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Report No: PAD5141

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 3.8 MILLION
(US\$5 MILLION EQUIVALENT)

TO THE UNION OF COMOROS

FOR THE

COMOROS INTERISLAND CONNECTIVITY PROJECT SOP2

February 27, 2024

Transport Global Practice
Eastern and Southern Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2024)

Currency Unit = Comorian Franc (KMF)

US\$1 = KMF 454.27

US\$1 = SDR 0.75

US\$1 = €0.92

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AFD	French Development Agency (<i>Agence Française de Développement</i>)
AfDB	African Development Bank
AWP&B	Annual Workplans and Budget
ANAM	National Agency of Maritime Affairs (<i>Agence Nationale des Affaires Maritimes</i>)
APC	Comoros Port Authority (<i>Autorité Portuaire des Comores</i>)
CERC	Contingent Emergency Response Component
CMMC	Comorian Merchant Marine Code (<i>Code de la Marine Marchande Comorienne</i>)
CPF	Country Partnership Framework
DGPSN	General Directorate of Police and National Security
DPSN	Directorate of Police and National Security (<i>Direction de la Police et de la Sureté Nationale</i>)
EIRR	Economic Internal Rate of Return
ENFMM	National School of Fishery and Merchant Marine (<i>Ecole Nationale de la Pêche et de la Marine Marchande</i>)
EPPAM	Public Establishment of the Port of Mutsamudu (<i>Etablissement Public du Port Autonome de Mutsamudu</i>)
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
FAOSTAT	Food and Agricultural Organization Corporate Statistical Database
FM	Financial Management
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIF	Global Infrastructure Facility
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
IMO	International Maritime Organisation
IPF	Investment Project Financing
IsDB	Islamic Development Bank
LMP	Labor Management Procedures
MFD	Mobilizing Finance for Development
MTMA	Ministry of Maritime and Air Transport (<i>Ministère des Transports Maritimes et Aériens</i>)
NAPA	National Adaptation Program of Action
NDC	Nationally Determined Contribution
PAD	Project Appraisal Document
PDO	Project Development Objective
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PPSD	Project Procurement Strategy for Development
PPP	Public-Private Partnership
RAP	Resettlement Action Plan
SCP	National Port Authority (<i>Société Comorienne des Ports</i>)

SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SOP	Series of Projects
TEU	Twenty-Foot-Equivalent Unit



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DATASHEET

BASIC INFORMATION

Project Beneficiary(ies) Comoros	Operation Name Comoros Interisland Connectivity Project SOP2		
Operation ID P179109	Financing Instrument Investment Project Financing (IPF)	Environmental and Social Risk Classification High	

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input checked="" type="checkbox"/> Series of Projects (SOP)	<input checked="" type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input checked="" type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternative Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date 21-Mar-2024	Expected Closing Date 29-Jun-2029
Bank/IFC Collaboration No	

Proposed Development Objective(s)

The Project Development Objective (PDO) is to improve maritime transport resilience, connectivity and safety between the islands.

Components

Component Name	Cost (US\$)
----------------	-------------



Improvement of Climate Resilience and Capacity of Port Infrastructure	0.00
Maritime safety and safe passenger boat program	3,000,000.00
Implementation support and capacity building	2,000,000.00
Contingent emergency response	0.00

Organizations

Borrower: The Union of Comoros
 Implementing Agency: Ministry of Maritime and Air Transport

PROJECT FINANCING DATA (US\$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)? Yes
 Is this project Private Capital Enabling (PCE)? No

SUMMARY

Total Operation Cost	48.00
Total Financing	48.00
of which IBRD/IDA	5.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	5.00
IDA Grant	5.00

Non-World Bank Group Financing

Other Sources	43.00
African Development Bank	28.00
Islamic Development Bank	15.00



IDA Resources (US\$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
National Performance-Based Allocations (PBA)	0.00	5.00	0.00	0.00	5.00
Total	0.00	5.00	0.00	0.00	5.00

Expected Disbursements (US\$, Millions)

WB Fiscal Year	2024	2025	2026	2027	2028	2029
Annual	0.00	0.50	1.00	2.00	1.00	0.50
Cumulative	0.00	0.50	1.50	3.50	4.50	5.00

PRACTICE AREA(S)

Practice Area (Lead)

Transport

Contributing Practice Areas

CLIMATE

Climate Change and Disaster Screening

Yes, it has been screened and the results are discussed in the Operation Document

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category

1. Political and Governance

2. Macroeconomic

3. Sector Strategies and Policies

Rating

● Moderate

● Substantial

● Substantial



4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Moderate
6. Fiduciary	● Substantial
7. Environment and Social	● High
8. Stakeholders	● Moderate
9. Overall	● Substantial

POLICY COMPLIANCE

Policy

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

Yes No

Does the project require any waivers of Bank policies?

Yes No

ENVIRONMENTAL AND SOCIAL

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant



NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

LEGAL

Legal Covenants

Sections and Description

Financing Agreement. Schedule 2, Section I.B.1. The Recipient, not later than sixty (60) days from the Effective Date, shall update and submit to the Association, the Project Implementation Manual (“PIM”) in form and substance satisfactory to the Association.

Conditions

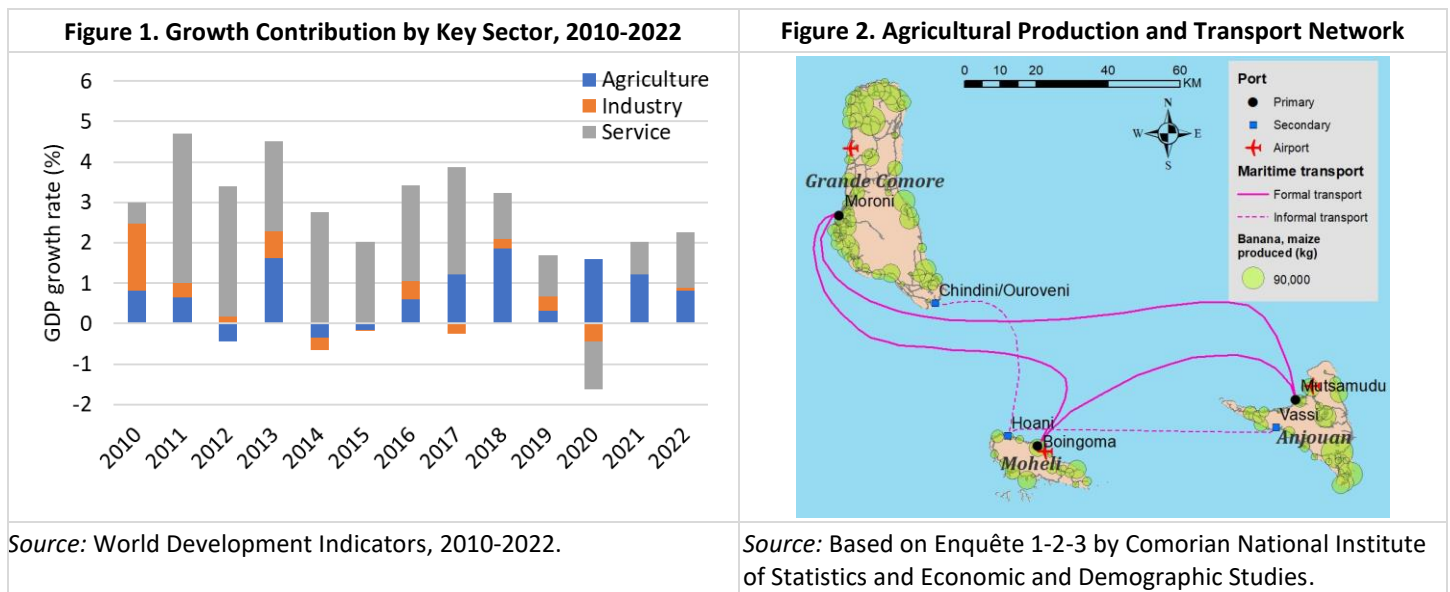
Type	Citation	Description	Financing Source
Disbursement	Condition-1	Financing Agreement. Schedule 2, Section III.B.1.(b) No withdrawal shall be made under Category (2) unless and until the Co-financing Agreement with the Islamic Development Bank has been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under them (other than the effectiveness of this Agreement) have been fulfilled.	IBRD/IDA



I. STRATEGIC CONTEXT

A. Country Context

1. The Union of the Comoros (the Comoros) is an archipelago in the Indian Ocean with a total population of about 837,000. The Comorian economy is historically dependent on agriculture but has been driven more by the service sector in recent years (Figure 1). Significant economic diversity exists among the islands. While Grand Comore, with half of the total population, is highly urbanized around the capital, Moroni, the other two islands, Anjouan and Moheli, are more rural-based economies with high agricultural and touristic potential (Figure 2). The agriculture sector employs about 60 percent of the total population, generating about 30 percent of gross domestic product (GDP), and earning about 80 percent of the country’s foreign exchange (vanilla, ylang ylang, and cloves).¹ The latest development vision by the Government, Plan Comores Emergent 2020–30, envisages potential growth in not only agribusiness but also coastal tourism and fishery as the blue economy. The service sector is growing around Moroni. However, the national markets remain fragmented because of poor connectivity among and within the islands.

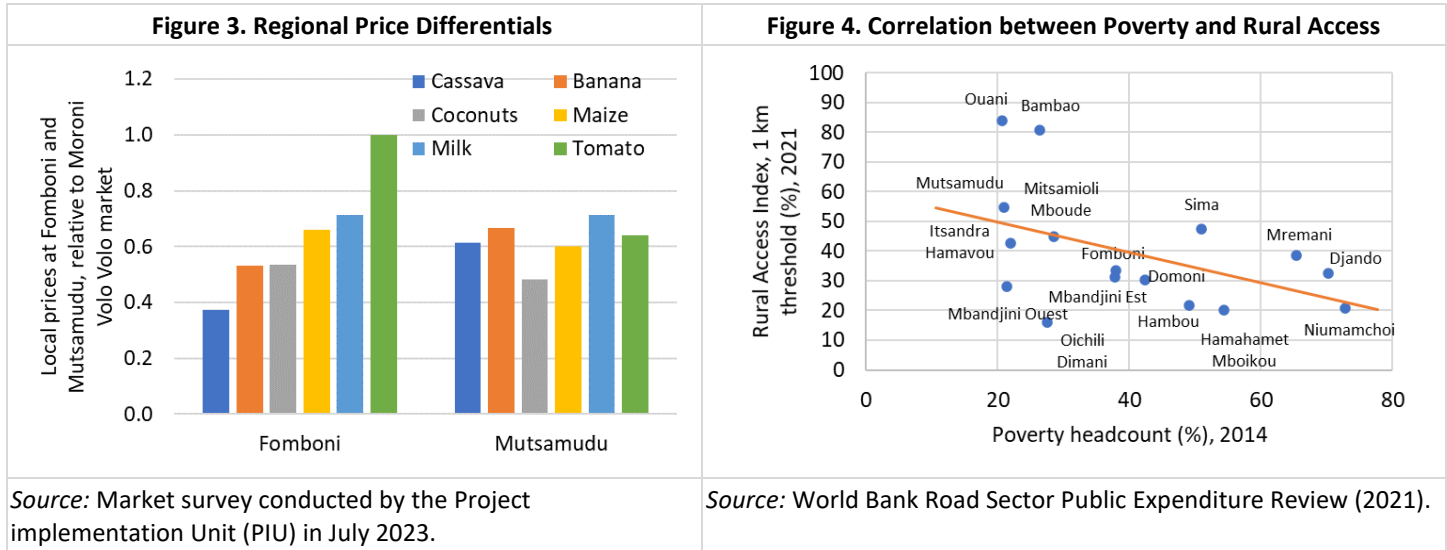


2. The recent global crises revealed the country’s high vulnerability to external shocks, reconfirming the importance of efficient international trade and connectivity as well as inclusive growth for sustainable growth. Over the last decade, despite various recent external shocks, the Comoros was growing steadily at an average growth rate of about 2.5 percent, reaching US\$1,405 per capita in 2022.² The Comoros imports many commodities, including food and oil products, construction materials and consumer goods. Because of high international commodity prices, inflation picked up to 12.4 percent in 2022, though it is expected to stabilize in 2024.³ Despite the country’s agricultural potential, domestic food prices have particularly increased, with consumer prices of vegetables, for instance, doubling over 2021-23.⁴ The price differentials remain significant among the islands, indicating untapped efficiency gains from the domestic market integration. Food products are about 40 percent more expensive in Grande Comore than in Moheli and Anjouan (Figure

¹ Food and Agricultural Organization Corporate Statistical Database (FAOSTAT) and World Development Indicators data for 2019.
² According to World Development Indicators (as of October 2023), and World Bank Macroeconomic Poverty Outlook (October 2023).
³ International Monetary Fund. 2023. *Union of The Comoros: Request for a Four-Year Arrangement under the Extended Credit Facility – Press Release; Staff Report; Staff Supplement; and Statement by the Executive Director for the Union of the Comoros*. IMF Country Report No. 23/215.
⁴ According to the Consumer Price Index (July 2023) published by the National Institute of Statistics and Economic and Demographic.



3). The poor tend to suffer more from external shocks. About 79 percent of the total population faces moderate to severe food insecurity.⁵ In the Comoros, poverty is persistently high in remote rural areas (Figure 4). About 44.8 percent of Comorians still lived below the national poverty line in 2020,⁶ compared with 43.2 percent in 2014. Moheli is one of the poorest regions with a poverty rate of 38 percent.



3. **Access to jobs is limited, particularly for youth and women.** Unemployment rate was 8.8 percent in 2022, increased from 7 percent in the early 2010s. Youth unemployment was particularly high at 20.3 percent.⁷ There is significant gender inequality in the Comoros. Female unemployment stood at 11.2 percent compared to 7.4 percent for males in 2022. The gender inequality has widened over the last two decades. The FY20-FY24 Country Partnership Framework (CPF) for the Comoros highlights the complexity of gender issues.⁸ The traditional system tends to exclude women from formal decision-making processes. Heads of villages are male. Women account for 16.7 percent of parliamentary seats. High-level job opportunities are also limited for women. Only one-fourth of managerial positions are filled by women.⁹

4. **The Comoros is highly vulnerable to natural hazards and climate change impacts,** ranked 157 out of 185 countries,¹⁰ indicating the country’s high exposure, sensitivity, and low ability to adapt to the negative climate impacts. The climate and disaster risk screening confirmed high tropical cyclone and coastal flooding risks, while landslides, extreme heat, volcanic eruptions, and earthquakes present moderate risk.¹¹ It is projected that temperature will increase between 0.8°C and 2.1°C by 2060 and between 1.2°C and 3.6°C by 2090, raising the risk of extreme heat, with precipitation intensified in the rainy season, raising the risk of floods. The sea level could increase by 20 centimeters by 2050, raising

⁵ Food and Agriculture Organization of the United Nations. FAOSTAT. Sustainable Development Goals (SDG) Indicator 2.1.2 Prevalence of Moderate or Severe Food Insecurity in the Population.

