (i) individual family applicants and (ii) commercial businesses	405	1,217
▪ Mozambique: Individual family applicants receiving support from FFP’s Matching Grants Scheme	400	1,213
▪ Mozambique: Commercial Businesses receiving support from FFP’s Matching Grants Scheme	5	4

53. **Outcome 3 was substantially achieved thanks to the establishment or reinforcement of co-management units with recognized mandates and established revenue streams, and enhancement of priority local fisheries value chains through research, training, and investments.**

Co-management targets were exceeded in Mozambique, achieved in Comoros, and partially achieved in Tanzania.

54. In *Comoros*, six CMUs composed of fishing community members from 15 villages in Anjouan, Moheli, and Grand Comore islands, achieved two of the four performance targets as planned<sup>36</sup>: the CMUs updated their existing co-management agreements and signed them with the fisheries administration, expanding their village-level agreement to several villages using the same fishing grounds, and met regularly with the administration (at least twice a year).<sup>37</sup> The CMUs implemented the community management measures of the national Demersal Fisheries Management Plan, including seasonal fishing closures, with the first closures carried out in Ndrondroni, Ouallah, Hantsindzi, Ndroudé, Hajoho, and Sadampoini. The CMUs also utilized new fishing techniques provided to them by the project, such as low-cost fish aggregating devices, octopus pots, and lobster traps. The project financed the engagement of community facilitators (*animateurs communautaires*) who supported and monitored the CMUs, island coordinators, costs of community meetings and ceremonies, training on management measures, fish aggregating devices, and learning exchanges between communities.

55. In *Mozambique*, 43 CCPs achieved three of the four performance targets<sup>38</sup>, exceeding the 30 CCP target: they signed co-management agreements with their respective districts, they regularly participated in District Co-Management Committees’ meetings, and they carried out bi-weekly meetings, with a halt in meetings during the COVID-19 pandemic. The artisanal fishers’ licensing rate improved but remained below the performance target in most project districts (42 percent on average). The World Bank reported that co-management interventions in Mozambique informed the development of new co-management articles during the revision of the 2013 Maritime Fisheries Regulation, and, in turn, the new articles are now influencing the implementation of activities by the CCPs - existing and new supported by the

<sup>36</sup> Defined for Comoros as agreement between the administration and communities on Community Management Plans, island co-management meetings held at least twice a year, at least 85 percent of vessels, static gears, and aquaculture operations registered for each CMU, and at least 50 percent of vessels, static gears, and aquaculture operations licensed for each CMU as per law.

<sup>37</sup> See <https://www.youtube.com/watch?v=XoBwjPblj1I&t=10s> and [https://www.youtube.com/watch?v=y6\\_Ujn9FErU](https://www.youtube.com/watch?v=y6_Ujn9FErU).

<sup>38</sup> Namely regular CCP meetings, agreements between districts and CCPs, CCP representation in all District Co-management Committee meetings, and fishing gear licensing above 74 percent.



follow-on Sustainable Rural Economy Project (P174002). The project financed studies on CCP sustainability, CCPs' training, development of new standard statutes, updating of CCPs' legal frameworks, support for the demarcation of CCPs' fishing right areas, and licensing campaigns.

56. In *Tanzania*, 116 out of 149 CMUs supported in both Mainland Tanzania and Zanzibar (78 percent) achieved two or three of the four defined performance targets, related to vessel licensing, incorporation of fisheries' management measures in community-managed areas' management plans, revenue raising, and implementation of area closure measures as planned. In *Mainland Tanzania*, 17 of the 50 supported Beach Management Unit (BMUs, 34 percent) in the priority districts of Mkinga, Tanga City, Pangani, Bagamoyo, and Lindi Rural achieved two or more of these results, while in *Zanzibar*, all 99 supported Village Fisheries Committees (VFCs, 100 percent) in the three MCAs achieved at least two of the targets. To achieve these results, in Mainland Tanzania the project financed the training of the 50 BMU members on fisheries management and leadership; development of twelve Collaborative Fisheries Management Areas (CFMA) management plans with management measures for priority fisheries, informed by the national fisheries management plans; training on the implementation of key measures, including octopus seasonal closure in line with the Octopus Management Plan in Pangani and Kilwa districts, prawn seasonal closure in line with the Prawn Management Plan in Kibiti and Bagamoyo districts; joint patrols by BMUs and district stakeholders to prevent blast fishing and littering in CFMAs and ensure vessel registration; training on revenue and licensing fee collection on behalf of the local government authorities and retainment of ten percent of collected revenue to finance BMUs' work plans<sup>39</sup>; and community awareness workshops. In Zanzibar, the project financed the development of the three General Management Plans for the three MCAs (as well as for two new MCAs: Changuu-Bawe MCA between Changuu Island and Bawe Island and Tumbu MCA in Unguja); the implementation of key management measures as per the approved fisheries management plans, including training on octopus seasonal closures (a practice that was later replicated to MCAs in Pemba given the successful results) and establishment of a coral reef benthic monitoring system at all the sites to inform MCAs' management; and training of VFC members on fisheries management functions, such as conflict management, record management, licensing and revenue collection and expenditure, and governance. Details on actions taken by each BMU and VFC are available in the project's files.

The target for community individuals participating in value chain enhancement was exceeded in all three countries.

57. In *Comoros*, 2,134 local fisheries value chain operators benefited from business and value chain development training, exceeding the 600 target: 244 operators (16 percent female) received business planning, packaging, and marketing training; and 1,890 operators (54 percent female) received training on good hygiene practices and proper use of sanitary kits that included cooler lots, scales, knives, gloves, and aprons. In addition, 600 people, including 355 women (56 percent), received fish conservation and sale equipment. The project financed the hiring of a firm that provided the training, and the equipment.

58. In *Mozambique*, the project established new and revitalized existing PCR Associations in Nampula, Sofala, and Zambezia provinces, reaching 17,546 fishing community members, 48 male and 52 percent female, above the 3,000 target. The PCR Associations served as small banking systems, jointly saving members' financial contributions, and lending them with interest. After several cycles (approximately 20 months), the interest was distributed among the shareholders who reportedly used it to pay for social and economic activities, such as house upgrading, school expenses, and boat motor repair. In Nampula Province, the number of participants was 3,449, 44 percent male and 56 percent female in Angoche, Larde, Liupo, Mogincual, and Moma districts; in Sofala Province, the number of participants was 5,599, 42 percent male and 58 percent female in Beira, Buzi, Dondo, Muanza, and Muchange districts; and in Zambezia Province,

<sup>39</sup> MLF recorded a total of US\$33,803 collected in January 2022 compared to US\$24,798.6 collected in January 2021.



the number of participants was 8,498, 54 percent male and 46 percent female in Chinde, Inhassunge, Mucubela, Maganja da Costa, Namacurra, Pebane, and Quelimane districts. The project financed the recruitment of service providers (a firm and NGOs) who helped to establish and revitalize the PCR Associations.

59. In *Tanzania*, the project helped 1,220 existing and new economic groups (336 in Mainland Tanzania and 884 in Zanzibar) to establish a VSL Scheme, with a total membership of 17,949 people from the targeted communities compared to a 2,200 target, 52 percent male and 48 percent female. Of the 1,220 groups, 332 were connected to an electronic financial management system (Fisheries Group Management System) to assist in the management of their funds and allow the government to check their status and provide support as needed. The beneficiaries received small loans at a low interest, and they used them to support small businesses, including horticulture activities, retail business, salt and achari (spice) processing, khanga (cloth) and soap making, food vending, and poultry and fishing activities. Reportedly, the loans also allowed small enterprises to access credit to diversity and strengthen their livelihoods. The project financed groups' mobilization, entrepreneurship training, and equipment (388 mobile phones, 330 safe boxes, and counter books for record keeping).

The target for operational fisheries infrastructure was exceeded in Tanzania and substantially achieved in Comoros and Mozambique.

60. In *Comoros*, the project financed a total of 18 infrastructures in the three islands as well as ice silos in several sites. Of these, 13 fisheries infrastructure investments are operational compared to a target of 14: seven cold chain chambers equipped with cold stores or ice machines, including three in Grande Comore (in Chindini, Foubouni, and Moroni-Hankounou) and four in Najouan (in Domoni, Mutsamudu, Sadampoini, and Sima); a fish shop in Ntsaouéni, Grande Comore; and five storage structures: one in Male, Grande Comore, one in Bimini, Anjouan, and three in Hamavouna, Ndrondroni, and Wallah II in Moheli, the latter also featuring a parking area. The infrastructure is operated mostly by local cooperatives, and in some cases by the administration.

61. In *Mozambique*, project financed the construction of a fish market in Namige District, Nampula Province, a fish market in Cuassiane, Zambezia Province, and three extension agent houses and offices – one in Namige District, Nampula Province, one in Chinamacondo District, Sofala Province, and one in Chinde District, Zambezia Province, all operational. This result is slightly below the end target of six operational infrastructures.

62. In *Tanzania*, the project financed a total of 23 investments compared to a target of 3: seven fisheries management infrastructure in Mainland Tanzania, 13 in Zanzibar, and three EEZ-related infrastructures, all of which are operational. In *Mainland Tanzania*, the project financed the establishment of five BMU offices (in Dunda in Mbarali District, Kipumbwi and Saadani in Pangani District, Sudi in Lindi Region, and Zingibari in Tanga Region), a wet laboratory within TAFIRI in Kunduchi that analyzes fish and water quality parameters, and staff accommodation for the Tanga Coelacanth Marine Park staff. In *Zanzibar*, the project financed the rehabilitation of the Nungwi fish market in Unguja (expansion of the auction area, insulated roof, elevated flooring with drainage, sectioning of landing, sales, and selling, accessible toilets for men and women, electricity connection, rainwater collection tanks, and a well); rehabilitation of the Tumbe fish market in Pemba (shades, sectioning, electricity connection, and rainwater collection tanks), supply of ice igloos, and installation of an ice plant; supply, installation, and commissioning of cold rooms at Malindi landing site in Unguja; construction or refurbishment of nine ranger surveillance posts/field offices (in Fumba, Kikungwi, Kizimkazi, Mazizini, Mkokotoni, Pungume, and Uroa in Unguja and in Misali and Wesha in Pemba)<sup>40</sup>; and refurbishment of the MBEF

<sup>40</sup> Construction of two MCA offices in Mkokotoni and Mazizini; refurbishment of three MCA offices in Kizimkazi and Uroa in Unguja and in Wesha in Pemba; construction of one new ranger surveillance post and field office in Pungume Island; refurbishment of three ranger



administration building in Maruhubi, Unguja (Nyangumi House) with new flooring, a new rest area, a water system, leakage control, air conditioning, new accessible toilets, and a library/archive. Finally, the project financed the refurbishment of the DSFA vessel monitoring system room; the construction of a DSFA boat ramp; and construction of a changing room for DSFA inspectors.

Tanzania and Mozambique exceeded their fishery value chain enhancement targets.

63. In *Mozambique*, a Matching Grants Scheme (*Mais Peixe Sustentável*, MPS) was implemented in the three provinces and supported a total of 1,217 recipients compared to a target of 405. MPS Window 1 supported 1,213 individual family applicants: 299 in Nampula Province, 514 in Sofala Province, and 400 in Zambezia Province (75 percent men and 25 percent women). The applicants received a total of MZN114,770,366 (US\$1,780,088) in grant resources, used to pay for transport means (vehicles, motorcycles, and bicycles), inefficient fishing gear replacement (vessels, fishing nets, and engines), and post-harvest loss reduction assets (freezers, cold rooms, cooling boxes, and scales). Beneficiaries also were trained on topics related to sustainable management of marine resources. MPS Window 2 supported four commercial enterprises for a total of MZN44,283,028 (US\$686,829): Instituto Politécnico Mártir Cipriano and Agrobusiness Moçambique, Lda in Nampula Province, Moçambique Aquacultura e Agricultura in Sofala Province, and Aquapesca in Zambezia Province. The grants were used by the enterprises to purchase and operate income generating assets related to aquaculture development, such as coolers, pumping equipment, processing and transportation equipment, fish tanks, fingerlings, and feed. Notably, Mozambique's MPS was considered highly impactful by the borrower, resulting in its current scale-up in follow-on operations (see Section IV.D) with additional funding from other partners, including International Fund for Agricultural Development and Japan International Cooperation Agency. In addition, 239 community members and interns received training on the use of the aquaculture equipment to facilitate their employment in these companies.<sup>41</sup> The project financed the grants, value chain analyses for artisanal fisheries and aquaculture, socioeconomic studies, analysis of financial entities' capacities, the design of the MPS, and training by consultants. The project also provided the National Institute of Fish Inspection laboratory equipment and reagents and supported the preparation of an accreditation roadmap to facilitate its accreditation by the EU.

64. In *Mainland Tanzania*, seven priority fisheries value chains were enhanced based on value chain studies. The fisheries were mariculture (seaweed), small pelagics (sardines), octopus, prawns, reef fish, and tuna. For mariculture, the recommendation to improve seaweed processing instead of selling them raw to increase revenue was implemented by developing dried seaweed qualification standards TBS/AFDC 23 (5714) with operational guiding standards. For small pelagics, the recommendation to establish quality standards to facilitate export was implemented by developing quality standards TBS/AFDC 23 (5713) for exported powdered sardines.<sup>42</sup> For octopus, prawns, reef fish, and tuna, the recommendation to understand the biological and chemical composition of products to enhance export was implemented by constructing the new TAFIRI wet lab in Kunduchi. In *Zanzibar*, the priority fish value chains were mariculture, octopus, and sea cucumber. For mariculture, the recommendation to scale up seaweed harvesting and support the seaweed value chain from production to sales was implemented by supplying 500 simple hand-pulled seaweed barges to seaweed farmers in 77 villages (49 villages in Unguja and 28 villages in Pemba), able to carry up to 500 kilograms of seaweed per trip to facilitate harvesting instead of the common use of small plastic bags, and providing 327 seaweed farmers training

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surveillance posts and field offices in Fumba and Kikungwi in Unguja and one in Misali int Pemba. See <https://www.youtube.com/watch?v=SIUzKIPbzbo>.

<sup>41</sup> See MPS beneficiaries' testimonials at [https://www.proazul.gov.mz/wp-content/uploads/2022/03/ProAzul\\_VOICES-FROM-THE-SEA\\_2021\\_Nov-v2.pdf](https://www.proazul.gov.mz/wp-content/uploads/2022/03/ProAzul_VOICES-FROM-THE-SEA_2021_Nov-v2.pdf); <https://www.proazul.gov.mz/historias-de-sucessos/>; and <https://www.youtube.com/watch?v=Z4wRwfvkq-Y>. More visual content on the MPS is available at <https://www.youtube.com/watch?v=l4ItWR2oy34>.

<sup>42</sup> See the ministry's announcement at [https://www.ippmedia.com/en/news/ministry-sets-standards-dry%C2%A0seaweed-and-sardines%E2%80%99-flour?fbclid=IwAR39wSjEi3IsWZ\\_UoaFyvgj0XtnsH04eAZ2QZJqoHwWvSe7KsW-cJiclmNg](https://www.ippmedia.com/en/news/ministry-sets-standards-dry%C2%A0seaweed-and-sardines%E2%80%99-flour?fbclid=IwAR39wSjEi3IsWZ_UoaFyvgj0XtnsH04eAZ2QZJqoHwWvSe7KsW-cJiclmNg).



on seaweed soap, juice, and powder production – products which are now produced in Zanzibar at higher value than the raw product.<sup>43</sup> For octopus, the recommendation to ensure sustainable harvesting was implemented by enforcing seasonal octopus closures. For sea cucumber, the recommendation to increase production was implemented by training 600 coastal groups in Unguja and Pemba on sea cucumber production and construction of sea cucumber pens (breeding facilities) in coastal areas in Pemba. The project financed the value chain studies’ consultancies, barges and pens, lab infrastructure and equipment, and training by consultants.

65. **Project beneficiaries.** The borrowers reported a total of 379,162 direct beneficiaries, exceeding the 105,050 beneficiary target. However, this does not reflect the number of unique beneficiaries across interventions as beneficiaries were aggregated by intervention type in each country. A conservative estimate of the number of unique beneficiaries<sup>44</sup> shows around 137,920 people, still above target. Thirty percent of the beneficiaries were females, slightly below the 31 percent target but more than three times the planned number of female beneficiaries. See more details on project beneficiaries and women’s participation in Section II.E and Annex 1.