⁶ World Bank. 2021. *Poverty and Equity Assessment Report. Comoros.*

⁷ According to World Development Indicators (as of February 2024).

⁸ World Bank. 2020. *FY20-FY24 Country Partnership Framework for the Union of Comoros. Report No. 145699-KM.* Discussed by the World Bank Board of Executive Directors on June 17, 2020.

⁹ United Nations Women Data Hub.

¹⁰ According to the Notre Dame Global Adaptation Initiative (ND-GAIN) country index. See University of Notre Dame, “Rankings,” Notre Dame Global Adaptation Initiative (ND-GAIN), University of Notre Dame. Accessed October 12, 2023. <https://gain.nd.edu/our-work/country-index/rankings/>

¹¹ Think Hazard. Accessed October 22, 2023. <https://thinkhazard.org/en/report/58-comoros>



the risk of high storm surges and coastal inundation.¹² The project will integrate climate resilience consideration, including hard and soft measures, such as climate resilient port protection, to reduce the project risk to a low level of residual risk.

B. Sectoral and Institutional Context

5. **The Ministry of Production, Environment, Energy, Industry and Handcraft’s Connectivity Index¹³ shows nearly no improvement for two decades and indicates a downward trend after the COVID-19 crisis (Figure 5).** Still, the demand for trade and maritime transport remains strong and continues growing. The Comoros imported about 510,000 tons of goods and exported about 14 tons of commodities in 2021 (Figure 6). During the last 10 years, the total trade volume increased on average by 4.8 percent per year, much higher than the average GDP growth rate (2.5 percent) or the average population growth (2.1 percent).¹⁴

6. **The port sector is among the most important growth constraints.** Each island has a primary port: Port Moroni on Grande Comore, Port Boingoma on Moheli, and Port Mutsamudu on Anjouan. The port of Boingoma, which has a 70-meter wharf with a 2.4-meter depth that is only accessible to small vessels (up to 4,000 tons), is most constrained from both capacity and climate resilience points of view. The port handled only about 16,300 tons of cargo in 2022.¹⁵ All exports and imports must be transited at other primary ports Moroni or Mutsamudu,¹⁶ with all cargos offloaded and reloaded onto smaller vessels, which add to unnecessary costs and times. Freight charges and port fees at Port Boingoma are among the highest in the region.¹⁷ While freight handling charges are KMF 4,000 or US\$10 per ton, port fees (including docking and wharfage) are KMF 84,000 per vessel, which adds another US\$1.50 to US\$2.00 per ton. Two freight vessels serve Moheli per week, one each from Moroni and Mutsamudu, whereas seven operate between Moroni and Mutsamudu daily.

7. **The current linear design of Port Boingoma without protection is highly vulnerable to climate events.** Tropical Cyclone Kenneth hit the country on April 24, 2019, directly affecting more than 345,000 people and causing damage, losses, and needs for recovery estimated at over US\$450 million. Transport infrastructure was also damaged, including Port Boingoma and about 90 kilometers of roads (10 percent of the total road network), leaving many remote villages disconnected. Port Boingoma was further degraded by Cyclone Cheneso in January 2023 and remains inaccessible for an average of two working days per week due to weather conditions. The damaged port infrastructure affects interisland connectivity, exacerbating marginalization of communities and hampering recovery efforts. The Comoros Interisland Connectivity Project, the first phase of a Series of Projects (SOP1) (P173114), approved in May 2022, aims at rebuilding climate resilience at Port Boingoma by designing and constructing breakwater and protection. To ensure long-term climate

¹² Ministry of Production, Environment, Energy, Industry and Handcraft. 2015. “Contributions Prévues Déterminées au Niveau National de l’Union des Comores.”

¹³ The Liner Shipping Connectivity Index is a global indicator that measures how well countries are connected to global liner shipping networks. It is calculated based on liner shipping traffic between countries and normalized to the best-connected country.

¹⁴ According to World Development Indicators (as of February 2024).

¹⁵ Including 2,700 tons of cement, 3,800 tons of consumer goods, 120 tons of agricultural products, and 5,800 tons of oil products.

¹⁶ The ports of Moroni and Mutsamudu also have capacity constraints. Port Moroni has a depth of 4.5 meters and a wharf length of 80 meters, handling 60 percent of the country’s total cargo (that is, 300,000 tons per year). Currently, most vessels anchor in the harbor and unload to a barge, causing extra handling costs and vessel congestion. To directly accommodate standard commercial vessels and containers (630 twenty-foot-equivalent units [TEUs]), at least a 120-meter wharf is required with a depth of 6.5 meters. Mutsamudu Port is the only deep seaport in the Comoros, with a 170-meter wharf and approximately 9-meter depth, which is allowed to call large container ships with a capacity of about 1,000 TEUs. Still, there is a potential need for dredging and additional quays to accept even larger ships.

¹⁷ Port costs are US\$6.00 to US\$6.50 per ton in the region, for example, Toamasina and Mahajanga, Madagascar, and Maputo, Mozambique. See World Bank. 2019. “Port Development and Competition in East and Southern Africa: Prospects and Challenges.”

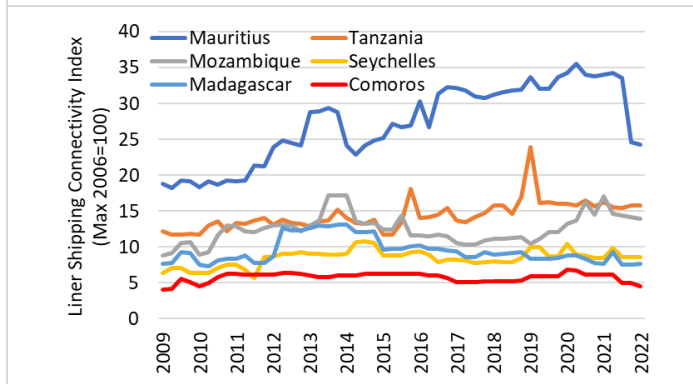
World Bank. 2011. “Africa’s Transport Infrastructure: Mainstreaming Maintenance and Management.”



resilience and accommodate foreseen traffic growth, additional investment is needed for adding an additional quay and enlarging a protected bay area. These remaining gaps will be financed by the SOP 2 among other components.

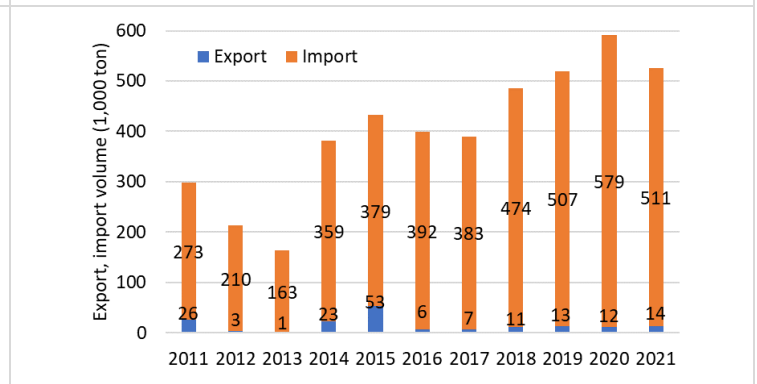
8. **The Comoros has active collaboration with the private sector for port operations; however, the institutional framework remains unharmonized, and the Government’s supervision capacity remains to be strengthened.** Port Moroni has already been under a 10-year concession and was renewed with Moroni Terminal (76.5 percent owned by Bolloré Africa Logistics) in June 2022. Port Mutsamudu is also under a lease contract with Anjouan Stevedoring Company for another 10 years starting from September 2022. Port Boingoma used to be managed by the regional government and is now under the responsibility of a National Port Authority (*Société Comorienne des Ports, SCP*), which was established in 2013 and operationalized in late 2020, through consolidating the regional port authorities, the Comoros Port Authority (*Autorité Portuaire des Comores, APC*), which supervised Port Moroni, and the Public Establishment of the Port of Mutsamudu (*Etablissement Public du Port Autonome de Mutsamudu, EPPAM*), which supervised Port Mutsamudu. The SCP is now a single national port authority, but its regulatory capacity remains limited. As a result, the concession frameworks are not harmonized, although governed by the Public Procurement Law.¹⁸ The ongoing SOP1 supports capacity building activities to fully operationalize the SCP to supervise port operations, including public-private partnership (PPP).

Figure 5. Liner Shipping Connectivity Index, 2009-2022



Source: United Nations Conference on Trade and Development Liner Shipping Connectivity Index.¹⁹

Figure 6. Trade Volumes of the Comoros, 2011-2021



Source: CPCS (2021)²⁰ updated.

9. **People’s connectivity among the islands is severely constrained.** Given the lack of port and ferry capacity, the formal passenger operations by ferry shrunk from 72,000 in 2015 to 31,000 in 2022 (Figure 7). Out of five private operators running ferry services among the islands, only one company is currently operating between Moroni and Mutsamudu once a week. At this stage, Port Boingoma is hardly accessible by ferry. In parallel to the project, the French Development Agency (*Agence Française de Développement, AFD*) is supporting the Comorian Government to purchase ferries (with a capacity of 100–200 passengers), which are expected to be delivered at Port Boingoma after the infrastructure is rehabilitated and extended.

10. **Maritime transport safety is of particular concern in the Comoros.** Due to unreliable ferry services, many local people use ‘informal’ interisland transport services by small flat-bottomed fishing boats, often called *kwassa kwassa*.²¹

¹⁸ The Law on Public Procurement and Delegation of Public Services (n°11-027/AU).

¹⁹ According to the Liner Shipping Connectivity Index in United Nations Conference on Trade and Development STAT (as of December 2023).

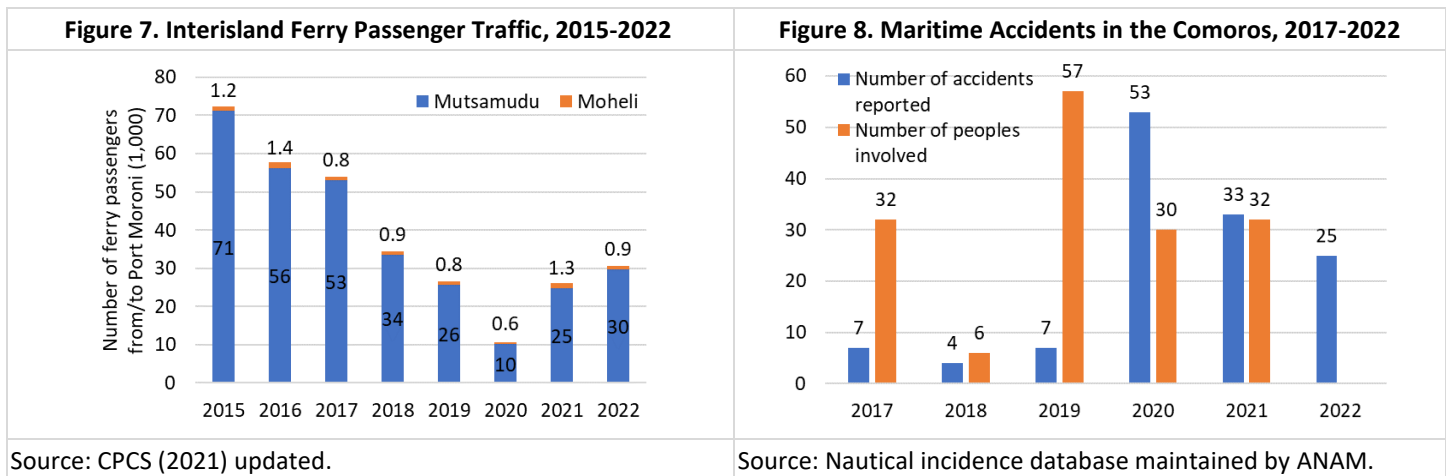
²⁰ CPCS. 2021. *Prefeasibility Study: Comoros Inter-Island Connectivity Improvement Project: Final Report*.

²¹ These boats are six to ten-meters long and about one to two-meters wide, flat-bottomed, and equipped with one or two engines, and are also called COMA4 referred to as a boat model commonly used.



Over 100,000 passengers are estimated to cross the Indian Ocean that way every year.²² These informal operations may be convenient, as by small boats, it takes about 1.5 hours between Grande Comore and Moheli and 2.5 hours between Moheli and Anjouan (compared to 8 hours by ferry between Grande Comore and Anjouan). In addition, small boats are cheaper than traveling by ferry.²³ However, these boats are not originally designed for passenger services and significant casualties are recorded every year (Figure 8). While passengers prefer to use small boats because of efficiency and low prices (Figure 9), ferry users, especially female passengers, are more concerned about maritime safety (Figure 10). The female ridership currently accounts for 45 percent of total demand in this interisland passenger market (both formal and informal). Women are considered disproportionately affected by the unsafe and unreliable small boat operations because of their household responsibilities and time constraints.²⁴ Women’s voices may not be reflected effectively in safety and security regulations because the maritime transport sector is dominated by males, as in many parts of the world.