### Justification of Overall Efficacy Rating

66. The Substantial Efficacy rating is justified by the substantial achievement of Outcome 1 thanks to the joint adoption of MTC for access to tuna fishery, submission of joint resolutions on tuna fisheries to IOTC, and joint MCS efforts, among other results; the substantial achievement of Outcome 2 thanks to with full implementation of priority fisheries management plans in Mozambique and partial implementation in Comoros and Tanzania, operational and transparent data systems in Mozambique and Tanzania but not in Comoros, full achievement of legislation targets, and above-target achievement of fishing activity control in all three countries; and substantial achievement of Outcome 3 with strong co-management results in Mozambique and Comoros and below target results in Tanzania, an above-target result for value chain enhancement beneficiaries in all countries, above-target infrastructure result in Tanzania and slightly below target results in Mozambique and Comoros, and exceeding results for priority fisheries’ value chain enhancement.

## C. EFFICIENCY

### Assessment of Efficiency and Rating

Rating: Modest

### Economic Analysis

67. The efficiency analysis included a cost-benefit analysis by computing the Financial Internal Rate of Return (FIRR) since appraisal and a cost-effectiveness analysis by comparing the ratio of project management costs to the total project cost as a proxy for administrative efficiency. A case for value for money was made by comparing the FIRR at completion against that at appraisal and by comparing the latter to other similar completed World Bank-funded projects. The FIRR represents the internal rate of return of the project’s incremental benefits stream from 2018-2019 to 2031-2032 (assuming the benefits started to accrue in 2019 and will last for ten years after project completion) minus the project’s costs’ stream (2015 to 2022). The incremental benefits stream is the incremental increase in incomes to all beneficiaries plus the incremental revenue to participating governments compared to a “without project” (WOP) scenario.

<sup>43</sup> TZS3,000 (US\$1.3) per soap and TZS12,000 (US\$5.2) per kilogram of powdered seaweed compared to TZS1,000 (US\$0.43) per kilogram of raw seaweed according to the ICR author’s conversation with seaweed product producers.

<sup>44</sup> By taking the highest number of beneficiaries among all the various interventions in each country and IOC.



68. The FIRR at completion was 27.3 percent for the three countries combined, which compares favorably to the figure projected at appraisal of 23 percent. However, it should be noted that this figure is based on a conservative estimate of the net incremental benefits stream, which was estimated from available project data whose bias is unclear. The estimate of unique project beneficiaries was again conservative and represents a lower bound. Comparison with completed World Bank-funded fisheries governance projects (such as the West Africa Regional Fisheries Program SOP<sup>45</sup>) was not possible since these projects did not compute the FIRR. The project's total disbursements were US\$86.2 million in current year prices. The Net Present Value (NPV) of the net incremental benefits computed using a discount rate of 12 percent in 2015 prices was US\$50.5 million. The ratio of project management to total costs was 17.8 percent, which places it in the middle of the comparator projects' ratios, which ranged from 15.6 to 20.9 percent. See Annex 4 for the full economic analysis.

69. From the GEF's perspective, the PAD showed that for an incremental cost of US\$15.5 million (GEF contribution), the project would generate national-level benefits, namely improved data collection and reporting for coastal fisheries catch and effort, development/updating and implementation of EAF management plans, law enforcement, and implementation of regionally agreed approaches based on the subsidiarity principle.<sup>46</sup> As noted, the three governments put in place digital data collection systems with a wide range of fisheries information for planning and decision making, developed and implemented management plans of priorities fisheries, improved MCS capacities and efforts with reduced IUU fishing activities as a result, and launched regional MTC guidelines.

### Implementation Efficiency

70. Activities in Mozambique and Tanzania were considerably delayed in the first project half and similarly delayed in Comoros in the second half for reasons explained in Section III.B. Consequently, the Comoros operation was extended by six months, and the Tanzania operation was extended by 12 months, while Mozambique was able to catch up on delays without extending the closing date. In 2020-2021, the COVID-19 pandemic further delayed implementation because of international and local movement and gathering restrictions, and increased the cost of goods, works, and consultations.<sup>47</sup> This resulted in more expensive contracts than planned. In Mozambique, for example, the development of the National Maritime Spatial Planning Plan had a contracted and estimated price differential of US\$1,017,248, and the assessment and technical design of landings sites had a contracted and estimated price differential of US\$240,000. Additional factors affecting implementation efficiency were: (i) in Comoros, additional administrative costs financed by the project in 2019-2021 (US\$1.85 million spent at closing compared to US\$1.6 million budgeted at appraisal) because of an EU sectoral support suspension; (ii) in Mozambique, a large number of executing agencies until 2018 – ten in total – resulting in high transaction costs for the PIU and higher than planned project management and coordination costs (US\$3.86 million compared to US\$1.3 million budgeted at appraisal) and incomplete construction of a fish market in Chinamacondo District, Sofala Province (70 percent completed at closing); and (iii) in Tanzania, two incomplete infrastructure investments at closing – a mariculture resource center in Kunduchi and a marine park administration block in Mafia island – with 38 percent and 60 percent of their costs paid, respectively.<sup>48</sup> In addition, a marine research lab at Maruhubi was completed but is not yet operational.

<sup>45</sup> P108941, P119380, and P124775.

<sup>46</sup> Whereby most activities are implemented at the national level and transnational activities are managed at the regional level.

<sup>47</sup> Because of the need to hire additional local staff to support international consultants who could not travel, the need to hire video-conferencing equipment, and extension of contracts to account for delays.

<sup>48</sup> The borrower paid TZS599,577,603.66, including VAT, to the contractor selected to construct the Kunduchi mariculture resource center (38 percent of the contract value of TZS1,591,059,517, including VAT), and TZS566,750,896.56, including VAT, to the contractor of the Mafia Island marine park administration block (60 percent of the contract value of TZS947,355,785.99, including VAT).



71. At the same time, efficiencies were recorded by the three countries and IOC in terms of speed and accuracy in data collection and recording thanks to digitized FISs (in Tanzania, for example, the e-CAS the data collection cost decreased by 64 percent compared to previous paper-based data collection campaigns – from TZS105,834,000 (US\$45,508) to TZS37,620,000 (US\$16,176)<sup>49</sup> per year; mariculture activities’ speed and convenience in Tanzania thanks to value addition training and equipment provided by the project; MCS activities in all three countries thanks to the MCSs and vessel monitoring systems, which allowed remote communication with vessels and better targeting of MCS operations; and reduced catch losses thanks to infrastructure and equipment provided to communities in the three countries. In Mozambique, the borrower’s decision to shift project management to the FFP and its subsequent restructuring into a Blue Economy Development Fund (*Fundo de Desenvolvimento da Economia Azul, ProAzul*) with modernized project management systems and a more efficient structure improved the institutional efficiency of the operation (see Section III.B). At the regional level, IOC reported travel expense savings of US\$275,658 in 2020 due to virtual regional meetings instead of in-person meetings and reduced RIU travel during the pandemic, while noting that virtual meetings that involved delicate discussions or negotiations were less effective than face-to-face meetings. IOC also leveraged US\$1,095,737 in co-financing from other programs and projects for regional activities, as well as 3,186 person days of in-kind contribution from SWIOFC member countries.<sup>50</sup>

#### D. JUSTIFICATION OF OVERALL OUTCOME RATING

Rating: Moderately Satisfactory

72. The overall outcome rating is based on a High Relevance rating given the continued high significance of fisheries governance support to the region, the countries, the World Bank, and GEF; a Substantial Efficacy rating with the three project outcomes substantially achieved; and a Modest Efficiency rating considering favorable economic results and efficiencies generated by project interventions on the one hand and implementation inefficiencies experienced in all three countries on the other hand.

#### E. OTHER OUTCOMES AND IMPACTS

##### Gender

73. While the project did not seek to close gender gaps, it looked to ensure a minimum rate of women’s access to training and leadership development within businesses and communities. At closing, the project directly benefited 113,944 females – more than three times the intended number of females and slightly below the intended rate of female beneficiaries. In Comoros, females were 21 percent of the beneficiaries, below the 27 percent target; in Mozambique, females were 48 percent of beneficiaries, above the 10 percent target; in Tanzania, females were 24 percent of beneficiaries, below the 50 percent target; and 23 percent of regional activities’ beneficiaries were female, below the 30 percent target. The lower than planned female beneficiary rate in Comoros and Tanzania is explained by the project’s strong focus on fisheries production compared to activities higher in the value chain, where males are more dominant (except in mariculture) because of fishing communities’ cultural orientation. Regional activities had a lower than expected beneficiary rate because of a continuous underrepresentation of women in some of the countries’ fisheries ministries and departments in managerial or technical positions. Female beneficiaries were mainly co-management units’ members in the targeted coastal communities who benefited from various training and participated in local fisheries management activities; women operating and accessing local finance schemes; seaweed farmers, octopus and sea cucumber fishers, and value chain operators learning and utilizing new harvesting and processing techniques and accessing small capital

<sup>49</sup> According to Tanzania’s completion report, September 2022.

<sup>50</sup> According to IOC’s completion report, August 2021.



support; and female public servants who participated in professional training and were provided access to enhanced systems and equipment.

### Institutional Strengthening

74. Thanks to project support, the countries' fisheries management agencies have in place improved policy and regulatory frameworks, data collection and management systems, MCS and licensing capabilities, and priority fisheries' management procedures. In Mozambique, the project also supported the evolution of the sector's administration from fisheries to a more comprehensive and efficient blue economy management agency under ProAzul. In Tanzania, DSFA also launched a Research Facility Support Grants program that provided US\$50,000 to 13 fisheries science and technology projects of young researchers and junior scientists from research or academic institutions in the country. The project provided financial and technical support to these activities, including development of a tuna economic profile and a review of the EEZ fishing license system. The project also supported six bachelor's degree, seven master's degree, and one doctorate students, who graduated in 2021 and joined the MLF as skilled staff. In all three countries, fisheries communities are better placed to carry out local fisheries management activities thanks to signed agreements with the local administration on responsibilities and revenue streams, and training. Regionally, SWIOFC member countries have in place agreed conditions for foreign access to tuna fisheries guidelines on tuna access with clear guidelines.

### Mobilizing Private Sector Financing

75. The project addressed countries' weak investment and business climate by upgrading fisheries infrastructure and services and developing value chain business opportunities. Component 3 financed improved fisheries management infrastructure and services in the three countries; financed value chain studies and supported their implementation in seven priority fisheries in Tanzania; and established a matching grants scheme in Mozambique that supported four commercial businesses. Furthermore, it enhanced countries' legislation for stronger enforcement of IUU fishing, which is critical to drawing private investments into the sector, and MTC guidelines that establish a clear and common access regime for foreign fishing of tuna and tuna-like species in the SWIOFC region.

### Poverty Reduction and Shared Prosperity

76. Rural coastal populations of the SWIO region are among the poorest and most vulnerable communities in the region. Among them, fishing households make up a significant proportion of households below the poverty level.<sup>51</sup> Fisheries are a vital safety net for coastal communities as they provide essential protein and revenues, and the sector makes a substantial direct and indirect contribution to poverty alleviation as it contributes to food security, balance of payments, public revenues, employment, and gender equity. Thirty-three percent of the project's financial resources supported coastal communities' governance systems, economic structures, and livelihood options by establishing and strengthening CMUs with mandate and skills to manage and benefit from fishery resources, credit groups that create revenue for their members, and access to affordable finance, skill training, and value chains. For example, in Zanzibar, the World Bank reported increased income for fishing communities from more competitive seaweed selling conditions thanks to project-financed barges.<sup>52</sup> Zanzibar also saw increased octopus production thanks to the seasonal closures<sup>53</sup>, directly

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<sup>51</sup> According to the PAD.

<sup>52</sup> Without the barges, farmers could only sell to companies that hired boats to ship their products. The barges allowed farmers to sell their products to any buying company offering competitive prices. Reported in the March 2022 Aide Memoire.

<sup>53</sup> A published research paper by TAFIRI, analyzing the positive impacts of the octopus seasonal closures, is available at <https://www.sciencedirect.com/science/article/abs/pii/S0964569121005044#abs0010>.



benefiting 14,773 village members, and increased sea cucumber harvest and export, directly benefiting 552 community members. The availability of ice in Tumbe fish market increased fish traders' profits because they spent less money and time on purchasing ice from afar.<sup>54</sup> In Mozambique, PCR Window 1 recipients reported improved living standards and fisheries and aquaculture opportunities.<sup>55</sup>

### Other Unintended Outcomes and Impacts

77. **Improved safety at sea in Comoros.** Safety at sea is a major challenge in Comoros because of the geography, location, and nature of its fisheries.<sup>56</sup> Thanks to the enhanced vessel registration system, which requires all registered vessels to undergo a safety check and all new vessels to be built by certified shipyards, the quality of fishing vessels improved overall according to the World Bank. Further, the installation of numbered plates helped to identify vessels and owners lost at sea and inform search and rescue missions. To further improve fishers' safety at sea, in 2021 the project funded a safety campaign that tested safety beacons from three manufacturers using different technologies (AIS, ARGOS, and PLB) on board 30 artisanal vessels. The campaign was coordinated by the Fisheries Monitoring Center and Coast Guard with the support of the French Safety Operation Center in La Réunion, and it concluded with a safety workshop and training in La Réunion for staff. Its results informed recommendations for mandatory safety equipment onboard artisanal fishing vessels.

78. **School attendance and beach cleanliness in Tanzania.** An impact evaluation report of the VSL Scheme in Tanzania<sup>57</sup> noted an increase in the number of children sent to primary school as the result of parents' access to low-interest small loans under the VSL Scheme in Mainland Tanzania; however, this was not quantified. In Zanzibar, informal interviews of seaweed farmers carried out by the ICR author highlighted the use of increased revenues from seaweed processing to send their children to school. Local awareness campaigns financed by the project and revenue generated by MBUs in Mainland Tanzania were used to conduct routine cleaning and patrols, which reportedly resulted in cleaner beaches, especially in Changwahela, Dunda, Kaole, Kisutu, Pande, and Saadani villages in Bagamoyo District.

79. **Enhanced sector transparency in all three countries.** The project financed the development of a Fishing Activity Monitoring System (*Sistema de Monitorização da Actividade Pesqueira*, SIMAPE), resident in the National Fisheries Administration (*Administração Nacional das Pescas*, ADNAP)<sup>58</sup>, with databases on fisheries licensing and other sectoral parameters available to the public.<sup>59</sup> This is an important transparency improvement as this information had not been publicly accessible before. In Tanzania, DSFA implemented an e-Billing system for collection of license revenue, which enhanced transparency in revenue collection compared to paper-based cash billing used before. After the e-Billing mobile application was completed, DSFA reported increased collection of revenues accrued from fishing licenses. In Comoros, annual statistics bulletins provided information to the public on catch per island, species, and other information for the first time in the country. To enhance transparency across the region, the project financed an assessment of transparency

<sup>54</sup> Octopus production increased from 536.6 kg worth US\$1,866.4 annual before the project to 3.15 tons worth US\$10,956.5 after the three-month closures in February 2022. Sea cucumber harvest and export increased from 5.53 tons worth US\$240,434.78 in 2020 to 12.69 tons worth US\$551,739.13 in 2021. Before the project, ice purchased from Mombasa, Kenya cost fish traders up to US\$2.26/kg, and after the project intervened, ice became available locally, costing only US\$0.4368/kg of ice, and saving an average of four travel hours previously used for travel in search of ice. Reported in the borrower's completion report.

<sup>55</sup> Reported in the June 2021 Aide Memoire.

<sup>56</sup> High value tuna fisheries offshore alongside depleting coastal resources, occurrence of destructive tropical cyclones, significant inter-island transport on small vessels (dhows/schooners) that serve as fishing vessels, to name several factors.

<sup>57</sup> Prepared out by Care Tanzania in June 2022.

<sup>58</sup> SIMAPE is available on ADNAP's website at [adnap.gov.mz](http://adnap.gov.mz) with access username and code.