11. **The Government is making efforts to address the maritime safety issues; however, the current institutional framework remains incomplete and with limited implementation capacity.** The National Agency of Maritime Affairs (*Agence Nationale des Affaires Maritimes, ANAM*) under the Ministry of Maritime and Air Transport (*Ministère des Transports Maritimes et Aériens, MTMA*) is the main authority to implement and promote the national maritime and port policies. The Comoros subscribes to major International Maritime Organization (IMO) treaties and conventions on maritime transport, including the Safety of Life at Sea convention. The required standards are transcribed in the Comorian Merchant Marine Code (*Code de la Marine Marchande Comorienne, CMMC*). However, several texts to implement them are still missing, such as environmental and safety regulations. The implementation capacity is also insufficient. For safety reasons, the Government has already prohibited passenger operations by informal small boats,²⁵ but the policy is not strongly enforced because there is no alternative transport means. The Government’s coordination mechanism is also weak with other relevant ministries and entities, such as the Ministry of Environment, the Directorate of Police and National Security (*Direction de la Police et de la Sureté Nationale, DPSN*) and the Coast Guard.²⁶



²² CPCS. 2021. *Prefeasibility Study: Comoros Inter-Island Connectivity Improvement Project: Final Report.*

²³ *Kwassa kwassa* costs KMF 15,000–22,500 or US\$30–50, compared to KMF 17,500–22,500 or US\$40–50 for ferry.

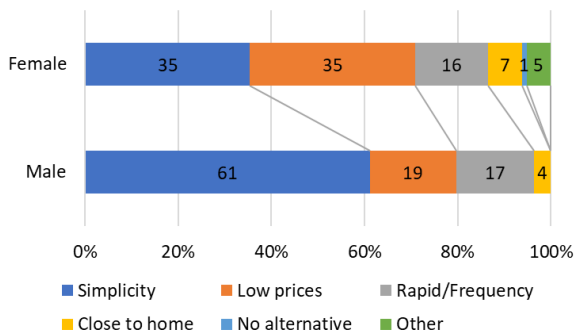
²⁴ CPCS. 2021. *Prefeasibility Study: Comoros Inter-Island Connectivity Improvement Project: Final Report.*

²⁵ Anjouan Governor Arrêté No. 20-050/Gouv/I.A.N. dated August 22, 2020.

²⁶ Different agencies play different roles. DPSN verifies the presence of all safety equipment at sea (life jackets, return fuel, and GPS, among others). The Coast Guard monitors weather conditions and conducts maritime search and rescue operations.

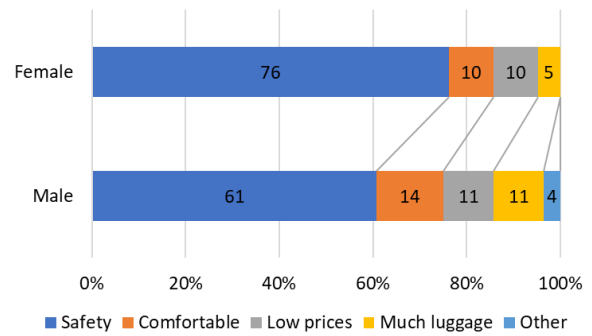


Figure 9. Reasons for Choosing Kwassa Kwassa



Source: CPCS (2021).

Figure 10. Reasons for Choosing Ferry Transport



Source: CPCS (2021).

C. Relevance to Higher Level Objectives

12. **The project is aligned with the World Bank Country Partnership Framework (CPF) for the Union of Comoros for FY20-24 (Report No: 145699-KM), discussed by the Board on June 19, 2020,** in particular with Objective 1 (Building Human Capital), Objective 2 (Supporting Disaster Recovery and Resilience) and Objective 4 (Improving Connectivity). The project will also contribute to the World Bank’s Africa Regional priorities for supporting climate change adaptation. The project will contribute to building more resilience in the economy, improving the business environment and fostering private sector growth. It will also help to reduce accidents in the transport sector, which have significant adverse effects occur on human capital through lost lives and livelihoods for affected households.²⁷

13. **The project is fully aligned with the World Bank’s mission to end extreme poverty and boost shared prosperity on a livable planet.** Together with SOP1, the project is focused on the transport and market accessibility for local communities in Moheli Island, the poorest region in the Comoros.²⁸ The poor who live in remote areas tend to suffer from external shocks, such as extreme climate events and disrupted trade. The project is also aligned with the World Bank’s Evolution Priority Areas.

14. **The project is consistent with the Comoros’ climate commitments and strategies.** The country’s Nationally Determined Contribution (NDC)²⁹ and National Adaptation Program of Action (NAPA)³⁰ have a strong focus on climate adaptation since the Comoros is a small country with a fairly limited contribution to greenhouse gas (GHG) emissions. The NDC sets a target for GHG emissions reduction at the country level and mentions roads, aviation, and navigation in the context of the energy sector but does not specify any transport-specific target nor mitigation measure. Meanwhile, the resilience risk to tropical cyclones and coastal flooding cannot be underestimated. The NDC identifies adaptation actions for key economic sectors, such as the rehabilitation of infrastructure with climate change considerations. The project will make an additional investment in the port, specifically for climate resilience purposes, and in safer and more fuel-efficient

²⁷ The Human Capital Index ranks Comoros 145 out of 174 countries according to World Bank, Human Capital Index 2020.

²⁸ World Bank. 2021. *Poverty and Equity Assessment Report*. Comoros. the

²⁹ Ministry of Agriculture, Fishery, Environment, Tourism, and Artisans. 2021. Contribution Déterminée au Niveau National 2021-2030 (CDN actualisée): Rapport de synthèse: 2021-2030. Available at https://unfccc.int/sites/default/files/NDC/2022-06/CDN_r%C3%A9vis%C3%A9_Comores_vf.pdf.

³⁰ Ministry of Rural Development, Fisheries, Handicraft and Environment. 2006. National Action Programme of Adaptation to Climate Change (NAPA). Available at <https://unfccc.int/resource/docs/napa/com01e.pdf>.



passenger transport services between the islands, in line with the broader objective to reduce the carbon intensity of transport.

D. Programmatic Approach and Phasing

15. **The overarching development objective of the Series of Projects (SOP) programmatic approach is to improve climate resilience, connectivity, and safety of maritime transport between the islands** (Figure 11). The first phase, SOP1, approved in May 2022 and complemented by the Additional Financing (AF) in May 2023, is focused on improving climate resilience by constructing breakwater and protection at Port Boingoma. Besides the contingent emergency response component, the project activities under SOP1, including procurement procedures for works at Port Boingoma, are well advanced. The second project in the SOP will further enhance resilience, expand the port capacity at Boingoma, and improve maritime transport safety through introducing proper landing sites and passenger boats.

16. **Given limited available IDA resources, SOP2 is financed in greater collaboration with other development partners.** The total program cost is US\$88 million (Table 1). SOP1 is financed by IDA (US\$35 million, including AF) and the AFD with a co-financing of EUR 5 million, approved in September 2022. SOP2 is financed by IDA (US\$5 million) and will be co-financed by the African Development Bank (AfDB) in the amount of US\$28 million, and the Islamic Development Bank (IsDB) in the amount of US\$15 million. The co-financing by AfDB and IsDB is expected to be approved by June-September 2024.

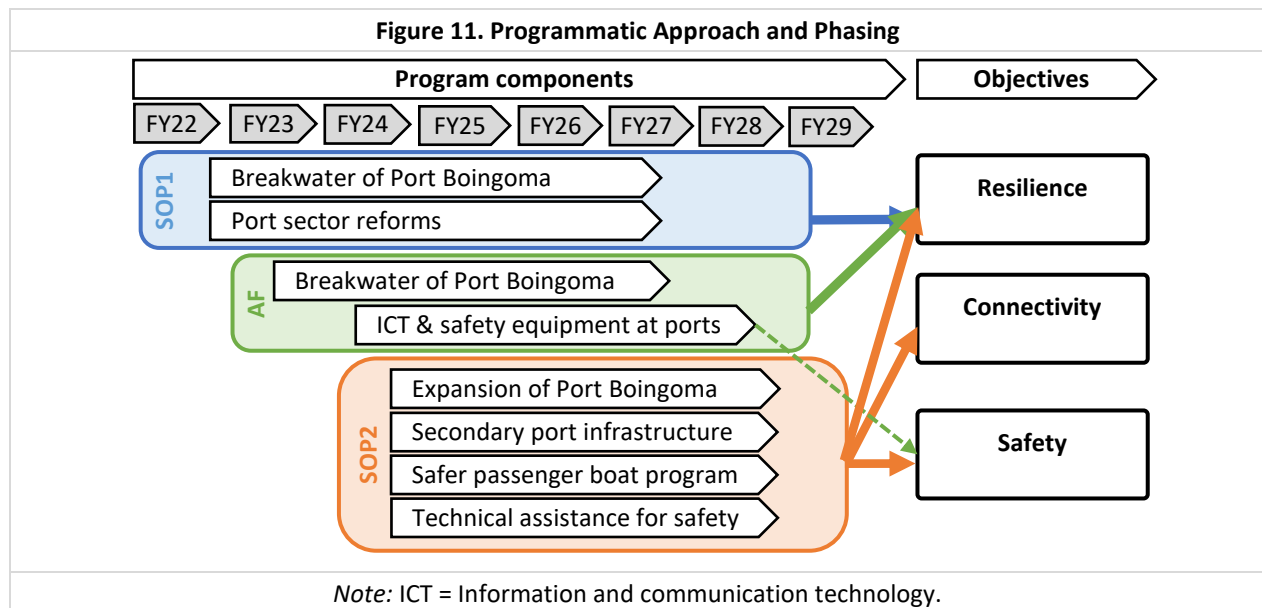




Table 1. Financing Plan for the SOP (US\$, millions)

	Cost Estimate	SOP1		AF	SOP2		
		IDA	AFD	IDA	IDA	AfDB	IsDB
Component 1: Improvement of Climate Resilience and Capacity of Port Infrastructure (Rehabilitation of Port Boingoma)	63	15	5	10	0	28	5
• Protection, breakwater, dredging	30	15	5	10			
• Quays, and other port infrastructure	33					28	5
Component 2: Maritime Safety and Safe Passenger Boat Program	13	0	0	0	3	0	10
Component 2.1: Improvement of port infrastructure at secondary ports	11				1		10
Component 2.2: Pilot program of new passenger boats	2				2		
Component 3: Implementation support, and capacity building	12	5		5	2		
Component 3.1: Implementation support, and capacity building	10	5		3	2		
Component 3.2: Safety equipment at ports	2			2			
Component 4: Contingent Emergency Response	0	0		0	0		
Total	88	20	5	15	5	28	15

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

17. The Project Development Objective (PDO) is to improve maritime transport resilience, connectivity and safety between the islands.

PDO Level Indicators

18. The PDO indicators for the project are the following:
- Number of people that benefit from improved access to sustainable transport infrastructure and services
 - Female share in maritime transport ridership by new boats, percentage change
 - Increased maritime connectivity in terms of volume of freight handled at climate resilient Port Boingoma
 - Reduction in the number of maritime transport accidents on a yearly basis
 - Reduction in the number of days each year when Port Boingoma is nonoperational due to weather conditions

B. Project Components

Component 1. Improvement of Climate Resilience and Capacity of Port Infrastructure (US\$28 million from AfDB and US\$5 million from IsDB)

19. To complement SOP1, this component supports increasing climate resilience and port capacity through constructing additional quays and other port infrastructure at Boingoma. SOP1 finances breakwater and protection to increase port resilience and prevent further damage of the substructure. Building upon these, this component supports

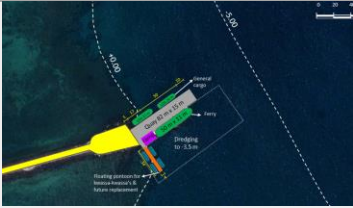

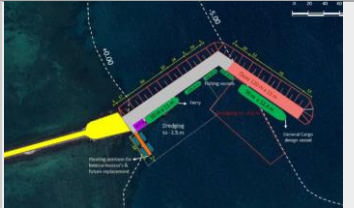


investment in reconstructing and extending quays and developing other port infrastructure at Boingoma. By enlarging a sheltered harbor area by the extended quays, the port’s climate resilience is intended to be increased further while accommodating other economic activities, such as fishery and passenger services, in the port area. The following key functionalities will be financed by the project:

- A new 136-meter-long quay in the extension of the current quay to accommodate ferries and fishery vessels within the port protected area,
- A new 136-meter-long quay constructed at an angle to the roll-on/roll-off/passenger (RoPax) and fishing berths, extending in a southeast direction, with a 5.5-meter draft to accommodate commercial cargo ships and to provide further protection against climate conditions for a sheltered harbor,
- An area for cargo handling and fishery activities, and
- Warehouses, administrative buildings, and access roads, integrating energy efficiency considerations and built considering climate change risks.

20. **The port design was prepared to maximize climate resilience and accommodate long-term port demand.** The current linear design of the port makes it vulnerable to ocean waves and weather conditions, which are expected to deteriorate further with climate change. The prefeasibility study compared three options: (a) modest investment but limited functionality without protection, (b) medium investment and progressive capacity addition with partial protection, and (c) full investment to maximize climate resilience and support potential growth by extended L-shaped quays (Table 2). To ensure climate resilience and avoid unnecessary adjustment costs in the future, option (c) was selected despite its significant upfront investment cost, including an additional cost of US\$36.6 million for resilience (including breakwater and the second part of the quay). This option will help open the whole Moheli economy.

Table 2. Comparison of Investment Options for Port Boingoma

	Option (a): Modest Investment	Option (b): Medium and Progressive	Option (c): Full investment and Resilience
Layout			
Estimated cost (US\$ million)	6.8	15.9	63.3
Of which:			
Breakwater, demolition	—	4.4	30.0 (SOP1, AF)
Additional L-shaped quay	—	—	6.6 (SOP2)
Existing quay, warehouse	6.8	11.5	26.7 (SOP2)
Advantages/ disadvantages	<ul style="list-style-type: none"> • Low initial investment • No space for fishery or passenger transport • High vulnerability to waves 	<ul style="list-style-type: none"> • Partly resilient against waves • Progressive expansion depending on traffic growth • High adjustment costs 	<ul style="list-style-type: none"> • Large initial investment • Maximum safety and climate resilience • No future adaptation cost



Component 2. Maritime safety and safe passenger boat program (US\$3 million IDA equivalent; US\$10 million from IsDB)

21. As experienced in similar projects in other countries,³¹ a multidimensional approach is needed to improve maritime safety: infrastructure improvement (Subcomponent 2.1), safe fleet (Subcomponent 2.2), and institutional framework (Component 3).

Subcomponent 2.1. Improvement of port infrastructure at selected secondary ports (US\$1 million IDA equivalent; US\$10 million from IsDB)

22. **This subcomponent finances construction of resilient landing infrastructure at selected landing sites or secondary ports.** By installing proper infrastructure to landing sites, the safety and environmental risks are expected to be minimized for passengers to board and disembark, especially for women, who often carry children and bags and wear clothes that make them difficult to balance on unequipped beaches. Based on a multicriteria analysis,³² two priority landing sites are identified: Ouroveni in Grande Comore and Vassi in Anjouan. Chindini and Ouroveni are complementary and close to each other. Although the current traffic is concentrated on Chindini, the investment cost is much higher, including breakwater. For Anjouan, Vassi is priority, while other beaches, such as Dodin, are close to the populated areas. There is no physical space for port development. For Moheli, Hoani is a de facto landing site, but the new Port Boingoma can accommodate passenger boats as well.

23. The project will equip the selected sites with a minimum but sufficient landing platform, integrating energy efficiency:

- A simple and light deck supported by piles with a width of about 3 meters to link the deeper water areas to the shoreline (length will vary across the sites, depending on coastal conditions),
- A multipurpose building for housing weather and navigation communication equipment, for the port and maritime safety authorities (SCP and ANAM) to manage the landing sites, a waiting area for passengers with gender-specific sanitation facilities, and a small retail area. The building integrates energy efficiency considerations, is electrified, and connected to the grid,
- Waste disposal facilities for vessel oil and a fuel station,
- A parking lot for approximately 20 vehicles (about 25 × 25 meters), with solar-powered lighting, and
- Lighting system, solar powered, for early departures and late arrivals (for safe pedestrian circulation).

Subcomponent 2.2. Pilot program of new passenger boats (US\$2 million equivalent from IDA grant)

24. **The project will support the purchase of properly designed passenger boats (V-hull) to improve maritime safety.** Current informal small passenger boats are flat bottom vessels and not designed for passenger transport.³³ Properly designed V-hull shape-vessels are needed. This pilot program will support introducing a few safer passenger boats in the market, using energy efficient technology available in the market, aimed at replacing the entire *kwassa kwassa* fleet in a

³¹ For instance, see India: West Bengal Inland Water Transport, Logistics and Spatial Development Project (P166020).

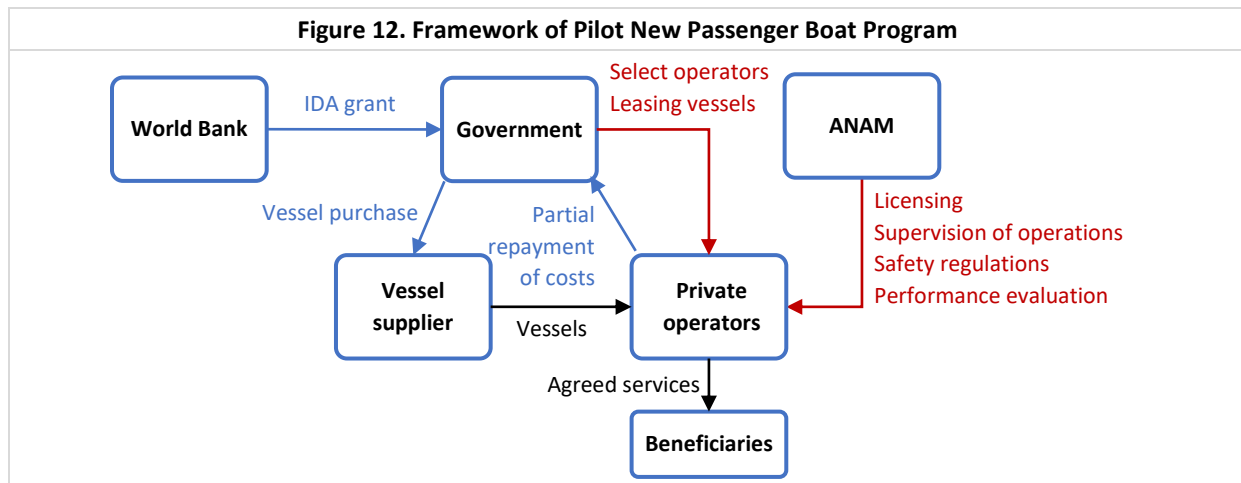
³² At least 12 beaches are used for *kwassa kwassa* operations: Chindini, Ouroveni (high tide), and Ouroveni (low tide) in Grande Comore; Hoani, Mbatse, Itsamia, Ouallah, and Fomboni in Moheli; and Bimbini, Moya, Vassi, and Dodin in Anjouan. The selection was made based on the following criteria: (i) environmental impact, (ii) local needs, (iii) availability of beach areas, (iv) maritime safety, (v) accessibility to passengers, (vi) proximity between the islands, and (vii) estimated costs.

³³ *Kwassa kwassa* boats are only granted a certificate of seaworthiness to navigate for fishing activities. A temporary operating permit for passenger services is issued as long as minimum safety requirements (for example, cellphones, life jackets, and additional fuel) are met.



progressive manner.³⁴ It aims at demonstrating socioeconomic benefits from safer and more efficient and reliable boats, encouraging other operators to renew their boats as well. The feasibility study shows that many people, particularly female users, are concerned about maritime safety and prefer to ride safer vessels. The new fleet with a capacity of 20-30 passengers per vessel will also be beneficial to operators and owners because it will be more energy efficient (on a per passenger basis) than the currently used small fishery boats which normally accommodates a maximum of 12 passengers.

25. **The new passenger boat program will be implemented under a PPP framework.** Given the thin financial market in the Comoros, local investors or operators cannot afford new vessels. The financial payback period is estimated at 6.2 years. By using PPP mechanisms, such as leasing, the project will support the private sector to purchase new boats.³⁵ The Government will purchase, own, and lease passenger boats to private operators to operate for a given period (for example, five to ten years), at the end of which the latter purchase the boats at their remaining value (Figure 12). To ensure the sustainability and efficiency of service provision, the operators will be selected through a transparent, competitive process based on multiple technical and financial criteria, with particular focus on local job creation, especially for former *kwassa kwassa* operators, to mitigate potential social impacts of the new program. The selected operators will be obliged and supervised to deliver the agreed level of services while complying with affordability, safety and environmental regulations and other operational requirements. ANAM, as a maritime administration and safety agency, will provide operational licenses and monitor the operators' performance based on the agreements, including safety, operational, and gender-based violence (GBV)/sexual harassment (SH) regulations. A detailed implementation manual, in addition to the overall Project Implementation Manual (PIM), and bidding documents were prepared. An additional monitoring mechanism will be established to ensure service quality and affordability during the implementation period.



³⁴ While a preliminary feasibility study estimated that about 45 *kwassa kwassa* boats are operating in the country, a supplementary study in November 2022 identified a total of 62 *kwassa kwassa* boats, out of which 55 are active. The vast majority operate between Hoani and Chindini/Ouroveni (20 *kwassa kwassa*) and between Ouroveni and Dodin, Anjouan, via Fomboni (20 *kwassa kwassa*).

³⁵ The feasibility study compares different approaches, such as management contract and concessions and recommends leasing given the country context. In similar maritime transport projects, for instance, India: West Bengal Inland Water Transport, Logistics and Spatial Development Project (P166020), three approaches are examined: subsidy to vessel purchase, direct loans to vessel operators, and financial backstop through commercial banks. There are pros and cons from the administrative and sustainability points of view. The optimal choice depends on depth of financial markets and the size of demand.



Component 3. Implementation support and capacity building (US\$2 million IDA equivalent)

26. **This component finances the costs of preparing and implementing the project, including the following:**
- Operating costs of the PIU
 - Fiduciary activities
 - Public procurement and governance activities
 - Environmental and social studies, and supervision and implementation of relevant activities
 - Other technical studies related to the project and in the relevant transport subsectors
 - Monitoring, reporting and evaluation of project activities
27. **The component will also provide technical assistance and training to ANAM** focused on the following areas:
- **Technical assistance for maritime safety**, for ANAM to update maritime laws, codes, legal provision, and regulations (such as CMMC), integrates international conventions; implements the updated maritime regulations (including training); and confirms and implements coordination mechanisms among other ministries and governmental agencies.
 - **Support to local community activities and small business development**, financing (i) needs assessment for local business development (sustainable fishery, eco-tourism and agrobusinesses) at local communities affected by the project, with particular focus on vulnerable groups, such as low-income households, women and youth, (ii) vocational training to generate sustainable fishing and other maritime jobs in the islands, including tourism, in collaboration with the National Fishery and Marchant Sailor School (*Ecole Nationale de la Pêche et de la Marine Marchande*), and (iii) local pollution protection measures at the landing sites.
 - **Support for the empowerment and safety of women**. A safety committee with a quota for female membership majority will be established, to enhance women's voice and tackle maritime safety issues that limit women's agency in mobility. The members will be trained to acquire knowledge on maritime safety and monitoring, including maritime communications tools, verification of safety norms, rescue protocols, basic swimming skills, and so on. To promote citizen engagement, female passengers, traders, and wives of small passenger boat operators will be consulted to identify their potential needs, which will be implemented under the above local community support under the committee's guidance. The committee will also contribute to ensuring and improving new passenger services from a gender perspective. The project will monitor female ridership.

Component 4: Contingent emergency response (US\$0 million)

28. This component will allow for rapid reallocation of uncommitted funds from IDA financing in an eligible emergency as defined in the World Bank Operational Policy 8.00.³⁶ An annex (CERC³⁷ Annex) will be included in the PIM to guide activation and implementation of the CERC. For the CERC to be activated and financing to be provided, the Government will need to (a) submit a request letter for CERC activation and the evidence required to determine eligibility of the emergency, as defined in the CERC Annex; (b) provide an emergency action plan, including emergency expenditures to be

³⁶ An eligible emergency is defined as an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact associated with natural or man-made crises or disasters. Such events include a disease outbreak.

³⁷ CERC = Contingent Emergency Response Component.



financed; and (c) meet environmental and social requirements agreed to in the Emergency Action Plan and Environmental and Social Commitment Plan (ESCP).

C. Project Beneficiaries

29. **Together with SOP1 focused on increasing climate resilience of the port, the project (SOP2) will contribute to efficient and safe movement of people, benefiting Comorians who travel between the islands.** The rehabilitation of Port Boingoma will allow passenger ferries to operate a triangle route among the three islands, including Moheli, which is currently often skipped because of weather conditions and the deficiency of the port infrastructure. The number of ferry passengers among the three islands was 31,000 in 2022, which is expected to continue increasing to 85,000 passengers for five years after the port rehabilitation according to the feasibility study. The expected impact is partly subject to the complementary activity of new ferry purchase that is supported by AFD in parallel.

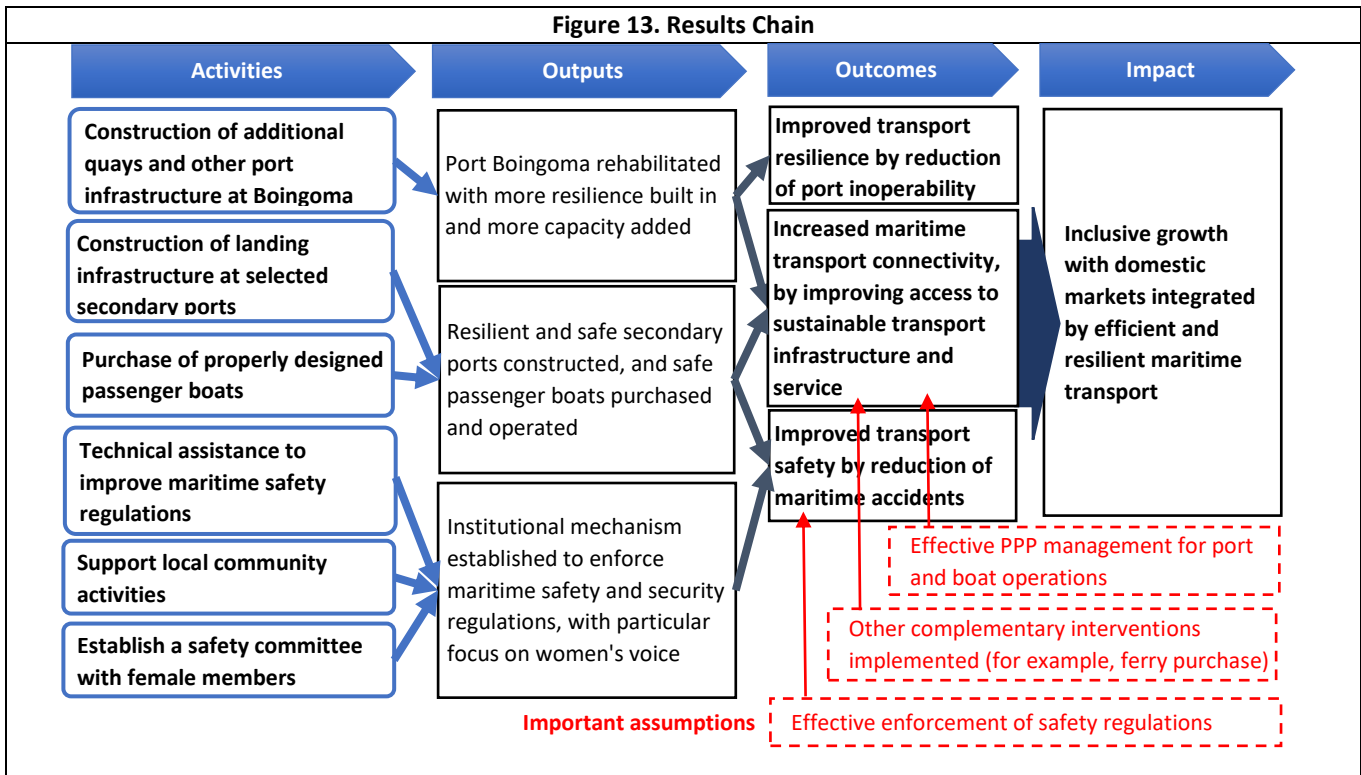
30. **The new passenger boats will also benefit local passengers who prefer safer transport means.** Under the assumptions that the financing can support four boats, each has a capacity of 30 passengers, and one operates twice per day between Grande Comore and Moheli while another operates once per day between Moheli and Anjouan, the program will transport about 65,000 passengers per year. This is not the generated demand but diverted from the current *kwassa kwassa* ridership, which is estimated at over 100,000 per year. New boat passengers, especially female users, will benefit from greater safety, comfort and reliability as long as the affordability is ensured. Average households in Mohali spend 4.9 percent of their total income on transportation, already high by regional standards. The poorest households spend 1 percent on maritime transport, five times as much as wealthy people.³⁸

31. **On the freight side, the whole population on Moheli Island (currently about 55,000 people) will benefit from the increased reliability and efficiency in maritime connectivity.** Although it is difficult to precisely identify direct beneficiaries, the entire economy of Moheli relies on Port Boingoma for its imports, exports and cabotage. With the increased capacity and resilience, freight operators and traders can increase service reliability, ensuring timely delivery of fuel and food products and other consumer goods. The freight handled by Port Boingoma is expected to increase from 16,000 tons to 50,000 tons by the end of the project implementation period.