<sup>59</sup> <https://www.adnap.gov.mz/arquivo/download-category/licencas>.



in fisheries in SWIOFC's member countries using the 12 transparency requirements of the Fisheries Transparency Initiative (FITI) to inform countries' dialogue with the Initiative's Secretariat on achieving a FITI Standard.<sup>60</sup>

### III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

#### A. KEY FACTORS DURING PREPARATION

80. **Lengthy preparation time.** SWIOFish1 took over 32 months to prepare<sup>61</sup> for the following main reasons:
- (a) The project's countries of focus and financial instrument changed several times during preparation<sup>62</sup> because of evolving World Bank discussions on countries of focus, the financial instrument to be used, and whether to have national projects under separate project codes or a regional project under a single project code; evolving country priorities and settings which affected countries' readiness to participate in the project; the availability of regional IDA resources during the course of preparation; a parallel project preparation processes vis a vis the GEF; and discussions with a variety of donors on additional financial support to the project. Each time the geographic, thematic, and financial scope of the project and its financial instrument changed, the project had to be redesigned and its new design had to be discussed across several World Bank management units.
  - (b) The approval of the project required all borrowers to complete set milestones, such as safeguards instruments, development of manuals, and establishment of PIUs. The preparation of the safeguards instruments was particularly time consuming because countries required preparation advances to finance them, entailing additional World Bank and country approval processes. Once funds became available, the recruitment of consultants and World Bank review of the draft instruments were also lengthy because of low capacities on the borrowers' side and the multiple document reviews needed on the side of the World Bank.
  - (c) Countries were required to send sector policy letters to the World Bank, stating that project-financed surveillance activities would be conducted in accordance with their international legal obligations. Communicating this requirement to the countries and internal authorizations within the countries were lengthy, particularly in Tanzania.
  - (d) For the purpose of World Bank OP/BP 7.60 (Projects in Disputed Areas), the Government of Comoros was requested to confirm that activities would not take place in disputed areas. This process was lengthy because of the political nature of this request and discussions about the letter's language and signatories.

<sup>60</sup> <https://www.fiti.global/fiti-standard>.

<sup>61</sup> The Concept Note Review took place on June 25, 2012, and Board approval was on February 27, 2015.

<sup>62</sup> At the concept stage in June 2012, Comoros, Mozambique, Seychelles, and Tanzania were the proposed recipient countries and the project was planned as a first phase of program using a Specific Investment Loan for a total of US\$38.5 million of IBRD and national IDA and GEF resources. At the Quality Enhancement Review in November 2013, the project had evolved to first of a SOP with both national and regional IDA and GEF resources (US\$45 million in total) with regional activities, focusing on Comoros, Tanzania, and IOC. At the Decision Review meeting in July 2014, the first SOP supported activities in Comoros, Mozambique, Tanzania, and IOC for a total of US\$116 million of regional and national IDA, GEF, and French Development Agency resources. The project was eventually approved without the French Development Agency resources for a total of US\$91 million of national and regional IDA and GEF resources.



- (e) Lengthy discussions between the World Bank and SWIOFC and internally about SWIOFC's eligibility to receive IDA grant funding given its lack of legal status and fiduciary capacity, and lengthy discussions with the countries about ways to ensure SWIOFC's financial autonomy.
- (f) The SOP nature of the project required all SWIOFC member countries to endorse the project's design before appraisal. The World Bank and the countries agreed to seek this formal endorsement during SWIOFC's annual meeting, delaying appraisal by several additional months.

81. **Adequacy of background analysis.** The project design was informed by countries' Transboundary Diagnostic Analyses and Strategic Action Program Analyses carried out by the GEF-funded Agulhas and Somali Current Large Marine Ecosystems Project (implemented by the United Nations Development Program in 2006-2017) and SWIOFP; data and lessons from past and ongoing fisheries projects, notably SWIOFP, MACEMP, Kenya Coastal Development Project (P094692, 2010-2017), and Comoros Coastal Resources Co-management for Sustainable Livelihood (P125301, 2010-2015); and sectoral information provided by the implementing agencies, SWIOFC, and IOTC. Project preparation advances were used to determine the target communities and fisheries based on social, economic, nutrition, and environmental criteria, as well as, in certain cases, the existence of an EAF management plan for the fishery. These sources provided valuable information to prioritize interventions in the countries and at the regional level. Missing in the background analysis was analysis of local political economies to set realistic licensing targets (see Section IV.A).

82. **Adequacy of project design.** The project was properly designed to finance activities in support of the three project outcomes in each country while considering the countries' specific needs and priorities. Components were structured logically, each supporting a distinct project outcome with embedded country-level flexibility. Implementation arrangements were appropriate to manage the three country operations and regional activities, with PIUs and PSCs in Comoros and Mozambique, responsible for daily project coordination and high-level decision making, respectively, and three PIUs in Tanzania – one in Mainland Tanzania (MLF), one in Zanzibar (MBEF), and one for EEZ activities (DSFA), in line with Tanzania's maritime administrative structure, and a Union-level PSC to ensure coordination and learning. IOC, having legal status and fiduciary capacity to receive IDA grant funding, held the budget and hosted an RIU that was responsible to plan regional activities, while SWIOFC hosted an RSC of countries' fisheries permanent secretaries, ensuring member countries' needs were voiced and facilitating joint discussions of countries' results to foster positive competition. The project's six-year timeframe was appropriate to complete the financed activities, even though it was extended in Comoros and Tanzania, but in part because of external factors (see more below). Design weaknesses were underestimation of project management costs in Comoros given the prevailing consultant salaries, multiplicity of executing agencies in Mozambique, which required high operating costs and coordination efforts, and the definition of expenditure categories for each country according to components rather than implementing agencies, which complicated disbursements in Tanzania. These issues were fixed in the restructurings. See Section IV.A for a discussion of M&E design factors.

83. **Appropriateness of the regional approach.** The project's regional approach was justified by the regional marine ecosystem within which it was to operate, and, therefore, the impact of one country's actions on its neighbors; the common issues that countries were facing and the potential to learn from each other; and the need for greater regional cohesion to enhance countries' voice in international fora and fishing-related agreements. The countries were also able to leverage regional IDA funding, thus increasing the available funds.

84. **Adequacy of the financing instrument.** The SOP was an appropriate choice for SWIOFish because it supported multiple borrowers facing a set of common development issues, it facilitated continued support to the countries through potential phase 2 projects with the understanding that fisheries reform required long-term World Bank engagement (as



discussed in the PAD), and it allowed additional SWIO countries to join as more resources became available to support them. The inclusion of several countries under the first SOP, however, caused substantial preparation delays as noted. Further, the bundling of several countries under one project meant that one country's shifting priorities or weak performance could affect the entire project's success.<sup>63</sup> In addition, phase 2 projects were contingent on the availability of resources to support them, risking an incomplete reform process. A Multiphase Programmatic Approach (MPA)<sup>64</sup> instrument of single country operations would have mitigated this risk; however, MPAs were introduced by the World Bank in 2017.

85. **Reflection of lessons learned.** The design drew on lessons from several national and regional projects<sup>65</sup>, namely: (i) the importance of phasing fisheries reform processes by first strengthening institutions, business environment, and human capacity before undertaking major reforms and investments; (ii) the importance of providing ample time for fisheries sector operations, with a high degree of flexibility and continuous support; and (iii) basing local fisheries management on broad-based consultative processes to build consensus, ensure inclusion, and enhance sustainability. These lessons were reflected in the strong emphasis on governance systems under components 1-3 with only five percent of the funds allocated for infrastructure construction and rehabilitation (amount that was later scaled up in Comoros and Tanzania as per the governments' priorities), the six-year implementation timeframe, the use of a SOP instrument, the flexibility embedded into the components, and the budgeting and work planning of co-management processes.

86. **Adequacy of risk assessment and mitigation measures.** The overall project risk was justifiably rated Substantial, noting risks associated with reaching consensus among a wide range of stakeholders on fisheries reform, borrowers' weak fiduciary capacities, communities' disinclination to engage in alternative livelihoods, and factors outside the control of the project, such as piracy threats. To mitigate stakeholder risks, reform targets were conservative (a minimum of one key policy or legal instrument) and the project's timeframe was set to six years; and to mitigate capacity risks, capacity building budgets were allocated under Component 4. Piracy threats were to be addressed as part of countries' MCS actions. Unidentified risks were the COVID-19 pandemic, USD-Special Drawing Rights (SDR) exchange rate fluctuations, the multi-country nature of the project, where one country's shifting priorities or weak performance could affect the entire project's success, and the possibility that phase 2 projects would not be supported, putting the sustainability of the project outcomes at risk.

87. **Readiness for implementation.** The project had three effectiveness conditions: adoption of a satisfactory Project Operations Manual (POM) by the three countries and IOC, establishment of a PSC and PIUs with coordinators in Tanzania, and establishment of an RSC and an RIU with a coordinator in IOC. In Tanzania, effectiveness was declared four months after approval (in June 2015), in Comoros and Mozambique it was declared eight months after approval (in October 2015), and the IOC operation became effective ten months after approval (in December 2015) because of lengthy POM preparation and adoption processes. Beyond POMs and project management and steering structures, the countries had

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<sup>63</sup> Indeed, the project's ratings in the Implementation Status and Results Reports (ISRs) were based on the lowest country rating as per World Bank guidance. Towards the latter part of the project, the guidance changed, and ratings reflected the overall project performance.

<sup>64</sup> Under the MPA, World Bank Executive Directors approve the overall Program framework and financing envelope for the Program and authorize World Bank Management to commit the financing for the MPA Program phases. This allows World Bank clients to structure a long, large, or complex engagement as a set of smaller linked operations (or phases), under one Program.

<sup>65</sup> Including Development Policy Loans in Peru (P101471/P116152/P118713) and Gabon (P070196), West Africa Regional Fisheries Program (P106063/P119380/P124775), Lake Victoria Environmental Management Project (P046837/P046836/P046838), SWIOFP, MACEMP, Kenya Coastal Development Project, and Coastal Resources Management Project (COREMAP, P071316/P071318) in East Asia.



in place an 18-month Procurement Plan and the required safeguards instruments (see Section IV.B). The World Bank provided safeguards, financial management, and procurement training to the PIUs in the second quarter of 2016.

## B. KEY FACTORS DURING IMPLEMENTATION

### *Factors subject to the control of the governments/implementing agencies*

88. **Suspension of Comoros' Fishing Agreement with the EU.** In May 2017, Comoros received a Red Card from the EU for not properly addressing IUU fishing, and in January 2019, the EU denounced its fisheries agreement with Comoros. This stopped sectoral support funds and the payment of licensing fees from EU vessels, resulting in a financial gap of around EUR300,000 annually for the fisheries administration – resources that had been used to cover the administration's operational costs. Given the limited financial support to the sector from the national budget, and to avoid closing the project, the World Bank decided to use project funds to cover these expenses, which stressed the project's already constrained budget due to exchange rate losses, COVID-19 related price increases, and increased investment in fisheries infrastructure. This resulted in the dropping of fish export activities and indicator during the June 2021 restructuring, partial completion of several infrastructure investments, and insufficient project management resources to maintain PIU staff, affecting the project's performance in its second half. With the support of the World Bank, the fisheries administration took action to remove the suspension,<sup>66</sup> but it is still in effect at present.

89. **Institutional reforms in Mozambique.** After a new government took office in January 2015 – a month before the project was approved – the Ministry of Fisheries was restructured and became MIMAIP with a broader mandate and new executing directorates. This caused confusion among staff about mandates and implementation responsibilities; project budgets and work plans were realigned to fit emerging priorities; and the funds flow arrangements were reestablished, resulting in implementation delays and no disbursement until May 2016. At the local level, ADNAP delegations, which had been responsible for project-funded local activities, were merged into districts' economic development bodies, with fewer resources and capacities, delaying the implementation of local activities. Start-up delays in Mozambique were also the result of multiple approval layers to which the PIU was subject under DEPI, delaying disbursements, hiring of key staff, and other key procurement activities. In July 2018, the PIU was relocated to a semi-independent entity under MIMAIP's FFP with fewer approval layers and strong support from the minister to implement reforms. This facilitated the recruitment of additional PIU staff and consultants and procurement of key items, expediting implementation. In November 2019, as part of a sectoral transition from fisheries to blue economy management and with project support, the FFP was restructured into ProAzul with motivated and highly skilled management and staff. Combined with the reduction in the number of executing agencies and the government's decision to assign directors as focal points instead of lower-level staff, implementation improved significantly. At the local level, a decision to hire local technical specialists to support local activities helped expedite implementation.

90. **Weak project management capacities in Tanzania.** The first two years after effectiveness showed almost no progress in Mainland Tanzania and Zanzibar. In Mainland Tanzania, this was because of delays in the procurement of key consultants and works, caused by insufficient core PIU staffing with low project coordination, financial management, and procurement skills, and insufficient proficiency in key technical aspects. Delays were also the result of insufficient high-

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<sup>66</sup> The fisheries administration revised its legal framework concerning vessels operating outside of Comoros and deflagged several vessels; however, one of the remaining conditions of the EU roadmap was accession to the FAO Agreement on Port State Measures. A letter to the EU was prepared by the Fisheries Department with the support of an international legal technical assistant to resume the dialogue, but it was not sent by the government.



level engagement and stewardship in resolving these bottlenecks, evident, for example, in a two-month delay<sup>67</sup> in the signing of the amendment to IDA Credit 5589-TZ following the November 2016 restructuring, holding back the replenishment of the two designated accounts. Another example is a six-month period when a fisheries director was not appointed in Mainland Tanzania. In Zanzibar, the technical and management capacity gaps were caused by the change to the implementing agency – from Ministry of Agriculture, Livestock and Fisheries to MBEF as noted – with shifting mandate, management, and staff. Consequently, in 2018, many activities were still in the planning phase, procurement processes lagged, and disbursements were low. Implementation began to pick up in 2019 thanks to stronger government engagement after the project’s MTR, with the World Bank reporting effective and timely implementation of agreed action plans, signing of multiple contracts, and a solid pipeline of activities in both Mainland Tanzania and Zanzibar. DSFA, on the other hand, performed well until late 2018, when the Director General retired and his replacement was delayed, resulting in implementation delays of EEZ activities afterwards. Like Comoros, the Government of Tanzania showed increased interest in infrastructure investments to have visible local results, diverting resources to more sites. This, combined with COVID-19-related price increases and exchange losses, affected the borrower’s ability to complete three of these investments as noted.

91. **Low licensing rates in all three countries.** In Comoros, vessel licensing was minimal because the borrower had insufficient capacities to set up a licensing program and the project instead focused on vessel registration as a first step. The licensing rate in Mozambique was below target because of insufficient budgets and capacities of local staff responsible for licensing, and because the paper-based payment system disincentivized districts to report on new licenses, allowing them to keep licensing revenues. Additionally, fishers had limited incentive to obtain a license given the still insufficient coverage of surveillance activities. The latter two factors also affected Tanzania’s licensing rate, in addition to insufficient high-level political will to prioritize a program that may create discontent among fishers who would be required to pay a fee to fish.

#### ***Factors subject to the control of the World Bank***

92. **MTR and restructurings.** The World Bank carried out comprehensive MTR missions in the three countries and IOC at their respective mid-points. Missions included high level discussions on progress and issues, detailed technical discussions on components’ progress and constraints based on borrowers’ mid-term reports, review of results and outcomes measured by the results framework, fiduciary reviews, restructuring discussions, and preparation of detailed action plans. Missions’ findings directly informed the December 2018 restructuring in Mozambique, including changes to implementation arrangements, results framework, and reallocations, and later – the September 2021 restructuring in Tanzania, which also addressed factors identified after the MTR mission (see below). The other restructurings were similarly instrumental in removing implementation bottlenecks, providing the borrowers additional time to complete delayed activities, and adjusting activities and targets to emerging priorities. In the case of Comoros, the MTR mission also resulted in an increase in mission’ frequency to provide extra support to the implementing agency.

#### ***Factors outside the control of the governments/implementing agencies***

93. **COVID-19.** From early 2020 to early 2022, the COVID-19 pandemic affected the project in all three countries and IOC. The impacts were multi-dimensional, ranging from delayed supply of materials and equipment to construction sites, inability to mobilize international consultants to countries, restrictions on stakeholder consultations and gatherings needed for regional discussions, co-management, legislation, management plan, and training-related actions, and protracted implementation of alternative livelihood support activities. The pandemic also led to an increase of

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<sup>67</sup> The amendment was signed by the World Bank on November 2, 2016 and by the Treasury on January 23, 2017.



construction material prices, affecting the three countries' budgets, and a shift in governments' attention to national level priorities, particularly fighting and controlling the pandemic, causing delays. To mitigate some of these impacts, regional and country-level discussions took place remotely where possible, local consultants were hired to support international consultants who could not travel, and reallocations and extensions facilitated the price increases and implementation delays, respectively.