D. Results Chain

32. The following Results Chain is assumed (Figure 13). The project supports investing in port infrastructure at Port Boingoma and the selected secondary ports, which will enhance connectivity and resilience in maritime transport, reducing climate-related port inoperability and stimulating mobility of people and goods between the islands. The project also contributes to improving maritime safety through purchasing new, safer passenger boats, thereby reducing maritime accidents. As a result, the project is expected to contribute to the country's socioeconomic integration among the islands, promoting inclusive growth over the long run.

³⁸ World Bank. 2021. Comoros Road Sector Public Expenditure Review: Toward Improving Sustainability and Resilience. World Bank.



E. Rationale for Bank Involvement and Role of Partners

33. **Coordination with development partners to mobilize resources.** The World Bank plays a key role in coordinating with other potential development partners, such as AFD, AfDB, and IsDB, to consolidate public resources needed in the sector within a constrained fiscal operating environment. In the maritime transport sector, significant upfront investment is often needed, especially when costly climate resilience is intended to be built. To avoid unnecessary adjustment costs and maximize potential growth impacts over the long run, the World Bank has been taking the lead to support detailed economic, environmental and social analyses of different options and promote climate resilient port design among other development partners. While other donors were mobilizing their resources, the World Bank has also been advancing technical preparatory works and procurement procedures not to delay the implementation of the project. In parallel to, but outside of the project, other development partners' complementary support in the maritime sector (such as ferry purchase and rehabilitation of Moroni Port) are also expected, generating considerable synergies to maritime accessibility.

F. Lessons Learned and Reflected in the Project Design

34. **Thorough project preparation and adaptability.** Maritime transport projects are complex, involving considerable technical uncertainties. The project takes advantage of the adaptability and flexibility of the SOP approach. A report from the World Bank independent evaluation group calls for adaptability to meet client needs, highlighting the difficulty of designing solutions ex-ante, because not all factors can be anticipated or held constant.³⁹ While thorough project preparation on the conservative side is important, it is also important to have flexibility to accommodate unexpected technical findings, including costs.

³⁹ Independent Evaluation Group. 2015. "Learning and Results in World Bank Operations: Toward a New Learning Strategy. Evaluation 2." World Bank.



35. **Government's ownership and donor coordination.** For small countries, such as the Comoros, it is essential to consolidate all available financial resources from different development partners. The size of the overall program is significant given the size of the country. While the Government takes the lead in dialogue with all stakeholders, the World Bank supports the dialogue by providing technical inputs and assistance to finalize the financing plan.

36. **Reducing administrative burden and providing enhanced implementation support.** The potential disadvantage of using the phased approach involving multiple development partners is that the administrative costs for coordination are high. Experience from other infrastructure projects already indicates that the limited administrative capacity is a challenge in the Comoros. The project will take advantage of the dedicated PIU already established under the MTMA for SOP1 and provide enhanced implementation support. The World Bank is also taking the lead in harmonizing procedures with other development partners.

37. **Climate resilience and adaptation.** Given the country's climate vulnerability, as in the case in similar size economies in the Pacific like Tonga and Vanuatu, it is important to incorporate climate resilience upfront and to enable a quick response to emergencies through project design. The project focuses on building resilience in port infrastructure and includes a CERC to address any potential emergency response and recovery needs.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

38. **Implementation agencies.** The project will follow the implementation arrangements established under SOP1 (Figure 14). The MTMA, in charge of maritime transport policies, has overall responsibility for project implementation. Under SOP1, a PIU was created by a ministerial *arrêté*⁴⁰ to conduct day-to-day project management and is fully staffed and has been accumulating experience under SOP1. The same PIU will be responsible for the management of SOP2 and the coordination of its activities including, *inter alia*, (i) procurement, disbursement, accounting, financial and technical reporting; (ii) social and environmental management; (iii) communication, monitoring and evaluation, ensuring the auditing of the accounts and providing project progress reports; (iv) coordinating the preparation, adjustments, and use of project management tools, including any updates to the PIM, an Annual Work Plan and Budget (AWP&B), a Procurement Plan, and disbursement projections; (v) coordinating with key stakeholders on the technical aspects of the project; and (vi) monitoring the progress of the PDO and intermediate indicators of the Results Framework.

39. **The project Steering Committee,⁴¹ chaired by the general secretary of the MTMA with the membership of other representatives from relevant ministries is organized regularly for SOP1 and will continue supervising the PIU's activities for SOP2,** providing overall strategic guidance, coordinating multisectoral project-related activities with other relevant ministries and agencies, for instance, with the Coast Guard, which is responsible for the action of the state at sea under the Ministry of Defense, and the Ministry of Agriculture, Fishery, Environment, Tourism, and Artisans, providing guidance on project implementation, and overseeing and monitoring the project activities. The Steering Committee reviews and approves the PIU's AWP&B.

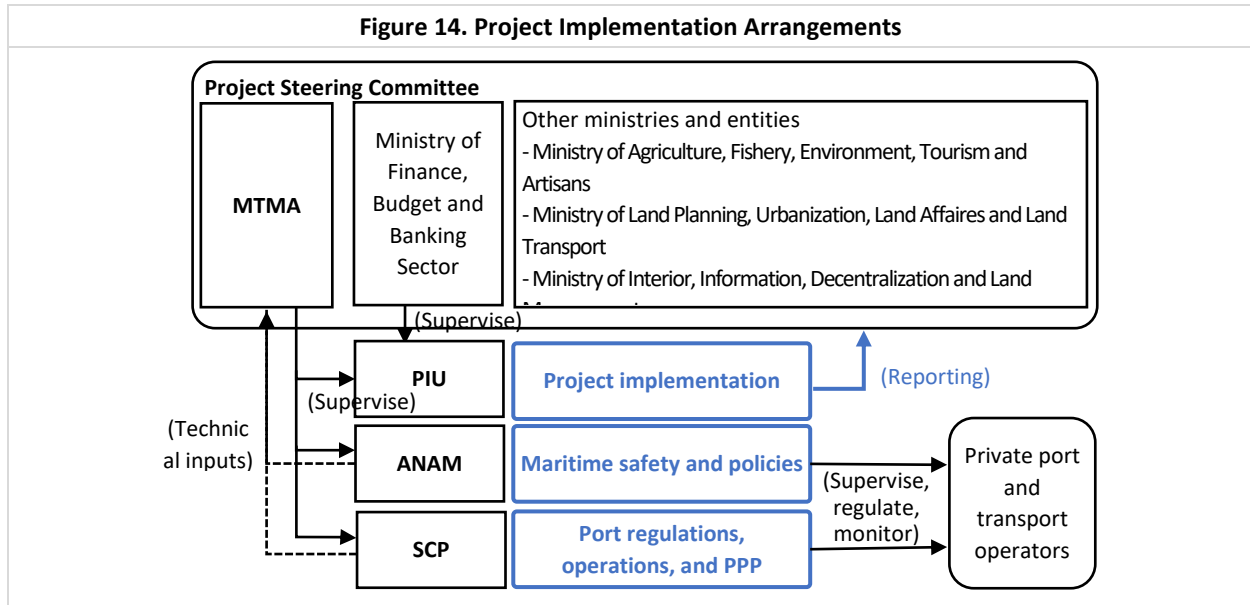
40. **The MTMA provides technical inputs to the project, coordinating government entities, including two national agencies in the maritime sector, ANAM and SCP, both of which are under the MTMA.** ANAM is responsible for overseeing maritime security and affairs, protecting the maritime environment, contributing to maritime regulations for ports and

⁴⁰ Arrêté is a ministerial decree in the Comoros. *Arrêté* No. 022-004/MTMA/CAB, dated March 2, 2022.

⁴¹ Based on Arrêté No.22-018/MTMA/CAB, dated May 24, 2022.



interisland transportation, and ensuring compliance with national and international maritime rules.⁴² The SCP is a public establishment created in December 2013, under the technical supervision of the MTMA and the financial supervision of the Ministry of Finance, Budget, and Banking Sector, and responsible for managing port operations, including port PPP.



B. Results Monitoring and Evaluation Arrangements

41. **Implementation arrangements and responsibilities for monitoring and evaluation.** The PIU is responsible for regular monitoring of the project and will produce semiannual and annual progress reports no later than one month after the end of each calendar semester. These reports will help assess progress toward achievement of the PDO and project performance based on the agreed-upon indicators for the Results Framework. The PIU will develop necessary survey templates, including beneficiary satisfaction surveys, and establish data collection protocols with relevant ministries and stakeholders. A midterm review will be undertaken no more than three years after the effective date to comprehensively assess the progress and performance of the project and implement any necessary measures to ensure that the project meets its objectives.

C. Sustainability

42. **Climate resilience and adaptation, and mitigation.** The project aims at bringing additional value to build more resilience in the transport sector and contribute to climate change mitigation and adaptation. The Comoros is vulnerable to climate events, such as tropical cyclones. Cyclone Kenneth severely damaged Port Boingoma because of the deficiency of resilience in port infrastructure. Using the World Bank’s extensive global knowledge on managing climate and natural hazard risks to improve disaster preparedness and response, the project incorporates strong climate resilience in the port design for Boingoma to ensure sustainability of the project. SOP1 focused on building breakwaters and protection. SOP2 adds to climate resilience by extending quays and enlarging a sheltered bay area. This will allow port operations, including freight, passenger and fishery activities, even during bad weather and strong swells, which currently limit activity. The project also brings value for climate mitigation through improved efficiency in passenger services, though the impact may be limited by global standards.

⁴² All of ANAM’s missions, organization, and operations are established in Decree n°16-019 of January 20, 2010.



43. **Mobilizing Finance for Development – Enabling Project (MFD-EP).** To ensure operational sustainability of the project, the project will promote an MFD-Enabling approach in two areas: (i) operations and maintenance of Port Boingoma after the rehabilitation, and (ii) the provision of new passenger boats. The World Bank supports required upstream policy work based on its global experience in other countries, especially in bringing in private sector participation. For Port Boingoma, the World Bank has already contributed to a pre-feasibility and market sounding study through mobilization of trust fund resources (Global Infrastructure Facility [GIF] and Public Private Infrastructure Advisory Facility). With GIF support, a framework for the provision of the new passenger boats was also prepared. After the rehabilitation and expansion, Port Boingoma will be operated and maintained by the private sector under the landlord concession or leasing framework. As in other primary ports at Moroni and Mutsamudu, leasing is considered a feasible option given the limited current and future traffic at Port Boingoma. For new passenger boat operations, leasing will also be adopted. While interisland passenger operations are generally financially viable, the access to finance is limited in the Comoros. Thus, the project will use a lease contract arrangement to ensure affordability and sustainability of the services while partially subsidizing the boat purchase costs. Private operators will be selected based on a set of financial and technical proposals, such as leasing fees and local employment (particularly current small passenger boat operators). The operational performance will be reviewed periodically with a monitoring mechanism established.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

44. **Technical appraisal.** Building on SOP1, SOP2 will include the following technical components: (i) complete the full protection of the sheltered area for vessels calls at Port Boingoma; (ii) provide accommodation for commercial cargo ships, RoPax ships, and fishing vessels by building two berths and a RoRo ramp on the internal side of the breakwater as well as deepening the access channel accordingly with limited dredging; (iii) build an enlarged access road and install utility networks, power, water, and lighting, throughout the extended port area; (iv) develop two secondary landing sites in Ouroveni (Grande Comore) and Vassy (Anjouan), by building pedestrian jetties allowing direct berthing by new V-hull passenger boats, progressively renew the existing *kwassa kwassa* fleet for passenger transport; (v) support a pilot program to initiate the renewal of this fleet; and (vi) strengthen capacity and provide training to ANAM and SCP to enhance maritime security throughout the islands and enable the emergence of a sustainable and effective sector institutional framework. These components will increase the resilience of the port sector to climate change impacts, facilitate interisland passengers' movements to support a more inclusive growth nationwide, and improve the overall safety of port and maritime operations, thereby protecting human capital.

45. **Economic analysis of Port Boingoma.** The detailed economic assessment for Port Boingoma, including SOP1 and SOP2, is presented in the Project Appraisal Document for SOP1.⁴³ It compares economic benefits, such as reduced transport costs, induced demand, increased reliability of port operations, improved maritime accidents and reduced local pollution, with an initial cost estimate of US\$60 million. Given a revised estimate of US\$63 million, the economic analysis was updated. Under the baseline scenario, with a conventional discount rate of 6 percent, the estimated economic internal rate of return (EIRR) is 4.3 percent for an evaluation period of 30 years, reconfirming the project's economic viability. The relatively modest rates of return are primarily attributed to the investment option focused on climate resilience involving large upfront costs. The Comoros is a low growth country in terms of per capita GDP (on average less than 1 percent over the last decade), for which a lower social discount rate is more suitable.⁴⁴ With a discount rate of 2 percent, the net present value is estimated at US\$22.3 million (Table 3).

⁴³ World Bank. 2022. Comoros Interisland Connectivity Project (P173114) Project Appraisal Document. Report No: PAD4509.

⁴⁴ World Bank. 2016. *Discounting Costs and Benefits in Economic Analysis of World Bank Projects*. OPSPQ, World Bank.