94. **Cyclone Idai.** One of the worst tropical cyclones on record to affect Africa and the Southern Hemisphere and the deadliest tropical cyclone recorded in the South-West Indian Ocean basin, Idai hit Mozambique's Sofala bank in March 2019, taking lives, destroying infrastructure, and stopping the project's local activities for several months due to the government's focus on reconstruction. The borrower was later able to catch up on these delays without the need to extend the closing date.

95. **SDR-USD exchange rate variations.** Exchange rate variations compared to the rate at negotiations<sup>68</sup> affected SDR-denominated IDA credits and grants, resulting in further budget constraints in all three countries. In Mozambique, this delayed the development of the National Maritime Spatial Planning Plan and the assessment and technical design of landings sites, resolved through budget reorganization and changes to the results framework in the September 2020 restructuring. In Comoros, budget constraints further restricted the borrower's ability to retain some of the PIU staff and maintain an appropriate level of project management, M&E, and reporting, and they also affected the borrower's ability to update the dashboard with information in 2021 and complete the construction of several assets. This was partially resolved with the June 2021 reallocation. In Tanzania, price increases contributed to the borrower's inability to finalize several infrastructure investments as noted.

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

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

Rating: Substantial

#### M&E Design

96. The results framework was the core of the project's M&E system, comprising overall well defined PDO-level indicators and IRIs per country that corresponded to the three PDO outcome statements and components' key expected results and were mostly aggregable (allowing the evaluation of the project's performance as a whole) and specific to the countries' context. Indicators had clear baselines, annual targets with gender disaggregation where relevant, and detailed measurement methodologies. Baselines were established using the best available information from country surveys, previous World Bank and donor-funded projects, World Bank and other studies, agencies' financial reports, and other sources. It was recognized, however, that countries' statistical systems were weak, and baselines may change as more information became available. M&E and reporting arrangements were clear, including regional, national, and local level data collection, evaluation, and production of semi-annual, mid-term, and completion reports with the lead of implementation units' M&E specialists. M&E design weaknesses were: (i) an output-oriented regional PDO level Indicator (measuring the number of agreements signed) and an outcome-oriented regional indicator at the intermediate result level (measuring joint agreement on a shared resource); (ii) a complex definition of fisheries management plan implementation; (iii) some inaccuracies in the definition of co-management targets in Mozambique as noted; (iv) measurement of infraction rate reduction was an imperfect indicator for fishing activity control because in some cases enhanced surveillance efforts

<sup>68</sup> SDR1 = US\$1.518 on August 31, 2014, SDR1 = US\$1.363 on September 30, 2019, and SDR1 = 1.408 on September 30, 2020 and 2021.



increased the number of reported infractions before reducing it; and (v) the beneficiaries target for Mozambique did not accurately reflect the operation's geographic focus as noted.

97. The restructurings addressed points (iii), (iv), and (v) and made additional adjustments to several indicators and targets to ensure their relevance and realism as noted. At the same time, they replaced the original fisheries management indicator with the relevant Corporate Results Indicator, setting some overambitious management plan implementation targets compared to countries' capacities. The restructurings also did not switch the regional indicators and reduced the ability to aggregate project results because they modified countries' breakdown indicators in isolation from each other to respond to countries' emerging priorities.

### **M&E Implementation**

98. The PIUs used the results framework to inform data collection activities, and measure countries' progress intermediate results and progress toward achieving the PDO. The information was summarized in semi-annual progress reports and mid-term reports as required. In Comoros and Mozambique, this was done with difficulties in the first project half due to the complexity of some of the indicators and PIUs' low M&E capacity. M&E data was overall of sound quality with the exception of the non-unique beneficiary counting, which did not affect measurement of results and outcomes. The RIU produced semi-annual, mid-term, and completion reports, financial reports and budgets, work plans, procurement plans, and associated documents (including GEF tracking tools) to the World Bank, the GEF Secretariat, and the RSC as planned.

### **M&E Utilization**

99. M&E information was used by the implementing agencies and the RSC to assess progress at the national and regional levels and agree on annual budgets and work plans. The information was also used by the World Bank to detect implementation challenges and focus its implementation support, discuss restructuring options with the borrowers, and report on the country and regional results in Aide Memoires and ISRs. Beyond project M&E, the ability of countries to monitor key sectoral parameters and use them for decision making were considerably enhanced thanks to data collection and analysis campaigns, establishment and enhancement of FISs, and the building of government staff capacities to operate and maintain the systems.

### **Justification of Overall Rating of Quality of M&E**

100. The M&E quality is rated Substantial because the project's M&E system was overall well designed with some of the weaknesses addressed through the restructurings, the continuous and gradual improvement of reporting on project progress by the countries and IOC, and the use of data - both on the project and countries' fisheries sector - for planning and decision making.

## **B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE**

101. **Environmental safeguards.** The project was in compliance with the World Bank environmental safeguards. The project was considered Category B (Partial Assessment) regarding potential environmental and social impacts, and it triggered the Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Pest Management (OP 4.09), and Physical Cultural Resources (OP 4.11) policies. These were triggered because the project was expected to have small-scale and localized negative impacts stemming from infrastructure investments and the potential use of aquatic herbicides or



antibiotics in aquaculture activities in Tanzania. The borrowers prepared Environmental and Social Management Frameworks (ESMFs), which were disclosed before appraisal.<sup>69</sup> The ESMFs provided guidance on site- or activity-specific environmental and social safeguards instruments. Environmental and Social Management Plans were prepared during implementation as required to mitigate environmental and social risks of project activities. Additionally, several activities were subjected to full environmental impact assessments to obtain required certificates or clearances as per national impact assessment guidelines and procedures. Appropriate grievance management procedures and arrangements for monitoring environmental management plans' implementation were put in place.

102. **Social safeguards.** The project was not in full compliance with social safeguards. The project triggered the Involuntary Resettlement (OP/BP 4.12) World Bank policy because of expected access restrictions and loss of livelihoods in some fishing grounds as part of co-management agreements. The ESMFs as well as Process Frameworks were prepared by the borrowers and disclosed to inform the management of foreseen impacts.<sup>70</sup> During implementation, the Government of Comoros prepared as required a Resource Access Restriction Action Plan, identifying alternative livelihood activities jointly with the affected local communities. These were supported in 2021 for the benefit of 176 people, and included agriculture activities, livestock production activities, and commercialization of fisheries products. However, the fish market in Moroni-Hankounou was constructed without adhering to OP/BP 4.12 because its environmental and social impact screening failed to mention the existence of households requiring relocation and no instrument was prepared to manage this, in spite of the World Bank's repeated efforts to mobilize the PIU. The World Bank requested the PIU to provide it with a detailed description of the relocation impact, the affected households with visual evidence, and a relocation status for the World Bank to take an informed decision on subsequent requirements in accordance with the policy. In Tanzania, the World Bank reported in June 2021 non-compliance with OP/BP 4.12 during the rehabilitation works of the Tumbe and Nungwi fish markets as they were completed without the requisite preparation and implementation of a Temporary Relocation Plan for 96 market vendors who had been temporarily relocated to nearby areas. At the request of the World Bank, however, the government conducted a social audit for these markets to identify gaps in compliance with OP/BP 4.12 and articulate remediation measures, and the draft audit report was submitted to the World Bank on March 2, 2022. After follow-up field visits, consultations, and reviews, the World Bank reported in March 2022 no substantial social or environmental damage caused by the construction of the markets and that MBEF had begun implementing the audit's recommendations.

103. **Grievance redress mechanisms (GRMs).** GRMs were properly established in Mozambique and Tanzania at local and central levels. In Tanzania, GRMs were operated by site-specific GRM committees using a phone line, mail, and suggestion boxes, while billboard, radio, and TV campaigns were carried out to make people aware of them. During implementation, one complaint was made on a contractor's staff misconduct and another complaint was made regarding damages to an access road by a contractor. The GRM committees resolved both cases. In Mozambique, the GRM was digitalized upon the operation's shift to the FFP to what the World Bank considers the best digital GRM system in Mozambique's public institutions and an example to other agencies.<sup>71</sup> The PIUs monitored the GRMs and reported on grievances in their progress reports. During implementation, grievances and queries were made regarding the livelihoods programs, delivery of purchased goods from suppliers, and funding and payment requests, and all complaints were resolved at closing. In Comoros, the GRM was designed and approved by the World Bank but not established; instead,

<sup>69</sup> The respective ESMFs were disclosed in Comoros on August 6, 2014, in Mozambique on August 7, 2014, and in Tanzania on August 22, 2014, and they were published by the World Bank InfoShop on August 22, 2014. The application of OP 4.11 and OP 4.09 were addressed through the Environmental and Social Assessment process.

<sup>70</sup> The respective Process Frameworks were disclosed in Comoros on August 6, 2014, in Mozambique on August 7, 2014, and in Tanzania on August 22, 2014, and published by the World Bank InfoShop on August 22, 2014.

<sup>71</sup> See <https://proazul.mdr.co.mz/>.



grievances were resolved informally by traditional mechanisms because of lack of sufficient stakeholder awareness and understanding of the GRM put in place. These mechanisms lacked transparency in terms of the types of complaints lodged and the way they were resolved.

104. **Procurement.** The project was in compliance with World Bank procurement procedures. During the first half of the project, performance was weak in Mozambique and Tanzania because of low PIU capacities and experience and lengthy internal approval processes, resulting in protracted procurement and implementation delays. In Tanzania, for example, several activities took over a year to procure, such as a research backstopping consultancy in Mainland Tanzania or Zanzibar's fisheries private sector development consultancy. In 2017, procurement improved thanks to the hiring of experienced procurement staff, more efficient internal approval processes, and gained experience and knowledge of the PIUs overall. Procurement in Comoros and IOC was overall smooth.

105. **Financial management.** The project was in compliance with World Bank financial management procedures. Like procurement, Mozambique and Tanzania exhibited low financial management capacities in the first project half, resulting in low disbursements, while the second half was much stronger thanks to the recruitment of qualified staff and acquired experience, resulting in acceleration of disbursements. In Comoros, financial management performance was strong in the first half and weaker in its second half, with several internal control recommendations made by the external auditor implemented with delays and delayed Interim Unaudited Financial Report (IFR) submission because of insufficient PIU staffing as noted. IOC maintained overall adequate financial management arrangements with suitably experienced staff, but there were some delays in the submission of IFRs and audit reports.

106. **Compliance with legal covenants.** The project had five legal covenants related to the customization of a chart of accounts in Comoros, purchase of accounting software and customization of chart of accounts in Tanzania, recruitment of external auditors by IOC and by Comoros, and appointment of a procurement consultant to the Mozambique PIU. While the latter was complied with some delays, all covenants were eventually complied with.

## C. BANK PERFORMANCE

Rating: Moderately Satisfactory

### Quality at Entry

107. The World Bank preparation team comprised the necessary operational and technical expertise (see Annex 2), resulting in an overall well-designed project that was informed by lessons learned and a wide range of information sources. The design encompassed regional, national, and local activities that addressed the countries' common and individual issues and settings. The PDO was clear with indicators set to measure each of the outcome statements, and targets that reflected the best available data. The World Bank carried out financial management, procurement, and safeguards capacity assessments and prepared action plans to address identified weaknesses. As noted, weaknesses at entry were the long preparation time because of factors that were in part within the control of the World Bank, the partial risk assessment, some M&E design weaknesses, and some country-specific design miscalculations.

### Quality of Supervision

108. The World Bank allocated a considerable number of staff and consultants to support the three country operations and IOC (see Annex 2), each assigned a task team leader, fiduciary, operational, and technical experts. Some were located in-country to ensure close work with the borrowers. On average, implementation support missions took



place three times per year in Comoros, twice a year in Mozambique and Tanzania, and once a year to IOC, with regular phone calls in between. Missions comprised high-level and detailed result-focused technical discussions, fiduciary reviews, and field visits when feasible (missions were virtual in 2020-2021). World Bank support was particularly intensive in the first project half in view of low capacities in Mozambique and Tanzania, and similarly more frequent in Comoros in the second half as noted. Missions produced detailed aide memoires, discussing progress, results, and constraints, fiduciary assessments' findings, detailed action plans, and restructuring details as relevant, as well as management letters communicating issues needing high-level government support. ISRs were candid in pointing out key project issues, risks, and ratings. The restructurings were effective in removing the implementation bottlenecks, improving efficiency and result monitoring, and aligning activities with governments' priorities. On the other hand, the restructurings led to an increase in the number of infrastructure investments in Comoros and Tanzania, which further constrained the countries' ability to maintain PIU staff and complete several of the investments. The World Bank extended sectoral support on matters beyond the requirements of the project, such as actions to remove Comoros' Red Card and the establishment of ProAzul in Mozambique. These and other efforts were appreciated by the SWIO countries during the RSC's August 2021 meeting.<sup>72</sup> Project-funded assets and systems were handed over to the borrowers at closing. Weaknesses during supervision included insufficient attention to grievance redress in Comoros, which led to suboptimal handling of grievances, and a lack of a completion mission in Tanzania due to insufficient supervision budget.

#### **Justification of Overall Rating of Bank Performance**

109. The Moderately Satisfactory rating is justified, on the one hand, by the overall strong design of the project, significant efforts made by the World Bank to support the three countries and IOC, and some moderate shortcomings during implementation.

#### **D. RISK TO DEVELOPMENT OUTCOME**

110. The project strengthened governance systems that are key baseline conditions for the long-term management of the fisheries sector in Comoros, Mozambique, and Tanzania, including legislative and regulatory frameworks, fisheries management plans, databases capable of informing decision making, MCS systems and capabilities, and local co-management bodies with mandates, capacities, and revenue streams. The project also helped to establish independent local finance systems within fishing communities in Mozambique and Tanzania and trained numerous community members on value chain development. At the regional level, a financing mechanism was agreed by SWIOFC's member countries. A factor that could affect sustainability is insufficient budgetary allocations to the fisheries sector by the governments to allow the relevant agencies to fully operate and maintain MCS functions and databases and provide the needed financial and technical support to coastal communities. This risk is particularly relevant to Comoros, whose fisheries administration has been overwhelmingly reliant on external financial support. Insufficient sectoral budgets coupled with focus by countries on COVID-19 recovery could also keep SWIOFC dependent on donor support.

111. The World Bank foresaw this risk at appraisal, noting that engagement over a second phase would be needed to establish sustainable financial mechanisms within the countries.<sup>73</sup> While the SOP was discontinued in Comoros, Mozambique, and Tanzania, the Food Resilience Systems Program for Eastern and Southern Africa Phase 3 (P177816) in Comoros is filling this role, with a focus on generating sustainable long-term financial support for governance of the sector. In Mozambique, the Sustainable Rural Economy Project and the Northern Mozambique Rural Resilience Project (P174635) continue to strengthen MIMAIP's capacities to manage the fisheries sector with increased focus on the role of the private

<sup>72</sup> Reported in IOC's completion report.

<sup>73</sup> PAD, page 5.



sector in the development of fisheries; and in Tanzania, the planned Scaling-up Sustainable Marine Fisheries and Aquaculture Management Project (P179969) intends to continue the institutional support to the government in Mainland Tanzania and Zanzibar, with the aim to increase the contribution of aquaculture, mariculture, and recreational fisheries to the sector's revenue stream. At the regional level, SWIOFish2 and SWIOFish4 have further promoted collaboration between countries in the management of shared fisheries and the recently approved SWIOFish5 will continue to reinforce regional collaboration through research, technical support, and coordination with other relevant regional programs and initiatives. Globally, a new generation of Blue Economy operations is emerging within the World Bank, financing fisheries activities and integrating them with other oceanic sectors while ensuring their contribution to countries' resilience to climate change and reduced greenhouse gas emissions.

## V. LESSONS AND RECOMMENDATIONS

112. **Achieving sustainable fisheries reform takes time.** At project closing, Comoros, Mozambique, and Tanzania had in place regional, national, and local governance systems that are key to the management of their fisheries sector, and efforts are ongoing by the World Bank to secure their sustainability, including by strengthening existing and additional revenue streams for the sector. Future interventions in the fisheries sector should take into consideration the time it takes to achieve sustainable reforms when deciding on the timeframe and financial instrument for such operations.

113. **Operations should be tailored to the absorption capacity and unique settings of each country.** While the project design accommodated the specific needs and priorities of countries, and its results framework facilitated aggregation of results, these priorities and circumstances changed during implementation. This resulted in varying progress and performance levels, and reduced the ability to aggregate results at the project level. Further, the multi-country nature of the project resulted in a lengthy preparation process as countries were required to reach a similar preparedness level. It would therefore be advisable to consider financing several single-country fishery reform operations instead of a single multi-country operation, with regional actions budgeted by each of the operations and outsourced to a regional organization, for example, through a subsidiary agreement.

114. **Operations in support of fisheries must strike a better balance between short-term visible results and long-term necessary reforms.** In both Comoros and Tanzania, the focus and budget dedicated to fisheries infrastructure expanded during implementation because governments wanted to demonstrate visible project results and immediate impact on communities. This expanded focus put budgetary constraints on the countries, exacerbating currency exchange losses and price increases due to the COVID-19 pandemic. In order to generate sustainable results, World Bank operations in support of the fisheries sector must encompass both infrastructure investments and the much needed but often neglected efforts around governance, writ large. This project illustrates the need to strike a balance between these two different, but not necessarily conflicting, priorities. Governments will lead with focus on visible infrastructure, which in and of itself is critically important, but unfinished infrastructures in this project point to the need for better planning and prioritizing, so that the building blocks of fisheries reform do not fall through the cracks.

115. **Local co-management structures are an effective mechanism for engaging communities in decision making and orchestrating fisheries management actions.** Co-management structures in all three countries were legally and financially empowered through agreements with the local administration to manage priority fisheries in assigned fishing grounds. Associations regularly met with the local administration to agree on fisheries management actions, which included seasonal fishing closures and use of fish aggregating devices that were effective in increasing harvests, joint licensing campaigns, joint patrols, and coral reef benthic monitoring to inform management of marine conservation areas. Co-management structures could be financially self-reliant when a portion of license and entrance fees they collect is



allocated for their use. Local facilitators are effective in mobilizing co-management structures and strengthening their management capacity.

116. **Sustainable regional coordination requires a change of approach.** There is a case for continued support for the work of SWIOFC given the shared resources, common issues, and the need for a strong regional voice. However, despite several years of support to SWIOFC (under SWIOFP and the SWIOFish projects), it is still reliant on donor support for its operation, with member countries yet to contribute the necessary resources because of competing budgetary demands. Countries should jointly identify the basic activities necessary for SWIOFC to maintain and foster collaboration and have them costed. On this basis, they should agree on government contributions, and development partners should work together to ensure that the remaining financial gaps are addressed on an annual basis. Countries should also have a better understanding of the economic benefits of regional collaboration, which could in turn encourage greater financial contributions.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Improve the management effectiveness of selected fisheries at regional level

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
(Regional Level) Number of new SWIOFC member country signatures to bilateral and/or multilateral agreements on fisheries	Number	0.00 01-Mar-2015	6.00 30-Sep-2021		11.00 30-Sep-2022

Comments (achievements against targets):

**Target achieved.** At closing, SWIOFC member countries signed eleven bilateral fisheries agreements: (i) between Comoros and the EU (later frozen on account of an EU Red Card); (ii) between Madagascar and Japan; (iii) between Mauritius and Seychelles; (iv) between Mauritius and Japan; (v) between Mozambique and Namibia; (vi) between Mozambique and Malawi; (vii) between Mozambique and Japan; (viii) between Seychelles and Taiwan, China; (ix) between Seychelles and China; (x) between Seychelles and Japan; and (xi) between Seychelles and South Korea. In addition, seven memoranda of understanding were signed between the countries and non-SWIO countries, and four Fisheries Partnership Agreements were signed between France (Réunion), Madagascar, Mauritius, and Seychelles and the EU. The project financed country representatives’ travel expenses, meetings of technical group members, and national-level capacity building activities and studies informing countries about their fish stocks prior to negotiating the agreements. Information source: World Bank reports, IOC completion report, and online media coverage of agreements’ signing.



**Objective/Outcome:** Improve the management effectiveness of selected fisheries at national level

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Fisheries Management Plans implemented	Number	0.00 01-Mar-2015	5.00 30-Sep-2021	10.00 30-Sep-2022	11.00 30-Sep-2022
Tanzania: Fisheries management plans (FMP) consulted, approved and implemented	Number	0.00	1.00	6.00	7.00
Mozambique: Management plans for demersal line fisheries, coastal shrimp, and deep-sea crustaceans	Number	0.00	3.00		3.00
Comoros: EAF demersal fisheries management plan	Number	0.00	1.00		1.00

**Comments (achievements against targets):**

**Target partially achieved**

Comoros (target partially achieved): The country's 2013 Demersal Fisheries Management Plan was evaluated and expanded to a new National Coastal Fisheries Management Plan that was adopted in December 2020, consistent with FAO's EAF approach. The plan was partially implemented: 67 percent of vessels (2,104 of a total of 3,000) were registered and there was a minimal licensing rate (19 vessels in 2021); and vessels were regularly inspected through land patrols and at sea in Comoros' EEZ (25.2 percent of vessels at closing). A fisheries monitoring center was built, equipped, and made functional, housing an existing satellite-based fishing vessel monitoring system that monitors and communicates with licensed industrial vessels operating in the EEZ. The



project financed a consultancy, technical assistance from FAO, and consultation and validation workshops to review, expand, and validate the management plan, a consultancy that designed the vessel registration system, development of a computerized registration database with cloud-based software and hardware, training of registration staff, registration campaigns in the three islands, construction of the fisheries monitoring center and its equipment, and the vessel monitoring system's software licensing cost and staff training. Information source: World Bank reports, fisheries management plan, borrower completion report, and additional information from GDRH.

Mozambique (target achieved): A Deep Sea Crustaceans Management Plan (2021-2025) was developed and the 2014-2018 Sofala Coastal Shrimp Management Plan and Demersal Fisheries Management Plan were updated for 2021-2025. The plans were approved and implemented, with licensing capacity within maximum thresholds established in the plans. In 2022, 34 licenses were provided for coastal shrimp compared to a maximum quota of 39 licenses; 23 licenses were provided for deep-sea crustaceans compared to a maximum quote of 27 licenses; and no licenses were provided for demersal line fisheries compared to a maximum quota of four licenses. The project financed consultancies and stock assessments to develop and update the management plans, MCS activities, such as patrols, to enforce the licensing, and technical assistance to MCS agencies. Information source: fisheries management plans, World Bank reports, and ADNAP 2022 report indicating annual licensing quotas and licenses.

Tanzania (target partially achieved): *In Mainland Tanzania*, management plans for octopus, prawn, and small pelagic were consulted, approved, and substantially implemented: in 2022, all vessels were registered but only 58 percent of them were licensed (5,547 of 9,563 vessels), and vessels were inspected on a quarterly basis by the MCS Department. *In Zanzibar*, management plans for octopus, reef fisheries, and small pelagic fisheries were consulted, approved, and substantially implemented: in 2022, all vessels were registered but only 50 percent of the vessels were licensed (3,998 of 7,942 vessels). Vessels were quarterly inspected by the MCS Department. Zanzibar also developed a Fisheries Master Plan with a five-year action plan to inform its new Blue Economy Strategy. DSFA developed a Tuna Fishery Management Plan and submitted it for MLF and MBEF approval in August, 2022; however, the plan is yet to be approved. Despite its pending approval, the plan has been implemented by tuna fisheries management stakeholders. A fisheries monitoring center with a state-of-the art vessel monitoring system (Themis Web System with AIS) and standard operating procedures was established at the DSFA. The project financed consultancies and data collection activities to prepare the management plans, stakeholder meetings and workshops to review and validate them, administrative costs of registration, licensing, and inspection (fuel, motorcycles, on-boarding boat, phones), the center's refurbishment costs, and the vessel monitoring system's software, hardware, license, training, and standard operating procedures' preparation. Information source: fisheries management plans, World Bank reports, and information from DSFA, MBEF, and MLF.

**Objective/Outcome:** Improve the management effectiveness of selected fisheries at community level



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
(Community level) Co-management units achieving at least 2 performance targets (2)	Number	0.00 01-Mar-2015	0.00 30-Sep-2021	0.00 30-Sep-2022	0.00 30-Sep-2022
Tanzania: Proportion (%) of targeted community-based management units achieving at least 2 performance targets	Percentage	0.00	7.00	92.50	78.00
Mozambique	Number	0.00	30.00		43.00
Comoros	Number	0.00	6.00		6.00
<p><b>Comments (achievements against targets):</b>  <b>Target substantially achieved</b></p> <p><u>Comoros (target achieved)</u>: The result reflects six CMUs composed of fishing community members from 15 villages in Anjouan, Grand Comore, and Moheli islands, that achieved two performance targets. The CMUs revised and signed revised co-management agreements with the fisheries administration, expanding their village-level agreement to several villages using the same fishing grounds, and met regularly with the administration (at least twice a year); implemented agreed community management measures, including seasonal fishing closures in Hajoho, Hantsindzi, Ndrondroni, Ndroudé, Ouallah, and Sadampoini, with regular participatory closure monitoring activities, and installation of new fishing techniques, such as low-cost fishing aggregating devices, octopus pots, lobster traps, and aquaculture operations. The project financed community facilitators who supported and monitored the CMUs, island</p>					



coordinators, costs of community meetings and ceremonies, training on management measures, fishing equipment, and learning exchanges between communities. Information source: World Bank reports and borrower completion report.

Mozambique (target achieved): The result reflects 43 CCPs out of 62 CCPs supported in Sofala bank that achieved three of the four performance targets. The results included 20 CCPs in Zambezia Province, 18 CCPs in Nampula Province, and five CCPs in Sofala Province. The CCPs signed co-management agreements with their respective districts, regularly participated in District Co-Management Committees’ meetings, and carried out bi-weekly meetings, with a halt in meetings during the COVID-19 pandemic. The project financed studies on CCP sustainability, CCPs’ training, development of new standard statutes, updating of CCPs’ legal frameworks, support for the demarcation of CCPs’ fishing right areas, and licensing campaigns. Information source: World Bank reports and the borrower completion report.

Tanzania (target substantially achieved). At closing, 116 out of 149 co-management units supported in Mainland Tanzania and Zanzibar achieved at least two performance targets. *In Mainland Tanzania*, 17 of the 50 BMUs (34 percent) in the priority districts of Mkinga, Tanga City, Pangani, Bagamoyo, and Lindi Rural achieved at least two targets. To achieve these results, the project financed training of the 50 BMU members on fisheries management and leadership; development of twelve CFMA management plans with management measures for priority fisheries; training on the implementation of key measures, including octopus seasonal closure in line with the Octopus Management Plan in Pangani and Kilwa districts, prawn seasonal closure in line with the Prawn Management Plan in Kibiti and Bagamoyo districts; joint patrols by BMUs and district stakeholders to prevent blast fishing and littering in CFMAs and ensure vessel registration; training on revenue and licensing fee collection on behalf of the local government authorities and retainment of ten percent of collected revenue to finance BMUs’ work plans; and community awareness workshops. *In Zanzibar*, all 99 supported VFCs (100 percent) in the three MCAs achieved at least two performance targets. The project financed the development of General Management Plans for the three targeted MCAs; the implementation of key management measures, including training on octopus seasonal closures and establishment of a coral reef benthic monitoring system at all sites to inform MCAs’ management; and training of VFC members on fisheries management functions, such as conflict management, record management, licensing and revenue collection and expenditure, and governance. Information source: borrowers’ result calculation datasheets, World Bank reports, borrower completion report, and MCA management plans.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00	135,050.00	105,050.00	379,162.00
		01-Mar-2015	30-Sep-2021	30-Sep-2021	30-Sep-2022



Female beneficiaries	Percentage	0.00	0.00	31.00	30.00
Comoros	Number	0.00	10,000.00		22,762.00
Percentage of female	Percentage	0.00	27.00		21.00
Mozambique	Number	0.00	60,000.00	30,000.00	98,485.00
Of which female	Percentage	0.00	10.00		48.00
Tanzania	Number	0.00	65,000.00		257,071.00
Of which female	Percentage	0.00	50.00		24.00



Regional	Number	0.00	50.00		844.00
		01-Mar-2015	30-Sep-2021		30-Sep-2022
Of which female	Percentage	0.00	30.00		23.00

**Comments (achievements against targets):**

**Target achieved with a slight underachievement of the female beneficiary target**

Comoros (target achieved, female breakdown target underachieved): The results is composed of 8,914 beneficiaries in Anjouan, 18 percent female, 10,027 beneficiaries in Grand Comore, 24.7 percent female; and 3,821 beneficiaries in Moheli, 18 percent female. Beneficiaries were CMU members benefitting from mobilization and training activities, value-chain operators benefitting from business and value-chain development training, registered vessel owners, fishers receiving marine safety equipment, government staff receiving training and equipment for data collection and MCS activities, and people benefitting from new or improved infrastructure and refrigeration equipment and alternative income generating activities. Information source: Borrower’s beneficiary calculation sheet and completion report.

Mozambique (target achieved): The result reflects CCP members in the three provinces (7,705 in total, 16 percent female), government agencies’ staff trained on relevant subjects (31,068, 49 percent female), community members implementing fisheries management plans, PCR participants, Matching Grants Scheme beneficiaries, and participants in regional MCS activities (59,712 in total, 51 percent female). Information source: World Bank reports and borrower’s beneficiary calculation sheet.

Tanzania (target achieved, female breakdown target underachieved): The result reflects 166,046 direct beneficiaries, 10 percent female *in Mainland Tanzania* (BMU members, fishers, fish processors, fish traders, seaweed farmers, researchers, students, and government staff); 89,429 direct beneficiaries, 51 percent female *in Zanzibar* (VFC members, fishers, fish farmers, fish farmer committee members, seaweed farmers, seaweed farmer committee members, Village Savings and Loan beneficiaries, and government staff); and 1,596 beneficiaries, 23 percent female from *DSFA* activities (observers and inspectors receiving MCS training and equipment, fisheries research students and staff benefiting from training and equipment, and project management staff benefiting from operational and technical training). Source: World Bank reports and borrower’s beneficiary calculation sheet.



Regional (target achieved, female breakdown target underachieved): the result reflects participants in the SWIOFC meetings supported by the project. Source: IOC completion report.

The reported results do not reflect the number of unique beneficiaries across interventions as beneficiaries were aggregated by intervention type in each country. A conservative estimate of the number of unique beneficiaries shows around 137,920 people, still above target.

### A.2 Intermediate Results Indicators

**Component:** Component 1. Enhanced regional collaboration

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Minimum Terms & Conditions (MTC) for access to tuna fishery agreed at technical regional level	Yes/No	No 01-Mar-2015	Yes 30-Sep-2021		Yes 30-Sep-2022

**Comments (achievements against targets):**

**Target achieved.** Guidelines for MTC for Foreign Fisheries Access in the SWIOFC Region were adopted in 2018. To achieve these results, the project financed the costs of regional technical meetings, meetings of the SWIOFC MTC Task Force, development of legal and technical reports by consultants in collaboration and co-financing from WWF, and the assessment consultation. Information source: MTC Guidelines, World Bank reports, and IOC completion report.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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SWIOFC sustainable regional financing mechanism agreed	Yes/No	No 01-Mar-2015	Yes 30-Sep-2021		Yes 30-Sep-2022
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**Comments (achievements against targets):**

**Target achieved.** Agreement was made by SWIOFC and its Statutory Bodies in 2019 to set up a multilateral trust fund to receive voluntary funding from Members Countries and donors under the auspices of FAO with contributions from Member States and donors to support the SWIOFC work plan. To achieve this result, the project financed the preparation of an options study, three background studies, and regional consultation meetings. Information source: World Bank reports, SWIOFC 10th Session Proceedings, and review of the options study.