Table 3. Revised Economic Analysis of Port Boingoma Investment

	Original	Revised	Port Traffic	
	Baseline	Baseline	Low Demand	High Demand
Net present value (6% discount rate)	-7.0	-9.5	-20.7	-0.7
(4% discount rate)	5.2	2.5	-13.9	16.2
(2% discount rate)	25.2	22.3	-2.6	44.1
Economic rate of return (%)	4.7	4.3	1.7	5.9

46. **Economic assessment of secondary ports and new passenger boat investment.** The investment in secondary ports (US\$11 million) and the purchasing cost of four new passenger boats (US\$2 million) are compared with economic benefits, including value of time saved for passengers, reduced operating costs (due to large capacity and high fuel efficiency), value of saved lives due to reduced maritime accidents, and emissions reduction. Over a 20-year project life with a social discount rate of 2 percent, the EIRR to secondary port investment and new boat operations is estimated at 7.6 percent, above the conventional threshold (Table 4). This is because expected economic benefits from efficient movements and improved safety would exceed the relatively large investment costs in beaches and new boats. The result is largely robust against potential cost increases of secondary port investment or lower-than-expected traffic.

Table 4. Economic Analysis of Secondary Port Investment and New Passenger Boat Operations

	Baseline		Sensitivity Analysis:				
	SCP scenario:	High	Low	(1) Investment 20%↑		(2) Demand 20%↓	
				High	Low	High	Low
Economic rate of return (%)	7.6	7.9	5.1	5.3	6.1	6.4	
Net present value (US\$, million)	6.742	7.110	4.232	4.600	4.775	5.143	

47. **Paris Alignment. SOP2 is aligned with the goals of the Paris Agreement on both mitigation and adaptation.** The project is consistent with the country’s strategies, NDC and NAPA (see the section on Relevance to Higher Level Objectives above). The Comoros does not have a Long-Term Strategy or a National Adaptation Plan. SOP2 is not at a material risk of having a negative impact on the country’s low-GHG-emissions development pathways. From a mitigation perspective, activities financed are either universally aligned or present a low risk. The main climate change and natural hazards relevant to the project are tropical cyclones and sea-level rise, which could damage port buildings and equipment or cause disruptions in port operations or interisland passenger services. The project adequately reduces such physical climate risks through project climate resilience and adaptation design considerations, limiting the exposure of the project to a low level of residual risk. More detail is provided in the Country and Sector Context sections and in Annex 2.

B. Fiduciary

(i) Financial Management

48. **The overall financial Management (FM) arrangements of the SOP2 are assessed to be adequate, provided that recommended mitigating measures are considered.** The FM assessment of the current PIU working on SOP1 under the MTMA, which will continue to be responsible for the implementation of SOP2, was carried out in October 2023.⁴⁵ The compliance with FM requirements since SOP1 effectiveness and the FM performance for SOP1 are assessed as moderately satisfactory. Weaknesses in planning and treasury management and implementing some control procedures were

⁴⁵ The assessment was carried out in accordance with the Directives and Policy for Investment Project Financings (IPFs) issued on September 30, 2018, and the World Bank Guidance on Financial Management in World Bank Investment Project Financing Operations issued on February 28, 2017.



identified during the recent supervision mission. Corrective actions are under way, and the World Bank provided training to the FM staff of the PIU as part of the remedial action plan. The Internal auditor was recruited in August 2023.

49. **The FM risk rating for SOP2 is Substantial due to the risk related to the nature of activities to be financed, the high level of decentralization of the project activities, and the limited experience of the recently established PIU.** To further improve the project's FM arrangements, the PIU is taking the following mitigation measures: (i) update the PIM within 60 days after grant effectiveness to take into account the changes introduced by SOP2, particularly the adjustments in procedures required for the co-financing; (ii) continue applying appropriate controls related to compensation payments managed under SOP1; and (iii) reinforce the planning and treasury management capacity of the PIU. These mitigation measures will strengthen the internal control environment and maintain the timeliness and the reliability of information produced by the PIU. The disbursement arrangements are as follows: (i) a segregated Designated Account will be opened for SOP2, (ii) the IDA funds will be disbursed on a transaction basis, and (iii) the applicable disbursement methods remain the same as for SOP1. The PIU will use the existing accounting software acquired under SOP1 to record and report on the project's transactions. The PIU's financial auditing, reporting, supervision and monitoring requirements will be unchanged from the parent project.

(ii) Procurement

50. **The project procurement risk is Substantial.** The PIU has been accumulating experience with the World Bank's New Procurement Framework under SOP1. However, there are still capacity gaps in the PIU's procurement unit because of the size and complexity of the project. The World Bank will continue to provide continuous hands-on support to the PIU. Procurement under the project will be guided (i) by the Procurement Regulations for IPF Borrowers' dated September 2023; and (ii) by the World Bank's 'Guidelines on Preventing and Combatting Fraud and Corruption' revised as of July 1, 2016, as well as provisions stipulated in the Financing Agreement. When needed, the project's procurement manual will be updated as necessary based on and in accordance with these documents. All goods and non-consulting services will be procured in accordance with the requirements set forth or referred to in Section VI. Approved Selection Methods: Goods, Works and Non-Consulting Services of the Procurement Regulations mentioned above. All consulting services will be procured in accordance with the requirements set forth or referred to in Section VII. Approved Selection Methods: Consulting Services of the Procurement Regulations, as well as according to the Project Procurement Strategy for Development (PPSD) and the Procurement Plan approved by the World Bank.

51. **The PPSD and the Procurement Plan covering the first 18 months of project implementation has been prepared and approved by the World Bank.** The Procurement Plan specifies for each contract (i) a brief description of the activities/contract, (ii) the selection methods and the market approach options to be applied, (iii) the estimated cost, (iv) time schedules, (v) the World Bank's review requirements, and (vi) any other relevant procurement information. Any updates of the Procurement Plan will be submitted for the World Bank's approval with the corresponding update in the PPSD. The project will be using the World Bank's online procurement planning and tracking tools, Systematic Tracking of Exchanges in Procurement (STEP), to prepare, clear, and update its Procurement Plan and to carry out all procurement transactions.



C. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

D. Environmental and Social

52. **Environmental and Social Risks:** The project’s environmental and social risk is High, reflecting a High environmental risk and a Substantial social risk. More information on the risk classifications and the eight of ten Environmental and Social Standards (ESSs) which apply to the project can be found in the Appraisal-Environmental and Social Risk Summary (A-ESRS). All ten ESSs apply, except for ESS7 and ESS9, which are not relevant to the project.

53. **The environment risk is assessed as High** and is related to activities to enhance the port capacity of Port Boingoma and installing proper infrastructure at selected secondary ports. Key environmental risks and impacts related to the improvement of the existing Boingoma Port infrastructure in Moheli Island and secondary ports in the three islands include perturbation of marine habitat and potential damage to marine biotopes during dredging, port waste and pollution control, pollution from the dredged material, occupational and community health and safety issues, and potential increase in road or traffic-related accidents especially during construction and transportation of dredged material. The infrastructure improvement in the Boingoma Port will likely involve heavy civil works, with noise, vibration, dust, traffic, and possible community safety concerns. Potential impacts to biodiversity may arise because the port site is in the protected area of Moheli. The Domoni quarry site activities, which are considered Substantial risk, could generate occupational and community health and safety issues, and potentially increase road or traffic-related accidents during construction and transportation with noise, vibration, dust, traffic, and possible community safety concerns. During the operation of the port and improved landing sites, environmental risks may include storm-water runoff, handling or storage of hazardous cargo and its movement through populated areas, health, and safety and security issues in the port areas.

54. **The social risk is assessed as Substantial** due to likely labor influx, some resettlement, and traffic safety risks from construction activities. Port infrastructure improvements and quarrying and transport of materials for Port Boingoma (and other ports as needed) will require laborers. The utilization of qualified local labor force is prioritized to minimize the social impacts and promote economic growth. While most labor will be hired locally for civil works, there will be some labor influx from outside the Comoros or between the three islands. Further, the risk of poor working conditions that are not in line with ESS2 and Comorian labor laws also require mitigation measures. Risks related to labor include use of child labor, forced/bonded labor and discrimination in hiring unless specific measures are in place to check these practices. Other risks related to infrastructure building and port improvements are community health and safety risks during infrastructure construction, through increased traffic, movement of machinery and materials etc. This can lead to impacts on health through emissions, increased noise and road accidents.

55. **The Sexual Exploitation and Abuse (SEA)/ Sexual Harassment (SH) risk is assessed as substantial**, mainly linked to labor influx and large civil works. In particular, labor influx can create situations that contribute an increased risk in SEA/SH. The project’s SEA/SH Risk Assessment prepared under SOP1 and updated for SOP2 has identified several measures to ensure that SEA/SH risk is mitigated and that there are protocols in place in case of such incidents.



56. **Environmental and Social Framework (ESF) instruments.** An Environmental and Social Impact Assessment (ESIA) and an Environmental and Social Management Plan (ESMP) for the port of Boingoma, and an Environmental and Social Management Framework (ESMF) for the construction of secondary ports were prepared and disclosed by the client, both on January 19, 2022, and updated and redisclosed on March 7, 2022, along with a Resettlement Policy Framework (RPF). A supplementary ESIA with its ESMP for the borrow pits in Domoni were prepared and submitted for review and approval by the World Bank and disclosed before the launching of the construction of Port Boingoma and Domoni quarry site activities. The Project's SOP1 Stakeholder Engagement Plan was updated to include SOP2 activities and redisclosed on the country's website⁴⁶ on February 6, 2024, on local newspapers on February 8, 2024, and on the World Bank's external website on February 7, 2024. Labor Management Procedures (LMP) and GBV Action Plan were also updated and disclosed on both the country's website and the World Bank's external website on February 8, 2024. Before the start of civil works, the contractor will prepare the Contractor Environmental and Social Management Plan (C-ESMP) for the construction of Port Boingoma and the Domoni quarry site. Additional ESIsAs/ESMPs, C-ESMPs and Resettlement Actin Plan (RAP) (if needed) will be prepared for the secondary port sites. While the pilot of new passenger boats under SOP2 does not intend to replace the whole fleet of current small passenger boats, a social assessment will be carried out before works begin on secondary ports to identify opportunities for providing support to local community activities and small business development, with particular focus on vulnerable groups, such as low-income households, women and youth, and informal boat operators and crews that may be affected by the arrival of the new larger passenger boats.

57. **Borrower capacity and commitment.** The project's PIU is the same as the one for SOP1, which includes a social specialist, an environmental specialist and a GBV and Gender specialist who oversee the implementation of risk management aspects for both SOP1 and SOP2. The Social and Environmental Specialists received their first ESF training session in 2022. The World Bank will continue providing further ESF training and support consistent with ESCP, ESMF and ESIA recommendations. During preparation and implementation, multiple consultations were undertaken with a range of stakeholders, from June 2021 to, most recently, November 2023 (see the section on Citizen Engagement).

E. Gender

58. **There is significant gender inequality in the Comoros**, especially for access to jobs. Female unemployment stood at 11.2 percent in 2022 compared to 7.4 percent for males.⁴⁷ The FY20–FY24 CPF highlights the complexity of gender issues in the country.⁴⁸ Maritime transport is traditionally dominated by males. Only 0.6 percent of the total female labor force worked in the transport, storage, and communication sector (compared with 6.6 percent for male) in 2022. About 31 percent of staff in managerial, professional and technical positions were female in Comoros.⁴⁹ According to UN Women (2020), the fishery sector has significant job opportunities for women, for instance, small-scale fish processing and trade. Women constitute nearly half of those employed in fisheries globally. However, their livelihoods are often vulnerable to external shocks due to a lack of equipment, skills, and alternative livelihoods.⁵⁰

59. **To reflect women's voice more effectively in the maritime sector, the project will support empowerment of women through creating a committee to supervise maritime safety issues with a quota for female membership majority.** The members will receive a variety of trainings on monitoring safety (for example, maritime communications tools and verification of safety norms). Reflecting their recommendations and suggestions in maritime policies and

⁴⁶ <http://picmc.org/>

⁴⁷ According to World Development Indicators (as of February 2024).

⁴⁸ World Bank. 2020. *FY20–FY24 Country Partnership Framework for the Union of Comoros*. (Report No. 145699-KM) discussed by the World Bank Board of Executive Directors on July 16, 2020.

⁴⁹ According to ILOSTAT by International Labor Organisation (as of February 2024).

⁵⁰ UN Women. 2020. *Women's Economic Empowerment in Fisheries in the /Blue Economy of the Indian Ocean Rim* <https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2020/Womens-economic-empowerment-in-fisheries-in-the-blue-economy-of-the-Indian-Ocean-Rim-en.pdf>



regulations, the project is expected to contribute to the slight increase in women’s use of maritime transport services. In addition, the scheduled services under the new passenger boat pilot will reduce passengers’ waiting time, facilitating more use of women who are often time constrained. The share of female users will be monitored as one of the PDO indicators.

F. Citizen Engagement

60. **Since the preparation of SOP1, the PIU continues to proactively engage in citizen consultations and project sensitization with local communities and relevant stakeholders.** During preparation and implementation, consultations were undertaken with a range of stakeholders, including women, fishermen, and residents of all islands from June 19 to July 8, 2021; October 24 to 28, 2022; November 5 to 15, 2022; December 20 to 30, 2022; January 12 to 14, 2023; July 28 to August 6, 2023; and November 16 to 24, 2023. The PIU personnel also visited all potential sites for secondary ports, with community members guiding the visits, which provided relevant information on the sites. A beneficiary feedback indicator continues to be used to monitor citizen engagement throughout project implementation by administering satisfaction surveys to project beneficiaries. The grievance redress mechanism (GRM) for SOP1 was established by the PIU on January 17, 2023. It is operational and will be used for SOP2.

V. GRIEVANCE REDRESS SERVICES

61. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank’s Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank’s independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank’s Grievance Redress Service (GRS), visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank’s Accountability Mechanism, visit <https://accountability.worldbank.org>.

VI. KEY RISKS

62. **The overall risk rating for this project is Substantial.** The drivers of this rating are risks associated with macroeconomic, sector strategy and policy, fiduciary, and environmental and social aspects.