**Component:** Component 2. Improved governance of priority fisheries

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Fisheries Information System (FIS) / Dashboards operational	Text	NA 01-Mar-2015	NA 30-Sep-2021	NA 30-Sep-2021	NA 30-Sep-2022
Tanzania: Fisheries Information System publishes data regularly with updated data	Yes/No	N	Yes		Yes
Mozambique: Dashboard in place and made public with regularly updated data	Yes/No	N	Yes		Yes



Comoros: Dashboard in place and made public with regularly updated data	Yes/No	N	Yes		No
<p><b>Comments (achievements against targets):</b>  <b>Target partially achieved</b></p> <p><u>Comoros (target partially achieved)</u>: At closing, a FIS was developed with a public dashboard on the DGRH website but the dashboard did not contain updated data for 2021. The FIS featured a modern statistical data collection and transmittal system using Open Data Kit Interface, replacing previously used paper forms, with data on artisanal fisheries, octopus fisheries, fishing efforts, and contribution of the fishing sector to GDP. The project financed the participation of key staff in FAO’s international course on sample-based statistics for artisanal fisheries and data collection campaigns. Information source: World Bank reports, borrower completion report, and additional information from GDRH.</p> <p><u>Mozambique (target achieved)</u>: The project financed the establishment of an Integrated FIS (SIIMAIP) with a public dashboard, and the FIS is regularly updated. The project financed the hiring of a consulting firm that developed the SIIMAIP and dashboard, consultancy and operating costs of data collection campaigns and equipment, such as motorbikes, computers, and laptops, and an update of the 2014-2018 Statistics Master Plan for 2017-2021. Information source: World Bank reports, borrower completion report, and information from MIMAIP.</p> <p><u>Tanzania (target achieved)</u>: FISs are available in Mainland Tanzania, Zanzibar, and DSFA, publishing data regularly with updated data. <i>In Mainland Tanzania</i>, the previous CAS database was converted into an eCAS database with features that include a mobile phone application to facilitate data transfer and sharing and real-time data availability, housed by MLF. The eCAS produces reports following internationally accepted FAO quality standards. <i>In Zanzibar</i>, a fishery catch database (SAMAKIS) was developed and is operational in all ten districts, and a public fisheries dashboard website was available at closing. It is currently being expanded to present a wider range of blue economy data and is expected to be available in the coming month. <i>In DSFA</i>, a decentralized FIS was developed, supported by a mobile phone-based platform for data collection and update. DSFA uses the FIS to publish data regularly, including semi-annually to the IOTC and quarterly to MLF and MBEF. Information is also made available to the public upon request in addition to hard-copy newsletters available to visitors and distributed during national and international meetings. The project financed the development and installation of the three systems through a joint consultancy, training of agencies’ staff on the operation of the systems, mobile phones for data inputs, and motorbikes for data collection in Mainland Tanzania’s landing sites. Information source: World Bank reports, borrower completion report, and information from MLF, MBEF, and DSFA.</p>					



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
At least one key policy or legal instrument for fishery management developed or updated for each country	Text	NA 01-Mar-2015	NA 30-Sep-2021	NA 30-Sep-2021	NA 30-Sep-2022
Tanzania: Fisheries Act revised, consulted and submitted to cabinet	Yes/No	N	Yes		Yes
Mozambique: Aquaculture Strategy reviewed and updated	Yes/No	N	Yes		Yes
Mozambique: Mid-term review of the Fisheries Master Plan and update	Yes/No	N	Yes		Yes
Mozambique: The Sea and Policy Strategy	Yes/No	N	Yes		Yes
Comoros: Fisheries law application texts adopted	Yes/No	N	Yes		Yes



Comments (achievements against targets):

Target achieved

Comoros (target achieved): The 2007 Fisheries Law was revised and promulgated by the President in April 2020, and 18 implementation texts, decrees and ministerial orders of the Fisheries Law were adopted, related to institutional arrangement for fisheries, MCS, fisheries management, fish quality and hygiene, and sanitary conditions. Information source: World Bank reports and borrower completion report.

Mozambique (target achieved): A 2020-2030 National Aquaculture Development Strategy was developed and approved by the Council of Ministers in 2020; a mid-term review and an update of the Mozambique’s Fisheries Master Plan (2010) was prepared and approved by MIMAIP in 2019; and a Policy and Strategy of the Sea was developed and approved in 2018 by the Council of Ministers. In addition, the government updated the 2013 Maritime Fisheries Regulation (approved in 2020 by the Council of Ministers), revised the 1986 Law of the Sea (approved in 2019 by the Assembly), revised the legal framework of the Maritime Courts Law (enacted by the President in 2022), prepared a National Strategy and Action Plan for Mangrove Management (2018-2023, approved by the Council of Ministers in 2018), developed a new Fisheries Statistics Master Plan (2017-2021, approved by MIMAIP in 2017), and developed a new Fisheries Products Quality Control Regulation (approved in July 2020 by the Council of Ministers). Information source: World Bank reports, borrower completion report, and review of instruments.

Tanzania (target achieved): *In Mainland Tanzania*, MLF reviewed the Fisheries Act (2003) and proposed revisions on day fishing, consulted with stakeholders, and submitted the revised Act to a Cabinet Parliamentary Committee, which approved it in 2022. MLF also reviewed and revised the Marine Park Reserve Unit Act (1994), which was approved by the Cabinet in 2022; and drafted and approved a Fisheries Policy and amendments to fisheries Regulations (GN. 383 of 2019 and GN.492 of 2020) in 2020. Zanzibar’s Fisheries Act (2010) and Fisheries Policy (2014) were revised by MBEF and approved by the Principal Secretary Committee and President Committee in 2022, respectively. *DSFA* drafted a new Deep Sea Fishing Policy and a Deep-Sea Fisheries Management and Development Act and Regulations, and these were approved in 2020 and 2021 by the Zanzibar Revolutionary Council and Mainland Tanzania Ministers Cabinet and Parliament, respectively. Information source: World Bank reports, borrower completion report, and review of instruments.

In all three countries, the project supported these results by financing the preparation of fisheries studies, consultancies to provide technical inputs to the implementing agencies, and costs of stakeholder consultation and validation workshops and meetings.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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Control of fishing activity	Text	NA 01-Mar-2015	NA 30-Sep-2021	NA 30-Sep-2021	NA 30-Sep-2022
Tanzania: % of noncompliance incidences in a year	Percentage	80.00	50.00	50.00	45.00
Comoros: Vessels inspected, as a percentage of the motorized fleet	Percentage	2.00	10.00		25.20
Mozambique: Actual days of patrols in the target area, disaggregated by (i) land patrols (ii) coastal patrols	Number	200.00	600.00		992.00
Mozambique: Actual days of land patrols in the target area	Number	200.00	360.00		695.00
Mozambique: Actual days of coastal patrols in the target area	Number	0.00	240.00		297.00
<b>Comments (achievements against targets):</b> <b>Target achieved</b>					



**Comoros (target achieved):** The result reflects the inspection rate at closing, namely 756 vessels of a total of 3,000 inspected through land and sea patrols. This was thanks to the project-financed reinforcement of capacity of inspectors (training, operating costs, cars), construction of a new building for the fisheries monitoring center and its staff, maintenance of a functional vessel monitoring system monitoring foreign industrial fishing vessels and industrial fishing vessels flying the Comorian flag, and signing of cooperation agreements between the fisheries administration and other entities engaged in MCS activities, such as the Coast Guard. Information source: World Bank reports.

**Mozambique (target achieved):** In 2021, MIMAIP carried out 695 days of land patrols and 297 days of coastal patrols in the target areas in Sofala bank, and throughout the project it carried out 2,300 days of land patrols and 1,029 days of coastal patrols. To achieve this result, the project financed the development of an MCS strategic study for industrial, semi-industrial, and artisanal fisheries, updating of the National Action Plan for IUU Prevention (consultancies, validation workshops), and surveillance activities' costs (vehicles, equipment, and operating costs). Information source: World Bank reports and borrower completion report.

**Tanzania (target achieved):** The result reflects the total rate of non-licensed vessels in 2022: 42 percent in *Mainland Tanzania* (4,016 out of 9,563 vessels), 50 percent in *Zanzibar* (3,944 out of 7,942 vessels), and full compliance in the *EEZ* (all 30 vessels). To achieve this result, the project financed inspection activities (purchase of patrol and on-boarding boats, air patrols, operating costs (fuel), and training of inspectors), the DSFA-based fisheries monitoring center and vessel monitoring system, and a boat slipway at Fumba (completed and handed over in January 2022). Information source: World Bank reports, borrower completion report, and information from MLF, MBEF, and DSFA.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Mozambique: Situation Plan elaborated and submitted for approval to the relevant authority	Yes/No	No 01-Mar-2015	Yes 30-Sep-2021		Yes 30-Sep-2022

**Comments (achievements against targets):**

**Target achieved.** A Maritime Spatial Planning Plan was prepared and approved by the Council of Ministers in November 2021. It includes a framework and a methodology, diagnosis, proposal, an M&E plan with indicators for measuring and evaluating zoning and planning measures, an M&E plan, and a public



participation process. The project financed the development of the Plan. Information source: World Bank reports, borrower completion report, and the Maritime Spatial Planning Plan.

**Component:** Component 3. Increased economic benefits from priority fisheries

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of target community individuals participating in value-chain enhancement through project initiatives	Text	NA 01-Mar-2015	NA 30-Sep-2021	NA 30-Sep-2021	NA 30-Sep-2022
Tanzania: Village Savings Loan Scheme recipients	Number	0.00	2,200.00		17,949.00
Mozambique: Participants in Rotating Saving and Credit Scheme (PCR) cycles	Number	0.00	1,200.00	3,000.00	17,546.00
Comoros: Number of value-chain operators benefitting from business and value-chain development training	Number	0.00	600.00		2,134.00

**Comments (achievements against targets):**



**Target achieved**

Comoros (target achieved): The result reflects 244 value-chain operators receiving business planning, packaging, and marketing training, 16 percent female; and 1,890 operators receiving training on good hygiene practices and proper use of sanitary kits (cooler lots, scales, knives, gloves, and aprons), 54 percent female. The project financed the hiring of a firm that provided the training. Information source: World Bank reports and additional information from GDRH.

Mozambique (target achieved): The project established new and revitalized existing PCR Associations in Nampula, Sofala, and Zambezia provinces, reaching 17,546 fishing community members, 52 percent female: 3,449, 56 percent female in Nampula Province (Angoche, Larde, Liupo, Mogincual, and Moma districts); 5,599, 58 percent female in Sofala Province (Beira, Buzi, Dondo, Muanza, and Muchange districts), and 8,498, 46 percent female in Zambezia Province (Chinde, Inhassunge, Mucubela, Maganja da Costa, Namacurra, Pebane, and Quelimane districts). The project financed the recruitment of service providers (a firm and NGOs) that helped to establish and revitalize the PCR Associations as small banking systems - jointly saving member financial contributions and lending them with interest. Information source: World Bank reports, borrower completion report, and PCR completion reports.

Tanzania (target achieved): The project helped 1,220 economic groups (existing and new) to establish a Village Savings and Loans Scheme (VSL) in Mainland Tanzania (336) and Zanzibar (884), with a total of 17,949 members from the targeted communities, 52 percent male and 48 percent female. The project financed groups' mobilization, entrepreneurship training, and equipment (388 mobile phones, 330 safe boxes, and counter books for record keeping). Source: World Bank reports, borrower completion report, and CARE Tanzania Final VSL Report, June 2022.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Operational fisheries infrastructure	Text	NA 01-Mar-2015	NA 30-Sep-2021	NA 30-Sep-2022	NA 30-Sep-2022
Tanzania: Operationalized targeted fisheries management infrastructure	Number	0.00	3.00	3.00	23.00



Comoros: Number of operational fisheries infrastructure	Number	0.00	8.00	14.00	13.00
Mozambique: Infrastructures to support artisanal fisheries completed and operational	Number	0.00	6.00		5.00

**Comments (achievements against targets):**

**Target substantially achieved**

Comoros (target substantially achieved): The result includes seven project-financed constructed and operational cold chain chambers equipped with cold stores or ice machines: three in Grande Comore (in Chindini, Foubouni, and Moroni-Hankounou) and four in Najouan (in Domoni, Mutsamudu, Sadampoini, and Sima); a fish shop in Ntsaouéni, Grande Comore; and five storage structures: one in Male, Grande Comore, one in Bimini, Anjouan, and three in Mohéli – in Hamavouna, Ndrondroni, and Wallah II, the latter also featuring a parking area. The infrastructure is operated mostly by local cooperatives, and in some cases by GDRH. Information source: World Bank reports, borrower completion report, and additional information from GDRH.

Mozambique (target substantially achieved): The result reflects the construction of a fish market in Namige District, Nampula Province, a fish market in Cuassiane, Zambezia Province, and three extension agent houses and offices – one in Namige District, Nampula Province, one in Chinamacondo District, Sofala Province, and one in Chinde District, Zambezia Province, all operational. Information source: World Bank reports and borrower completion report.

Tanzania (target achieved): The result includes seven fisheries management infrastructure in Mainland Tanzania, 13 in Zanzibar, and three EEZ-related infrastructures, which are operational. In *Mainland Tanzania*, the project financed the establishment of five BMU offices (in Dunda in Mbarali District, Kipumbwi and Saadani in Pangani District, Sudi in Lindi Region, and Zingibari in Tanga Region), a wet lab within TAFIRI in Kunduchi that analyzes fish and water quality parameters, and staff accommodation for the Tanga Coelacanth Marine Park staff. In *Zanzibar*, the project financed the rehabilitation of the Nungwi fish market in Unguja (expansion of the auction area, insulated roof, elevated flooring with drainage, sectioning of landing, sales, and selling, accessible toilets for men and women, electricity connection, rainwater collection tanks, and a well; rehabilitation of the Tumbe fish market in Pemba (shades, sectioning, electricity connection, and rainwater collection tanks), supply of ice igloos, and installation of an ice plant; supply, installation, and commissioning of cold rooms at Malindi landing site in Pemba; construction of nine ranger surveillance posts/field offices (in Fumba, Kikungwi, Kizimkazi, Mazizini, Mkokotoni, Pungume, and Uroa in Unguja and in Misali and Weshu in Pemba); and refurbishment of the MBEF administration building in



Maruhubi, Unguja (Nyangumi House) with new flooring, a new rest area, a water system, leakage control, air conditioning, new accessible toilets, and a library/archive. Finally, the project financed the refurbishment of the DSFA VMS room; the construction of a DSFA boat ramp; and construction of a changing room for DSFA inspectors. Information source: World Bank reports, borrower completion report, and ICR author's visits to sample sites.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
At least one target fishery value chain enhanced per country	Text	NA 01-Mar-2015	NA 30-Sep-2021	NA 30-Sep-2021	NA 30-Sep-2022
Tanzania: At least one recommendation is implemented for each priority fish value chain study for economic benefits	Number	0.00	3.00		7.00
Mozambique: Targeted value chain actors receiving support from the FFP Matching Grants Scheme, disaggregated by (i) individual family applicants and (ii) commercial businesses	Number	0.00	405.00		1,217.00
Mozambique: Individual family applicants receiving support from FFP's Matching	Number	0.00	400.00		1,213.00



Grants Scheme				
Mozambique: Commercial Businesses receiving support from FFP's Matching Grants Scheme	Number	0.00	5.00	4.00

**Comments (achievements against targets):**

**Target substantially achieved**

Mozambique (target achieved, commercial breakdown target substantially achieved): The results reflect the recipients of a Matching Grants Scheme (MPS) implemented in the three provinces. MPS Window 1 supported 1,213 individual family applicants: 299 in Nampula Province, 514 in Sofala Province, and 400 in Zambezia Province, of whom 308 were women (25.4 percent). MPS Window 2 supported four commercial enterprises: Instituto Politécnico Mártir Cipriano and Agrobusiness Moçambique, Lda in Nampula Province, Moçambique Aquacultura e Agricultura in Sofala Province, and Aquapesca in Zambezia Province. The project financed the grants, value chain analyses for artisanal fisheries and aquaculture, socioeconomic studies, analysis of financial entities' capacities, the design of the matching grants scheme, and the training by consultants. Information source: World Bank report, borrower completion report, and ProAzul Program Closing Report (2019-2021).

Tanzania (target achieved): In *Mainland Tanzania*, the priority fish value chains were mariculture (seaweed), small pelagics (sardines), octopus, prawns, reef fish, and tuna. For mariculture, the recommendation to improve seaweed processing instead of selling them raw to increase revenue was implemented by developing dried seaweed qualification standards TBS/AFDC 23 (5714) with operational guiding standards; for small pelagics, the recommendation to establish quality standards to facilitate export was implemented by developing quality standards TBS/AFDC 23 (5713) for exported powdered sardines; and for octopus, prawns, reef fish, and tuna, the recommendation to understand the biological and chemical composition of products to enhance export was implemented by constructing the new TAFIRI wet lab in Kunduchi. In *Zanzibar*, the priority fish value chains were mariculture, octopus, and sea cucumber. For mariculture, the recommendation to scale up seaweed harvesting and support the seaweed value chain from production to sales was implemented by supplying 500 simple hand-pulled seaweed barges to seaweed farmers in 77 Villages (49 villages in Unguja and 28 villages in Pemba), which can carry up to 500 kg of seaweed per trip to facilitate harvesting instead of the common use of small plastic bags, and providing 327 seaweed farmers training on seaweed soap, juice, and powder production. For octopus, the recommendation to ensure sustainable harvesting was implemented by enforcing seasonal octopus closures. For sea cucumber, the recommendation to increase production was implemented by training 600 coastal groups in Unguja and Pemba on sea cucumber production and construction of sea cucumber pens (breeding facilities) in coastal areas in Pemba.



The project financed the value chain studies' consultancies, barges and pens, lab infrastructure and equipment, and training by consultants. Information source: World Bank reports, borrower completion report, and informal interviews with seaweed farmers.

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**B. KEY OUTPUTS BY COMPONENT**

<b>Outcome 1: Improve the management effectiveness of selected fisheries at regional level</b>	
Outcome Indicators	(Regional Level) Number of new SWIOFC member country signatures to bilateral and/or multilateral agreements on fisheries
Intermediate Results Indicators	<ol style="list-style-type: none"> <li>1. Minimum Terms &amp; Conditions (MTC) for access to tuna fishery agreed at technical regional level</li> <li>2. SWIOFC sustainable regional financing mechanism agreed</li> </ol>
Key Outputs by Component (linked to the achievement of Outcome 1)	<p><u>Component 1</u></p> <ol style="list-style-type: none"> <li>1. Eleven signed bilateral fisheries agreements</li> <li>2. Seven signed memoranda of understanding between SWIO and non-SWIO countries</li> <li>3. Four signed Fisheries Partnership Agreements between SWIO countries and the EU</li> <li>4. A regional strategy for tuna fisheries and studies to inform a Regional Fisheries Framework Agreement</li> <li>5. Adopted guidelines for MTC for Foreign Fisheries Access in the SWIOFC Region</li> <li>6. Agreed sustainable regional financing mechanism for SWIOFC</li> <li>7. Joint resolutions and proposals for tuna conservation and management measures</li> <li>8. Regional training on FAO’s Port State Measure</li> <li>9. Joint sea and aerial patrols</li> <li>10. Development of a Regional Observer Scheme</li> <li>11. Participation of SWIOFC and member countries in regional and international meetings and workshops</li> <li>12. Studies and reports of regional interest</li> </ol>
<b>Outcome 2: Improve the management effectiveness of selected fisheries at national level</b>	
Outcome Indicators	<p>Fisheries Management Plans implemented</p> <ul style="list-style-type: none"> <li>- Tanzania: Fisheries management plans (FMP) consulted, approved and implemented</li> <li>- Mozambique: Management plans for demersal line fisheries, coastal shrimp, and deep-sea crustaceans</li> <li>- Comoros: EAF demersal fisheries management plan</li> </ul>
Intermediate Results Indicators	<ol style="list-style-type: none"> <li>1. Fisheries Information System (FIS) / Dashboards operational <ul style="list-style-type: none"> <li>- Tanzania: Fisheries Information System publishes data regularly with updated data</li> <li>- Mozambique: Dashboard in place and made public with regularly updated data</li> </ul> </li> </ol>



	<ul style="list-style-type: none"> <li>- Comoros: Dashboard in place and made public with regularly updated data</li> </ul> <ol style="list-style-type: none"> <li>2. At least one key policy or legal instrument for fishery management developed or updated for each country <ul style="list-style-type: none"> <li>- Tanzania: Fisheries Act revised, consulted and submitted to cabinet</li> <li>- Mozambique: Aquaculture Strategy reviewed and updated</li> <li>- Mozambique: Mid-term review of the Fisheries Master Plan and update</li> <li>- Mozambique: The Sea and Policy Strategy</li> <li>- Comoros: Fisheries law application texts adopted</li> </ul> </li> <li>3. Control of fishing activity <ul style="list-style-type: none"> <li>- Tanzania: % of noncompliance incidences in a year</li> <li>- Comoros: Vessels inspected, as a percentage of the motorized fleet</li> <li>- Mozambique: Actual days of patrols in the target area, disaggregated by (i) land patrols (ii) coastal patrols <ul style="list-style-type: none"> <li>▪ Mozambique: Actual days of land patrols in the target area</li> <li>▪ Mozambique: Actual days of coastal patrols in the target area</li> </ul> </li> </ul> </li> <li>4. Mozambique: Situation Plan elaborated and submitted for approval to the relevant authority</li> </ol>
<p>Key Outputs by Component (linked to the achievement of Outcome 2)</p>	<p><u>Component 2</u></p> <p>Comoros:</p> <ol style="list-style-type: none"> <li>1. 2013 Demersal Fisheries Management Plan evaluated, expanded, and approved as a new National Coastal Fisheries Management Plan (2020)</li> <li>2. A fisheries monitoring center equipped and made functional, housing an existing satellite-based fishing vessel monitoring system</li> <li>3. A FIS with a public dashboard on the DGRH website (currently not active)</li> <li>4. Revised and approved Fisheries Law (2020) and 18 implementation texts, decrees, and ministerial orders</li> <li>5. Increase of inspection rate to 25.2 percent of vessels</li> </ol> <p>Mozambique:</p> <ol style="list-style-type: none"> <li>1. A Deep Sea Crustaceans Management Plan (2021-2025) developed and 2014-2018 Sofala Coastal Shrimp Management Plan and Demersal Fisheries Management Plan updated for 2021-2025, approved and implemented.</li> <li>2. A regularly updated Integrated FIS with a public dashboard.</li> <li>3. A new approved 2020-2030 National Aquaculture Development Strategy (2020); approved mid-term review and an update of the Mozambique’s Fisheries Master Plan (2019); new approved Policy and Strategy of the Sea</li> </ol>



	<p>(2018); updated and approved Maritime Fisheries Regulation (2020); revised and approved Law of the Sea (2019); revised and approved legal framework of the Maritime Courts Law (2022); new approved 2018-2023 National Strategy and Action Plan for Mangrove Management (2018); new approved Fisheries Statistics Master Plan (2017); and new approved Fisheries Products Quality Control Regulation (2020).</p> <ol style="list-style-type: none"> <li>4. A new approved Maritime Spatial Planning Plan</li> <li>5. 992 days of land and coastal patrols</li> </ol> <p>Tanzania:</p> <ol style="list-style-type: none"> <li>1. Management plans for octopus, prawn, and small pelagic consulted, approved, and substantially implemented in Mainland Tanzania; management plans for octopus, reef fisheries, and small pelagic fisheries consulted, approved, and substantially implemented in Zanzibar; a Tuna Fishery Management Plan prepared by DSFA and submitted to MLF and MBEF approval.</li> <li>2. A fisheries monitoring center with a state-of-the art vessel monitoring system and standard operating procedures established at the DSFA.</li> <li>3. FISs in Mainland Tanzania, Zanzibar, and DSFA, publishing data regularly with updated data.</li> <li>4. Approved revised Fisheries Act (2022) and Marine Park Reserve Unit Act (2022); and approved Fisheries Policy and amendments to fisheries Regulations (2019 and 2020) in Mainland Tanzania; revised and approved Fisheries Act (2022) and Fisheries Policy (2022) in Zanzibar; and new Deep Sea Fishing Policy and Deep-Sea Fisheries Management and Development Act and Regulations (2020 and 2021) for the Union.</li> <li>5. 42 percent noncompliance rate in Mainland Tanzania, 50 percent in Zanzibar, and zero in the EEZ.</li> </ol>
<b>Outcome 3: Improve the management effectiveness of selected fisheries at community level</b>	
Outcome Indicators	<p>(Community level) Co-management units achieving at least 2 performance targets (2)</p> <ul style="list-style-type: none"> <li>- Tanzania: Proportion (%) of targeted community-based management units achieving at least 2 performance targets</li> <li>- Mozambique</li> <li>- Comoros</li> </ul>
Intermediate Results Indicators	<ol style="list-style-type: none"> <li>1. Number of target community individuals participating in value-chain enhancement through project initiatives <ul style="list-style-type: none"> <li>- Tanzania: Village Savings Loan Scheme recipients</li> <li>- Mozambique: Participants in Rotating Saving and Credit Scheme (PCR) cycles</li> <li>- Comoros: Number of value-chain operators benefitting from business and value-chain development training</li> </ul> </li> </ol>



	<ol style="list-style-type: none"> <li>2. Operational fisheries infrastructure <ul style="list-style-type: none"> <li>- Tanzania: Operationalized targeted fisheries management infrastructure</li> <li>- Comoros: Number of operational fisheries infrastructure</li> <li>- Mozambique: Infrastructures to support artisanal fisheries completed and operational</li> </ul> </li> <li>3. At least one target fishery value chain enhanced per country <ul style="list-style-type: none"> <li>- Tanzania: At least one recommendation is implemented for each priority fish value chain study for economic benefits</li> <li>- Mozambique: Targeted value chain actors receiving support from the FFP Matching Grants Scheme, disaggregated by (i) individual family applicants and (ii) commercial businesses <ul style="list-style-type: none"> <li>▪ Mozambique: Individual family applicants receiving support from FFP's Matching Grants Scheme</li> <li>▪ Mozambique: Commercial Businesses receiving support from FFP's Matching Grants Scheme</li> </ul> </li> </ul> </li> </ol>
<p>Key Outputs by Component (linked to the achievement of Outcome 3)</p>	<p><u>Component 3</u></p> <p>Comoros:</p> <ol style="list-style-type: none"> <li>1. Six supported CMUs composed of fishing community members from 15 villages</li> <li>2. 244 value-chain operators receiving business planning, packaging, and marketing training, 16 percent female and 1,890 operators receiving training on good hygiene practices and proper use of sanitary kits, 54 percent female</li> <li>3. 13 operational fisheries infrastructure</li> <li>4. 1,213 individual recipients (25.4 percent female) and three commercial businesses receiving MPS grants</li> </ol> <p>Mozambique:</p> <ol style="list-style-type: none"> <li>1. 43 CCPs supported in Sofala bank</li> <li>2. New and revitalized PCR Associations in Nampula, Sofala, and Zambezia provinces, reaching 17,546 members, 52 percent female</li> <li>3. Five constructed and operational cold chain chambers equipped with cold stores or ice machines</li> </ol> <p>Tanzania:</p> <ol style="list-style-type: none"> <li>1. 116 co-management units supported in Mainland Tanzania and Zanzibar</li> <li>2. 336 VSLs in Mainland Tanzania and 884 VSLs in Zanzibar, with a total of 17,949 members, 48 percent female</li> <li>3. 23 operationalized targeted fisheries management infrastructure in Mainland Tanzania, Zanzibar, and DSFA</li> <li>4. Seven priority fish value chain studies' recommendations implemented (one per priority fish)</li> </ol>

**ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION****A. TASK TEAM MEMBERS**

<b>Name</b>	<b>Role</b>
<b>Preparation</b>	
Xavier F. P. Vincent, Ann Jeannette Glauber, Benjamin Garnaud	Task Team Leaders
Xiaoping Li, Sylvain Auguste Rambeloson, Gisbert Joseph Kinyero, Antonio Laquene Chamuco, Lova Niaina Ravaoarimino	Procurement Specialists
Patrick Piker Umah Tete, Mercy Mataro Sabai, Joseph Byamugisha, Patrick Kabuya, Elvis Teodoro Bernado Langa	Financial Management Specialists
George Campos Ledec	Ecologist
Luis M. Schwarz, Christiaan Johannes Nieuwoudt, Aissatou Diallo	Finance Officers
Cheikh A. T. Sagna	Social Development Specialist
Paulo Jorge Temba Sithoe, Paul-Jean Feno	Environmental Specialists
Victor Bundi Mosoti, Edith Ruguru Mwenda Omri Moshe Sender	Counsels
Dinesh Aryal	Operations Officer
Marie Bernadette Darang	Information Assistant
Salimata D. Follea	Natural Resource Management Specialist
Helen Z. Shahriari	Social Scientist
Jayne Angela Kwengwere, Mariella Beugue, Salma Chande, Virginie A. Vaselopoulos	Program Assistants
Anna Corsi	Institutions Specialist
Faustina Robi Chande, Adelia Ninete Matias Chebeia	Team Assistants
Suhail Kassim	Private Sector Development Specialist
Mohammad Nadeem	Legal Analyst
<b>Supervision/ICR</b>	
Charlotte De Fontaubert, Enos E. Esikuri, Joao Moura Estevao Marquesda Fonseca, Julien Marie Francois Million	Task Team Leaders
Gisbert Joseph Kinyero, Sylvain Auguste Rambeloson, Amos Martinho Malate, Maria Isabel Nhassengo-Massingue, Amanda Teresia Jerneck, Mohammad Ilyas Butt	Procurement Specialists



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Patrick Kabuya, Joao Tinga, Tandile Gugu Zizile Msiwa, Nkundwe Jonah Mwakiluma, Maharavo Harimandimby Ramarotahiantsoa	Financial Management Specialists
Maria Do Socorro Alves Da Cunha, Erika Ella Auer	Social Development Specialists
Amelia Jose Cumbi, Bruno Alberto Nhancale, Daniel Mira-Salama, Paul-Jean Feno, Erik Winter Reed	Environmental Specialists
Victor Bundi Mosoti	Counsel
Aissatou Diallo	Resident Representative
Franka Braun, Hasinarijaona Laza Rakotondrasoa	Natural Resource Management Specialists
Angela Alice Dengo, Judith Elimhoo Matemba, Bodomalala Sehenarisoa Rabarijohn, Imma Ismaily Killasama, Grace Anselmo Mayala, Vohangitiana Josiane Rarivoson, Faustina Robi Chande, Mariella Beugue, Aurore Simbananiye, Andrianina Noro Rafamantanantsoa, Priscilla Simbisayi Zengeni, Jayne Angela Kwengwere	Program Assistants
Christiaan Johannes Nieuwoudt	Finance Officer
Elvis Teodoro Bernado Langa	Operations Officer
Suhail Kassim	Economist
Noro Hajalalaina Rasoloarimanana Andriamihajas, Adelia Ninete Matias Chebeia	Team Assistants
Wilbard Mkama Makene, Cedric Boisrobert, David Japp, Gertjan de Graaf, Simeao Lopes	Fisheries Consultants
Olivia Datius Rutashobya	Financial Management Consultant
Nikolai Alexei Sviedrys Wittich	Procurement Consultant
Jason Rubens	Coastal Management Consultant
Jean-Luc Lejeune	MCS Consultant
Joseph Sciortino	Infrastructure Engineer, Consultant
Karuna Krishnaswamy	ICR Economist
Ayala Peled Ben Ari	ICR Author

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**B. STAFF TIME AND COST**

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
<b>Preparation</b>		
FY13	31.497	205,571.74
FY14	40.493	336,711.52
FY15	56.437	362,974.58
FY16	0	0.00
FY20	22.537	240,937.46
FY21	8.378	365,528.84
FY22	0	55,884.60
FY23	.225	1,586.52
<b>Total</b>	<b>159.57</b>	<b>1,569,195.26</b>
<b>Supervision/ICR</b>		
FY16	46.797	286,189.79
FY17	27.319	194,670.93
FY18	44.964	315,217.35
FY19	67.838	385,782.83
FY20	40.320	404,170.17
FY21	46.955	466,685.67
FY22	28.761	257,445.32
FY23	2.150	14,063.84
<b>Total</b>	<b>305.10</b>	<b>2,324,225.90</b>

**ANNEX 3. PROJECT COST BY COMPONENT**

Components	Amount at Approval (US\$M)		Revised Amount <sup>74</sup> (US\$M)		Actual at Project Closing <sup>75</sup> (US\$M)		Percentage of Approval (%)	
	IDA	GEF	IDA	GEF	IDA	GEF	IDA	GEF
Component 1. Enhanced regional collaboration	3.03	0.00	3.03	0.00	2.88	0.00	95%	-
Component 2. Improved governance of priority fisheries	39.16	15.50	40.16	15.24	24.60	15.24	62%	98%
Component 3. Increased economic benefits from priority fisheries	24.98	0.00	23.78	0.16	28.15	0.05	113%	-
Component 4. Project management and coordination	8.33	0.00	8.53	0.10	15.28	0.04	183%	-
<b>Sub-total</b>	<b>75.50</b>	<b>15.50</b>	<b>75.50</b>	<b>15.50</b>	<b>70.91</b>	<b>15.33</b>	<b>94%</b>	<b>99%</b>
<b>TOTAL</b>	<b>91.00</b>		<b>91.00<sup>76</sup></b>		<b>86.24</b>		<b>95%</b>	

<sup>74</sup> Amounts were revised in the September 28, 2021 restructuring.