63. **Macroeconomic risk is substantial.** Although the Comoros has been experiencing steady growth with prudent macroeconomic management for the last decade, economic growth has been challenging because of various external shocks. The International Monetary Fund foresees that the economy will recover gradually, but structural challenges may continue to be significant, such as debt accumulation, high dependency on importing for the majority of goods, and stagnant domestic private businesses. Global commodity prices may continue to put further pressure on the economy, slowing growth down, intensifying fiscal pressure and making it difficult to bring external resources to the infrastructure sector. The project itself will mitigate these risks by facilitating more efficient international trade and transactions and easing pressure on import prices.



64. **Sector strategies and policies risk is substantial.** Although the Government's latest national development strategy identifies interisland connectivity as a bottleneck, its implementation is lagging. In the port sector, operationalization of the SCP is still slow. The Government's safety and operational regulations for small passengers are not fully enforced. The project continues supporting technical assistance to the national port authority, and the proposed passenger boat pilot will encourage the Government to tighten all safety and operational regulations. The project has been preparing the pilot boat program carefully engaging with existing service operators and local communities.

65. **The fiduciary risk is substantial.** The FM assessment was conducted at the MTMA level, under which the designated PIU was created. The recruitment of an internal auditor was completed, and the FM system was established. However, the current FM processes tend to be delayed because of complexity of project procurement and budgeting. Procurement procedures also tends to be delayed. To facilitate the project's FM and procurement arrangements, the same PIU and FM procedures currently being used for SOP1 will be used for SOP2, in accordance with the updated PIM, including the arrangements for the co-financing and compensation, keeping the AWP&B and disbursement projections updated periodically.

66. **The environmental and social risk is high, due to the high environmental risk, while the social risk is substantial.** Based on the ESIA for Port Boingoma, the potential adverse risks and impacts of improving the port infrastructure include perturbation of marine habitat and damage to marine biotopes during dredging; port waste and pollution; pollution from dredged material; occupational and community health and safety problems; and increases in traffic crashes, especially during construction and transportation of dredged material. Project impacts are mainly localized and can be mitigated. The borrower prepared an ESIA for Port Boingoma. The Resettlement Policy Framework prepared indicated that there is little, if any, land taking involved in the port areas. A social specialist, an environmental specialist and a GBV/SEA/SH specialist recruited under SOP1 are operational to oversee risk management.



VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Closing Period
Improve maritime transport connectivity among the islands	
Number of people that benefit from improved access to sustainable transport infrastructure and services (Number)	
Oct/2023	Jun/2029
0	65000
> Female share in maritime transport ridership by new boats (Percentage)	
45	50
Increased maritime connectivity in terms of volume of freight handled at climate resilient Port Boingoma (Tones/year)	
Dec/2022	Jun/2029
16000	50000
Improve maritime transport safety among the islands	
Reduction in the number of maritime transport accidents on a yearly basis (Number)	
Jan/2024	Jun/2028
25	0
Improve maritime transport climate resilience among the islands	
Reduction in the number of days each year when Port Boingoma is nonoperational due to weather conditions (Days)	
Jan/2024	Jun/2029
216	20

Intermediate Indicators by Components

Baseline	Closing Period
Improvement of Climate Resilience and Capacity of Port Infrastructure	
Port Boingoma is rehabilitated and expanded with climate resilience design built in (Yes/No)	
Jan/2024	Jun/2029
No	Yes



Number of domestic ferry passengers on an annual basis (Number)	
Dec/2022	Jun/2029
31000	85000
Maritime safety and safe passenger boat program	
Number of secondary ports to be constructed (Number)	
Jan/2024	Jun/2029
0	2
Number of safer passenger boats to be introduced under the pilot program (Number)	
Jan/2024	Jun/2028
0	4
Implementation support and capacity building	
Establishment of a safety committee including female representatives (Yes/No)	
Jan/2023	Jun/2029
No	Yes
> Share of female members in leadership positions in a safety committee (Percentage)	
0	40
Satisfaction rating by project beneficiaries (Percentage)	
Jan/2024	Jun/2028
0.00	75.00
Percentage of complaints responded and/or resolved within the stipulated standard for response times (Percentage)	
Jan/2024	Jun/2028
0.00	75.00
Contingent emergency response	



Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

Improve maritime transport connectivity among the islands	
Number of people that benefit from improved access to sustainable transport infrastructure and services (Number)	
Description	The number of interisland transport passengers by new boats under the pilot safe boat program per year
Frequency	Annual
Data source	Annual reports
Methodology for Data Collection	The value is updated based on actual ridership data by ANAM and private operators
Responsibility for Data Collection	To be collected by PIU/ANAM
Female share in maritime transport ridership by new boats (Percentage)	
Description	This is a breakdown indicator by gender. According to the feasibility study, the female ridership currently accounts for 45 percent of total demand in the market.
Frequency	Annual
Data source	Annual reports
Methodology for Data Collection	The value is updated based on actual ridership data by ANAM and private operators
Responsibility for Data Collection	To be collected by PIU/ANAM
Increased maritime connectivity in terms of volume of freight handled at climate resilient Port Boingoma (Tones/year)	
Description	This indicator measures the increase of maritime freight connectivity among the islands by the volume of freight (tons) of conventional freight handled at Port Boingoma on an annual basis.
Frequency	Annual
Data source	Port statistics
Methodology for Data Collection	The value is updated based on port statistics prepared by SCP.
Responsibility for Data Collection	PIU/SCP
Improve maritime transport climate resilience among the islands	
Reduction in the number of days each year when Port Boingoma is nonoperational due to weather conditions (Days)	
Description	This indicator measures climate resilience of maritime transport by the number of days that the port of Boingoma is not operational because of weather conditions.
Frequency	Annual
Data source	Reports prepared by PIU
Methodology for Data Collection	The value will be updated based on reports from SCP that would supervise the operations of Port Boingoma.
Responsibility for Data Collection	PIU/SCP
Improve maritime transport safety among the islands	
Reduction in the number of maritime transport accidents (Number)	
Description	This indicator measures the improvement of maritime transport safety among the three islands by the number of maritime accidents and disappearances of small passenger boats on an annual basis.
Frequency	Annual
Data source	Reports prepared by ANAM
Methodology for Data Collection	The value will be updated based on reports from ANAM.
Responsibility for Data Collection	PIU/ANAM



Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

Improvement of Climate Resilience and Capacity of Port Infrastructure	
Port Boingoma is rehabilitated and expanded with climate resilience design built in (Yes/No)	
Description	The capacity and climate resilience of Port Boingoma will be increased. The port design specifically aims at not only increasing the freight and passenger handling capacity but also ensuring climate-resilient infrastructure and port operations, through adding an additional L-shaped quay and increasing a protected bay area for port and other economic activities.
Frequency	Once
Data source	Supervising consultants reporting
Methodology for Data Collection	The value will be updated based on progress reporting from the supervising consultant.
Responsibility for Data Collection	PIU
Number of domestic ferry passengers on an annual basis (Number)	
Description	This indicator measures the annual number of interisland transport passengers by ferry.
Frequency	Annual
Data source	Port statistics
Methodology for Data Collection	The value will be updated based on official port statistics and reports to be prepared by SCP.
Responsibility for Data Collection	PIU/SCP
Maritime safety and safe passenger boat program	
Number of secondary ports to be constructed (Number)	
Description	The indicator measures the number of secondary ports to be established by the project.
Frequency	Annual
Data source	Reports by supervising consultants
Methodology for Data Collection	The value will be updated based on progress reporting from the supervising consultants.
Responsibility for Data Collection	PIU
Number of properly designed passenger boats introduced under the pilot program (Number)	
Description	The indicator tracks the number of properly designed passenger vessels that are supported under the pilot program financed by the project.
Frequency	Annual
Data source	Report by PIU.
Methodology for Data Collection	The licenses for boat operators are managed by ANAM.
Responsibility for Data Collection	PIU/ANAM
Implementation support and capacity building	
Establishment of a safety committee including female representatives (Yes/No)	
Description	The indicator tracks the development of a safety committee, involving female members, to tackle challenges related to maritime safety.
Frequency	Once
Data source	Report by ANAM
Methodology for Data Collection	The value will be updated based on progress reporting from the safety committee.
Responsibility for Data Collection	PIU/ANAM
Share of female members in leadership positions in a safety committee (Percentage)	
Description	To assure women's voice in the maritime sector, the project aims at supporting the safety committee with a specific



	quota of 40 percent for female membership.
Frequency	Once
Data source	Report by ANAM
Methodology for Data Collection	The value will be updated based on progress reporting from the safety committee.
Responsibility for Data Collection	PIU/ANAM
Satisfaction rating by project beneficiaries (Percentage)	
Description	The indicator measures the satisfaction rating by project beneficiaries administered through a survey questionnaire on an annual basis.
Frequency	Annual
Data source	Questionnaire
Methodology for Data Collection	The value will be updates based on a survey administrated by the PIU.
Responsibility for Data Collection	PIU
Percentage of complaints responded and/or resolved within the stipulated standard for response times (Percentage)	
Description	The indicator tracks the number f complaints responded and/or resolved within the stipulated standard for response times.
Frequency	Annual
Data source	Reports prepared by PIU
Methodology for Data Collection	The value will be updated based on report from the PIU.
Responsibility for Data Collection	PIU
Contingent emergency response	



ANNEX 1: Implementation Arrangements and Support Plan

Project Institutional and Implementation Arrangements

1. **The MTMA**, which formulates and implements maritime transport policies, including maritime safety and security, national and international navigation, port regulations, and PPP supervision in the transport sector, will have overall responsibility for project implementation. Under the MTMA and the Ministry of Finance, Budget, and Banking Sector, a PIU was created under SOP1 by ministerial *arrêté* (decree) to conduct day-to-day management of the project and coordinate its activities including, procurement, disbursement, accounting, financial and technical reporting, social and environmental management, communication, and monitoring and evaluation, ensuring the auditing of the accounts and providing project progress reports. The same PIU comprising a project coordinator, a procurement specialist, procurement assistants, an FM specialist, an environmental specialist, a social specialist, a gender and GBV/SEA/SH specialist, a monitoring and evaluation specialist, a port transport specialist, an infrastructure specialist, a communication specialist, an internal auditor, and an accountant, will be used for the project (SOP2).
2. **A project Steering Committee** established by ministerial *arrêté* on May 24, 2022, which the general secretary of MTMA chairs with the membership of other representatives from relevant ministries, continues to be responsible for providing overall strategic guidance and ensuring consistency and support for the multisectoral project activities as well as guidance on project implementation to PIU. The Steering Committee reviews and approves the PIU's AWP&B. The latest AWP&B for 2024 was submitted to the World Bank in November 2023 and approved by the World Bank on January 15, 2024. The MTMA also provides technical input for the project received from other government entities, including two national agencies in the maritime transport sector—ANAM and SCP—both of which the ministry supervises.
3. **The CMMC**. At the international level, the Comoros subscribes to several conventions on maritime transport, including the Treaty of the International Maritime Organisation and the International Maritime Organisation conventions (for example, International Convention for the Safety of Life at Sea; International Convention for the Prevention of Pollution from Ships; and International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers). The standards described in these conventions have been transcribed at the national level in the CMMC, which was promulgated in 2014 and applies to all categories of ships, irrespective of what is transported (including fish and passengers) and to inland (in archipelagic waters) and long-distance navigation. These conventions, even if partly transcribed in the CMMC, require practical measures to inform operators about their implementation and improve the quality of transport services between the islands.
4. **Implementation of the CMMC is incomplete**. The provisions of the CMMC govern the activity of ships in the Comoros, including integration of ships into the maritime spaces of the Comoros, environmental conservation, the public maritime domain, maritime installations and works, state intervention at sea, the administrative status of ships, and the organization of maritime transport. Under the CMMC, the ANAM was established as an implementation agency for the national maritime and port policies. However, some implementing provisions and texts still need to be drawn up to ensure that problems affecting maritime transport in the Comoros are properly covered, including establishment of regulations adapted to regulate all ships operating in the territorial sea, including small passenger vessels (*kwassa kwassa*). Safety and the environment must also be the subject of dedicated regulatory texts to end practices that harm the environment. Port regulations could also be significantly improved.
5. **With regard to PPPs, the Comoros Public Procurement Code addresses only public service concessions**. This framework has made it possible to draw up port concession agreements for the ports of Moroni and Mutsamudu, but the country would benefit from a clear PPP law in line with international standards that would allow PPPs to be carried out in



forms other than public service concessions. This would enhance the attractiveness of port projects in the pipeline, including development and operation of Port Boingoma.

6. **Port and maritime sector institutions.** From an institutional standpoint, several actors are involved in the functioning of the interisland maritime transport system:

- MTMA
- ANAM
- SCP
- General Directorate of Police and National Security (DGPSN)
- Coast Guard
- Port terminal operators
 - Moroni Terminal
 - Anjouan Stevedoring Company.

7. **The MTMA technically supervises ANAM and SCP.** It establishes provisions related to the composition, operation, and allocation of these structures by decree. Through its Maritime Transport Directorate, it coordinates actions related to national and international navigation in terms of maritime safety and security. As the competent maritime authority under the terms of the CMMC, it intervenes, particularly upstream of the process to draw up the regulatory provisions to ensure the safety of maritime navigation. It also helps develop policy for development of the port sector. The MTMA has not established any specific regulations pertaining to security of port navigation, although articles 55 and 232 of the CMMC refer to regulatory provisions on the safety of port navigation to be issued by the ministry.

8. **ANAM is responsible for registration of Comorian vessels, regulates traffic at sea, and ensures compliance with national and international rules to ensure the safety of ships and navigation and prevent pollution from ships.** ANAM was created under Law n°15-015/AU of December 28, 2015, under dual supervision of the MTMA and the Ministry of Finance, Banking, and Budget. Under article 226 of the CMMC, ANAM is the regulatory authority for maritime navigation in the territorial waters of the Comoros. Under article 233, ANAM is responsible for policing navigation "in archipelagic waters and up to the limit of the territorial waters." Because archipelagic waters are the waters between the islands, ANAM is responsible for ensuring that interisland navigation is conducted in accordance with standards. ANAM's missions are set out in Article 4 of Decree n°16-019/PR:

- Administration of ships
- Administration of maritime navigation
- Management of seafarers
- Coordination of search and rescue at sea
- Policing of shipping, marine pollution, the maritime public domain, and maritime and port safety and security
- Monitoring of port tariffs
- Prevention of marine pollution.