<sup>75</sup> Amounts extracted from borrowers' final audit reports and additional information from the World Bank. Exchange rates at closing were used to calculate several US\$ values. Components' original and actual costs per borrower are available in the project's files.

<sup>76</sup> The ICR Datasheet notes a revised total amount of US\$90,826,491 because of cancellation of unused resources from TF19022 and TF19023 at closing.



## ANNEX 4. EFFICIENCY ANALYSIS

### Introduction

1. This annex is organized as follows: First, the assumptions, methodology, and results of the efficiency analysis at appraisal are summarized. Next, the expected benefits to the project stakeholders, modified assumptions, methodology, data used, and results of the efficiency analysis at completion along with a sensitivity analysis are presented. The efficiency analysis primarily presents a cost-benefit analysis. It computes the FIRR of the project at completion, which is the internal rate of return of the annual net incremental benefits stream from the date of project effectiveness until ten years after project closure. The annual net incremental benefit is the difference between the annual incremental benefits in monetary terms to project stakeholders and the annual project financial costs. The annual incremental benefit in a given year is the incremental benefit in monetary terms to project beneficiaries and to government compared to a WOP scenario. The project's case for value for money is made by comparing the FIRR at completion to that at appraisal. Additionally, a measure of cost-effectiveness is presented by comparing the ratio of project management costs (Component 3) to total project disbursements with that of three similar comparator projects to provide a sense for administrative efficiency.

### Efficiency at Appraisal

#### *Methodology and Assumptions Used*

2. At appraisal, the expected benefits were that improved resource assessment and access rules at national and regional levels would halt the existing trends of over-exploitation of selected coastal fish stocks and of marine ecosystems deterioration, through improved regional coordination and management in the three countries, leading to improved resource economic rent (a term similar in meaning to economic profits) for public and private actors, improved income and safety for fishers, and increased local, national, and regional value-addition from post-harvest activities.

3. The key assumptions were that (i) in the WOP scenario, large numbers of fisheries in the three countries were over-exploited leading to lower profits, and that the number of economically under-performing fisheries would continue to increase at the prevailing rate of 6 percent per year, leading to total annual loss of economic rent of US\$123 million (in 2008 prices); (ii) the project could prevent 10 percent of the rent loss through improved management; (iii) improved enforcement and minimum terms and conditions of licensing for foreign vessels would lead to a 50 percent increase in licensing and related revenue from foreign fishing agreements by Year 5; (iv) timely and reliably shared regional information on production and prices in fisheries was expected to increase the collective worth of the fisheries and mariculture sector by US\$1 million per year from Year 2; (v) an increase in access fees in the "with project" (WP) scenario from 5 percent to 10 percent of the gross value of catch would generate additional revenue of US\$3.4 million per year; and (vi) recovery of fisheries, increased value-addition, improved fleets, and new infrastructure were expected to increase incomes of fishers by US\$1 million from Year 1 to Year 5, increasing by another 5 percent from Year 5 to Year 10.

#### *Results of the Efficiency Analysis*

4. To demonstrate efficiency, the FIRR was calculated. Against the total project costs of US\$91 million, the FIRR was estimated to be 23 percent at the end of 10 years after project completion, reportedly a conservative estimate.



**Efficiency at Completion**

***Benefits at Completion***

5. The table below summarizes the various actual interventions implemented that were expected to increase the size of catch and yields, reduce input costs, increase incomes of project beneficiaries, and increase the tax and licensing revenue of the governments.

**Table 4.1: Project Interventions that are Expected to Lead to Benefits to Beneficiaries and to the Government**

<b>Community-based management interventions</b>
<p><b>Tanzania</b>  Vessel licensing  Fisheries’ management measures  Implementation of area closure measures  Training on fisheries management and implementation  Patrolling to prevent blast fishing</p>
<p><b>Mozambique</b>  Fishing gear licensing  Demarcation of fishing right areas</p>
<p><b>Comoros</b>  Licensing vessels, static gears, and aquaculture operations  Seasonal fishing closures  Installation of new fishing techniques  Training on management measures  Fishing equipment</p>
<b>Value chain enhancement interventions</b>
<p><b>Tanzania</b>  Village Savings and Lending, fisheries fund management system for government support provisioning, small business loans, and entrepreneurship training  Improved seaweed processing, scaleups, and sales  Quality standards to facilitate export of small pelagics</p>
<p><b>Mozambique</b>  Rotating savings and credit association-based saving and credit services  Matching grants scheme for income augmentation  Training on the use of the aquaculture equipment</p>
<p><b>Comoros</b>  Business and value chain training on fish processing, use of ice, fish cleaning, hygiene practices, business planning, packaging, and marketing  Provided value chain enhancement equipment</p>
<b>Fisheries infrastructure interventions</b>
<p><b>Tanzania</b>  Laboratory for analyses of fish and water quality  Rehabilitation of fish markets  Cold chain chambers  Boat ramp</p>
<p><b>Mozambique</b>  Fish markets  Extension agents’ offices</p>
<p><b>Comoros</b>  Cold chain chambers equipped with cold stores or ice machines</p>



Landing sites Storage warehouses for fishers Parking areas Small fish markets
<b>For government</b>
Increase in fees from vessel and fisher licenses and preventing illegal fishing

6. **Methodology and assumptions used for the cost-benefit analysis.** The incremental income earned by project beneficiaries compared to the WOP scenario was estimated by taking a simple average of three data points from the Tanzania project completion report. The data are drawn from case study-based estimates of incremental income accrued to communities of beneficiaries in three project sites in Tanzania after the project compared to before, namely (i) the ice plant interventions in Tumbwe market, Zanzibar, (ii) octopus closure and sea cucumber harvest interventions, and (iii) licenses to foreign fleets. The average of the three differential incomes is US\$203.4 per beneficiary per year. This figure was assumed to be the annual incremental benefit per beneficiary for all interventions combined and for all three countries since similar data are not available for Mozambique and Comoros. The incremental revenue to the governments of Mozambique and Tanzania was estimated at US\$814,809 per year, extrapolated from incremental earnings to local and central governments in Tanzania from fishing and vessel licenses compared to the previous year, estimated from the project data and further extrapolated to Mozambique.

7. The project tracked the number of beneficiaries by intervention type in each country, but did not track the number of unique beneficiaries across interventions. Hence, an estimate of the number of unique beneficiaries was made by taking the highest number of beneficiaries among all the various intervention as this is a conservative lower bound to the number of unique beneficiaries. This figure is 137,920 based on the borrowers’ completion reports and project documents.

8. The benefits were assumed to have started in 2019 and accrued to pro-rated, increasing numbers of beneficiaries from 2018-2019 to 2021-2022 and then continue to accrue to all beneficiaries for ten years after project closure (as was assumed at appraisal). The annual incremental benefits stream for beneficiaries was computed by multiplying the number of unique beneficiaries in each year by the average incremental income per beneficiary. The net financial benefits were computed by subtracting the yearly project financial costs from the stream of annual incremental benefits to fishers and government. The FIRR was computed on the yearly stream of net incremental benefits from 2015 to 2032. The discount rate was set at 12 percent, which is the opportunity cost rate commonly used in World Bank projects.<sup>77</sup>

**Table 4.2: Inputs to Cost-benefit Analysis**

Estimated Input Variables	Value
No. of unique direct beneficiaries	137,920
Tanzania	102,617
Mozambique	26,703
Comoros	8,600
Incremental income per beneficiary	US\$203.4
Incremental income to government	US\$814,809
Years of project costs	2015 to 2022
Years of benefits	2019 to 2032

9. **Methodology and assumptions used for the cost-effectiveness analysis.** Three comparator World Bank fisheries projects with similar development objectives situated in Africa were selected, out of which two have completed. The ratio

<sup>77</sup> For instance, ICR Report Number ICRR0022303.



of the cost of the project management component to the total project disbursement was computed for all four projects and compared to provide a sense for project management efficiency. In addition, cost per beneficiary was considered but not used due to the varying definitions of beneficiary in each project.

**10. Limitations of the data used and method of analysis.** 1) No credible impact evaluation data on the changes in incomes to participating fishers and businesses and revenues to government attributable to the project interventions were available. Hence, case study-based figures of incremental incomes to beneficiaries (before versus after), in three interventions in Tanzania (which do not purport to be casual impact sizes of the project) are used for the analysis. The average impact per fisher beneficiary was computed by a simple arithmetic mean of the incremental incomes from the three interventions. Hence, the average incremental income of the remaining interventions is assumed to be the same as the average of these three interventions. Alternate methods were considered but not feasible. No similar data from Mozambique or Comoros were used. The Mozambique completion report reports data on incremental profits of selected beneficiaries from two sets of interventions. The median increase in profits of these two interventions were approximately US\$4,000 per beneficiary per year. However, further supporting data, such as the total number of beneficiaries who were interviewed, are not available. Since one could not compute the average figure, these figures from Mozambique were not used. The final approach chosen is intentionally conservative in the absence of more rigorous data. This estimated final figure, hence, has an unknown bias and variance and should be treated with caution. 2) The analysis at completion considers a similar stream of benefits as at appraisal. However, due to lack of data, the specific assumptions made on the individual components of the benefits stream cannot be verified. 3) Owing to the nature of the project and benefits, it is not feasible to accurately estimate and assign a monetary value to all the differential benefits accrued to different stakeholders nor the duration of these benefits from other secondary data sources as was done at appraisal.

### Results of the Efficiency Analysis at Completion and Interpretation

11. The results of the cost-benefit analysis are tabulated below. The actual total project expenditure was US\$86.2 million at current year prices. Using a discount rate of 12 percent, the NPV of the stream of net incremental benefits was US\$50.5 million, in 2015 prices. The FIRR at completion was 27.3 percent as per the above inputs. This value compares favorably with that estimated at appraisal of 23 percent and with the typical opportunity cost rate of 12 percent. Similar completed World Bank projects did not attempt to compute the FIRR and hence could not be compared against.

**Table 4.3: Results of Cost-benefit Analysis**

Project disbursement at actual prices	US\$86.2 million
NPV of the stream of incremental benefits	US\$50.5 million in 2015 prices
FIRR	27.3%

12. The changes to selected benefits to fishers and to the governments expected at appraisal are presented below. The values represent a before-after comparison of selected metrics for which data were available from Mainland Tanzania. The assumptions at appraisal are not available in comparable units at completion to facilitate a comparison to observed data at completion.

**Table 4.4: Percentage Changes to Selected Benefits between Pre- and Post-project Years (Mainland Tanzania)**

Benefit	Change Measured Post-project
Vessel registration - National	124%
Fish catch	94%
Revenue collection from illegal fishing fines	327%
Fisher licenses	84%
Regional vessel licenses	54%



Number of fish traders	24%
Number of fish sales points	75%
Blast fishing	-99.88%

13. The results of the cost-effectiveness analysis are presented in the table below. This ratio of project management to total cost is 17.8 percent, placing it in the middle of comparator projects.

**Table 4.5: Ratio of Project Management Cost to Total Project Costs**

Project	SWIOFish1	West Africa Regional Fisheries Program - Sierra Leone (P108941)	West Africa Regional Fisheries Program - Ghana (P124775)	West Africa Regional Fisheries Program - Guinea Bissau (P119380)
PM to total cost ratio	17.8%	15.6%	15.8%	20.9%

**Sensitivity Analysis**

14. For the sensitivity analysis, different values of the FIRR were estimated, corresponding to different values of the two key estimates, the average annual incremental income increase per beneficiary, and the number of unique beneficiaries. The results are tabulated below. The number of unique beneficiaries is mathematically sure to be higher than the value estimated, which was the lower bound. It can be seen that even if the assumed incremental benefit was decreased to 55 percent or 70 percent of the value estimated, and if the number of beneficiaries was inflated by 15 or 30 percent to be closer to the truth, the FIRR ranges from 21.1 to 34.2 percent, still close to or above the value estimated at appraisal. Additionally, varying values of the number of years for which the project’s impacts would continue beyond completion was estimated. Even if the benefits continued for five years after the end of the project compared to the assumed figure of ten years, the FIRR is still 23.6 percent, above the value estimated at appraisal.

**Table 4.6: Sensitivity of FIRR (%) to Changes in Inputs**

Incremental Income per Beneficiary	Number of Beneficiaries			
	At Actual Value Estimated	At 115% of Value Estimated	At 130% of Value Estimated	At 145% of Value Estimated
At actual value estimated	27.3	35.9	44.6	53.2
At 85% of value estimated	23.4	31.4	39.6	47.9
At 70% of value estimated	19.1	26.5	34.2	42.0
At 55% of value estimated	14.3	21.1	28.1	35.2

**Table 4.7: Sensitivity of FIRR (%) to Changes in Years of Sustainability of Impact**

FIRR	Years for which Impact Continues				
	At 9 Years	At 8 Years	At 7 Years	At 6 Years	At 5 Years
FIRR	26.9	26.5	25.8	24.9	23.6

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

No official comments were received on the ICR.



## ANNEX 6. SUPPORTING DOCUMENTS

### Borrowers' documents

- Annual audit reports and IFRs
- Care Tanzania. 2022. Village Savings and Loans Groups Evaluation Report
- Co-management units' minutes
- Environmental and Social Management Frameworks, Process Frameworks, Environmental Management Plans, and Comoros Resource Access Restriction Action Plan
- FAO and SWIOFC. 2019. Guidelines for Minimum Terms and Conditions (MTC) for Foreign Fisheries Access in the Southwest Indian Ocean Fisheries Commission (SWIOFC) Region
- Fisheries bulletins
- Fisheries Management Plans
- ProAzul. 2021. FFP Matching Grants Scheme Completion Report
- ProAzul. 2021. National Maritime Spatial Planning Plan
- Project Operations Manuals and Procurement Plans
- Revised and newly developed policies, acts, and regulations
- Semi-annual, mid-term, and completion reports
- SWIO countries' Fisheries Agreements, Memoranda of Understandings, and Fisheries Partnership Agreements
- SWIOFC Annual Meetings' proceedings
- Zanzibar Marine Conservation Area General Management Plans

### World Bank documents

- Aide Memoires and Management Letters, 2012-2022
- Comoros Country Partnership Framework for the Period FY2020-2024, Report No. 145699-KM
- Comoros Country Partnership Strategy for the Period FY2014-2017, Report No. 82054
- Financial management and procurement assessments and reviews
- GEF and IDA Financing Agreements: Credit 5589-TZ, Grant 019021, Grant D011-KM, TF019023, Credit 5546-MZ, Grant H994-MZ, Grant TF019022, Grant 0995
- Integrated Safeguards Data Sheet Concept Stage, Report No. ISDS1924/Appraisal State, Report No. ISDSA1924
- ISRs sequence 1-14
- Mozambique Country Partnership Framework for the Period FY2017-2021, Report No. 104733-MZ
- Mozambique Country Partnership Strategy for the Period FY2012-2015, Report No. 66813
- Project Appraisal Document, Report No. PAD415
- Project Concept Note
- Project Information Document Concept Stage, Report No. PIDC495 /Appraisal Stage, Report No. PIDA9505
- Restructuring Papers, amendments, and extension notices
- Tanzania Country Assistance Strategy for the Period FY2012-2015, Report No. 60269
- Tanzania Country Partnership Framework for the Period FY2018-2022, Report No. 121790-TZ
- World Bank's 2008 Regional Integration Assistance Strategy for Sub-Saharan Africa, Report No. 43022

**ANNEX 7. PHOTOS AND PROJECT MAP**

<b>Comoros</b>	
	
Registered vessel	Octopus pots being submerged
	
Constructed storage structure in Male, Grande Comore	Installed cold Chamber in Domoni, Anjouan



**Mozambique**



Namige



Cuassiane

Constructed fish market in Namige District, Nampula Province

Constructed fish market in Cuassiane, Zambezia Province



Pebane CCP meeting



Training of PCR Association members

**Tanzania**



New roof, flooring, and rainwater collection tanks in Nungwi fish market, Unguja, Zanzibar



New accessible toilets in Nungwi fish market, Unguja, Zanzibar



Refurbished MBEF administration building in Maruhubi, Unguja, Zanzibar



Seasonal closing activities in Zanzibar



Front view of constructed Kipumbwi BMU office, Pangane District



Constructed TAFIRI Wet Lab, Kunduchi