9. **ANAM thus plays a central role in maritime and port security, protects the maritime environment, and regulates port activity and interisland maritime traffic, coordinating all administrations and bodies with responsibilities at sea**



and on the coastline of the Comoros. However, the actions of institutions such as the APC, EPPAM, and the DGPSN are not harmonized or systematically monitored. The ANAM's capacity to monitor and coordinate the actions of the actors in the system needs to be strengthened.

10. **The SCP is a public establishment of industrial and commercial nature** created by Decree n°13-141/PR promulgating Law n°13-011/AU of December 2, 2013. It is under the technical supervision of the MTMA and the financial supervision of the Ministry of Finance, Banking, and Budget. According to Article 27 of the law creating the SCP, the APC and EPPAM are deemed to be dissolved as soon as the law is promulgated to make way for the SCP. This dissolution was *de jure* effective on the day the law was promulgated in 2013, but the SCP has been slow to become fully operational. A presidential decree enacted on May 6, 2020, nominated the new director of the SCP and made him responsible for preparing the effective establishment of the SCP.

11. The SCP's missions concern safety, economic regulation, and environmental protection. Its responsibilities, set out in Article 2 of Decree n°13-141, include the following:

- Technical operation of the ports of the Comoros, including safety of ships, persons, and property
- Commercial exploitation of ports, including collection of port fees and taxes
- Development of port sites
- Protection of the port environment.

12. The SCP has the power to concede the industrial and commercial activities for which it is responsible to public entities, private companies, or semi-public companies: public equipment, port handling, beaconing, warehousing, bunkering of ships, towing, and garbage collection. Thus, within the framework of the concession for the future port of Boingoma and for any other initiative for the development of Comorian ports, the SCP will be a key decision-making entity from which any operator will derive its rights.

13. Regarding investments at the port level, the SCP is not responsible for acquisition of basic port equipment such as cranes, elevators, trolleys, and machinery. These investments are the responsibility of the Government, which is also responsible for construction of major civil engineering projects, which the SCP subsequently maintains, renews, and repairs. According to Article 23 of Decree n°13-141 and in accordance with Order n°14-029 on the concession fee, the SCP collects the products of the port fees as well as concession fees, which constitute the main resources of general management and must be used, among other things, to finance port investments.

14. **The APC**, created on June 15, 2001, by Order n°01-008/CE, is a public establishment of industrial and commercial nature that ensures the technical and commercial exploitation of Comorian ports. Decree n°02-24/CE of January 21, 2002, on the statutes of the APC specifies the APC's mission and responsibilities. Among other things, it was responsible for the safety of ships, handling during unloading operations, and embarkation of goods. Article 5 of Decree n°02-24/EC gives the APC the right to grant "services of an industrial and commercial nature for which it is responsible," in particular, port handling services. This concession can be granted to legal entities of public law and to private entities or semi-public companies, as in the case of Moroni Terminal and Anjouan Stevedoring Company. The APC managed Port Boingoma and was the port authority of Port Moroni, which Moroni Terminal manages. According to Article 27 of the law creating the SCP, the APC is deemed to be dissolved as soon as the law is promulgated to make way for the SCP, which is supposed to take over its mandate.

15. **EPPAM** was established by Law n°02-003/AI of July 2003 on the creation, organization, and operation of EPPAM. Its responsibilities are essentially the same as those of the APC but are strictly applicable to Port Mutsamudu. In general, EPPAM was responsible for the general and maritime police of Port Mutsamudu, operations and maintenance of the port,



monitoring and managing of the concession area and concession facilities, and vessel traffic handling operations to and from the port. EPPAM was also responsible for approving handling and storage rates that the Anjouan Stevedoring Company sets, although according to Article 27 of the law creating the SCP, EPPAM is deemed to be dissolved as soon as the law is promulgated to make way for the SCP, which is supposed to take over its mandate.

16. **The DGPSN** exercises its role of border control and verification and control of established security standards on an ad hoc basis, with nonconventional operators, particularly small boat operators. The DGPSN also plays a significant role in policing beaches, in collaboration with the municipalities, by supervising activities that take place on the shore.

17. **The Coast Guard.** The Comoros has had a coast guard unit since April 12, 2010, whose main purpose is the action of the state at sea, notably to "ensure the maritime defence of the territory and maritime surveillance of the waters under Comorian sovereignty." Protection of the marine and coastal environment, in particular by preventing and combating marine pollution and protecting public marine resources, monitoring maritime security and safety, and fighting illegal maritime activities and maritime piracy, requires trained human resources, equipment, and infrastructure. The Coast Guard plays a key role in ensuring the security of maritime shipping and conducts maritime search and rescue operations. According to Article 305 of the CMMC, it is responsible for assisting persons in danger at sea, although the existing provisions state that information on navigational conditions should be provided to ANAM, which should coordinate with the Coast Guard and the DGPSN.

18. **Moroni Terminal** is a mixed operating company under Comorian law, 76.5 percent owned by Bolloré Africa Logistics, leader of the consortium that won the concession for handling Port Moroni in 2011. The concessionaire's rights and obligations were transferred to Moroni Terminal when it was established in 2012. The concession is being renegotiated for another 10-year term. It is responsible for

- Devising a plan for renewal of the equipment and tools necessary for operation of the port;
- Keeping the tools and machinery clean and in good working order; and
- Maintaining surfaces, roads, embankments, various networks, public lighting, and sheds.

19. Moroni Terminal is responsible for paying fixed and variable port charges to the concession grantor. It plans to invest nearly €9 million for development of Port Moroni during the 10 years of the concession. The concession agreement provides for establishment of financial guarantees by the concessionaire to ensure that these investments are effective. Several important investments have already been made to acquire handling equipment adapted to international standards, including mobile cranes, front loaders, reach stackers, and tractor trucks. Moroni Terminal is in charge of proposing handling tariffs while considering the main objective set by the concession grantor, which is to improve operation of the port, productivity, and service to ships and users while reducing costs. According to the agreement, tariffs vary according to the variation of the Harmonized Index of Consumer Prices for the European Union. Moroni Terminal is not responsible for security within the port. The concession agreement does not give it the right to intervene in the movement of ships or in the port police.

20. **Anjouan Stevedoring Company** is a mixed operating company responsible for handling services in Port Mutsamudu. Its responsibilities under the current concession are to

- Maintain the concession area and facilities in clean, usable condition;
- Comply with imposed and generally accepted rules regarding safety and environmental preservation;
- Provide quality services to users;
- Perform its activities in compliance with international standards on occupational safety;



- Develop and promote Port Mutsamudu;
- Establish a structure for repairing and cleaning containers;
- Provide transshipment, cargo handling, and warehousing services; and
- Provide loading and unloading services for all bulk carriers arriving at Port Mutsamudu.

21. According to the investment plan of the current concession contract, the Anjouan Stevedoring Company committed to investing close to US\$3 million for development of the port, mainly for acquisition of new equipment, including ship loaders, container handlers, and tugboats. For the new concession contract under negotiation, this commitment is US\$10 million. The concessionaire has no clear safety responsibilities other than complying with generally accepted safety rules. The provisions make no mention of the concessionaire working with the port authority in this regard. The obligations in terms of security are strictly imposed on the port authority, in this case EPPAM, which, according to Article 10 of the concession, must ensure application of the International Ship and Port Facility Security Code.

Procurement

22. **National procurement procedures may be used for national procurement.** Requirements for open national tenders are as follows:

- Open advertising of the market possibility at the national level;
- Open to eligible companies from any country;
- Tender and tender documents will require bidders submitting bids and proposals to submit a signed acceptance at the time of the call for tenders, to be incorporated into any subsequent contract, confirming that they will apply and comply with World Bank Guidelines on corruption, including, without limitation, the right to sanction, World Bank inspection, and audit;
- Contracts with an appropriate allocation of obligations, risks, and liabilities;
- Publication of information related to award of contracts;
- Right of the World Bank to review procurement documentation and activities;
- An effective complaints mechanism, including for EAS cases; and
- Maintenance of records of the contracting process.

Implementation Support Plan and Resources Required

23. Project implementation support will involve the following activities:

- Up-front technical support to assist the Government on technical approaches and specifications;
- At least two regular implementation support missions per year;
- Intermediate technical missions, as needed;
- Monthly implementation progress reports (physical and financial progress) prepared by the PIU; and
- A midterm review around halfway through project implementation to review progress and assess the need for mid-course corrections.



24. The implementation support plan outlined in Table 1.1 indicates the focus areas for implementation support during the initial and subsequent periods of the project. It will be reviewed regularly and updated when required during project implementation.

Table 1.1. Implementation Support Plan

Timeline	Focus
FY24 for SOP1	<ul style="list-style-type: none"> • Finalization of environmental and social studies • Implementation of ESF commitments • Launch of port infrastructure investment in Port Boingoma • Start of sensitization and trainings on GBV and SH • Operationalization of the port authority and enhancement of maritime safety • Recruitment of transaction advisors for PPP activities for the project • Routine FM and procurement reviews • Implementation of ESF commitments
FY24 for SOP2	<ul style="list-style-type: none"> • Preparation, appraisal, and approval of SOP2 • Finalization of detailed design studies for secondary ports • Finalization of vessel renewal program arrangements • Creation of a safety committee to supervise safety and small boat operations
FY25-29 (SOP1 and SOP2)	<ul style="list-style-type: none"> • Continuation of port infrastructure investment in Port Boingoma • Start of projects on improvement of secondary ports • Implementation of vessel renewal program • Routine FM and procurement reviews • Implementation of ESF commitments • Midterm review (FY25)



ANNEX 2: Paris Alignment

1. **SOP2 is aligned with the goals of the Paris Agreement on both mitigation and adaptation.** The project is consistent with the country's strategies, NDC and NAPA (see Relevance to Higher Level Objectives above). The Comoros does not have a Long-Term Strategies or a National Adaptation Plan. Comoros' Country Climate and Development Report (CCDR) is under preparation. The project is not at a material risk of having a negative impact on the country's low-GHG-emissions development pathways. Activities financed are either Universally Aligned or present low risk. The main climate change and natural hazards relevant to the project are tropical cyclones and sea-level rise, which could damage port buildings and equipment or cause disruptions in port operations or inter-island passenger services. The project adequately reduces such physical climate risks through project climate resilience and adaptation design considerations, limiting the exposure of the project to an acceptable level of residual risk. More detail on climate risks is provided in the Country and Sector Context Sections and details on risk reduction measures are provided below.

Assessment and reduction of mitigation risks:

2. **Component 1** will finance new quays to accommodate ferries and fishery vessels and extend a 5.5-meter draft to provide further protection against climate conditions in the sheltered harbor. The port of Boingoma handles a small amount of oil products⁵¹, not impacting the economic viability of the project. The project does not create more favorable conditions for the transport of fossil fuels vis-à-vis other cargo. The investments will enable the inclusion of fisheries and passenger transport activities in the Port, thus facilitating the diversification of activities and commodities handled by the port. SOP2 will invest in the reconstruction of warehouses and administrative buildings making these fully electrified and grid-connected and using energy efficient appliances and equipment thus presenting low risk from a mitigation perspective. Overall, the investments in Port Boingoma are considered low risk from a mitigation perspective.

3. **Component 2** will support improvements of infrastructure at selected secondary ports, dedicated to passenger transport. The project does not contribute to deforestation. The improvements in secondary port infrastructure are considered universally aligned. The multipurpose building, waste disposal facility for vessel oil and a vessel fueling station, parking lot, and deployment of lighting system, solar powered, and therefore considered to present low risk from a mitigation perspective. Component 2 will also finance the piloting of a vessel fleet renewal program for short sea shipping inter-island passenger transport and is therefore considered to be universally aligned. The vessel fleet renewal program aims to reduce barriers to future vessel improvements and promotes the selection of vessels that use the most efficient and best available technology, considering the country and sector context, existing technological options, and the economic viability of investments. The new passenger boat pilot will contribute to reducing emissions against business-as-usual (i.e., *kwassa kwassa*).⁵²

4. **Component 4** is the Contingency Emergency Response Component (CERC). The World Bank will ensure that all eligible activities included in the CERC Manual/CERC Annex of the Project Operations Manual are Paris Aligned.

⁵¹ 5,800 tons of oil products in 2022, for domestic consumption, corresponding to 35 percent of total port traffic.

⁵² The first boats acquired are expected to use unleaded gasoline 98 octane rating. The fuel efficiency (par passenger) for new, larger boats is 32 percent higher than that for *kwassa kwassa*. Assuming the financing of two boats with a capacity of 30 passengers, the purchased new boats would transport 65,000 passengers annually, saving emissions by 381 tons per year. The fuel efficiency (par passenger) for new, larger boats is 32 percent higher than that for *kwassa kwassa*. Over a project evaluation period of 20 years, the CO₂ emissions without project are estimated at 22,769 tons, compared with 15,538 tons under the with-project case, translating into an annual net saving of 7,231 tons of CO₂. Evaluated at the shadow carbon prices under the high and low scenarios, the economic benefits are estimated at US\$941,479 and US\$470,740, respectively.



Assessment and reduction of adaptation risks:

5. **Component 1** finances the extension of quays and draft at port Boingoma to enlarge the sheltered harbor area protecting fisheries and passenger transport services, in the port area, taking into consideration sea-level rise and cyclone risks. Component 1 also finances the reconstruction of warehouses with increased seasonal logistics buffers to accommodate climate variations and extreme weather events; and the reconstruction of administrative buildings and enhanced access roads to be climate resilient.

6. **Component 2** will improve port infrastructure at selected secondary ports to strengthen the resilience of landing infrastructure taking into consideration projected sea-level rise and cyclone risks. Component 2 will also invest in a pilot program for new passenger boats that will enable more reliable and safer inter-island transportation during inclement weather conditions. The pilot program for new passenger boats aims to provide alternative means of transport that are more climate resilient and therefore reduce risks by providing essential connectivity and access to critical supplies and services. These investments are essential for climate resilience and to enable evacuation and emergency response during extreme weather events.

7. **Component 3** will finance project implementation costs and the provision of technical assistance to tighten safety and operational regulations and ensure climate resilience in port and intra-island passenger transport operations. The technical assistance will strengthen institutional capacity to identify and respond to disruptions from climate hazards and restore connectivity.

8. **Component 4** is the CERC, which allows for the drawing of uncommitted resources from the other project components to cover emergency response activities.