THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

FOR OFFICIAL USE ONLY

Report No: PAD00061

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED GRANT
IN THE AMOUNT OF SDR 42.2 MILLION
(US$56 MILLION EQUIVALENT)

TO THE

FEDERATED STATES OF MICRONESIA

FOR A

PACIFIC ISLANDS REGIONAL OCEANSCAPE PROGRAM – SECOND PHASE FOR ECONOMIC RESILIENCE: FEDERATED STATES OF MICRONESIA (P178237)

September 19, 2024

Environment, Natural Resources & the Blue Economy
East Asia and Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective {July 31, 2024})

Currency Unit =	US$
SDR 0.7527 =	US$1
US$ 1.3284 =	SDR 1

FISCAL YEAR
October 1 - September 30

Regional Vice President:	Manuela V. Ferro
Regional Director:	Anna Wellenstein
Country Director:	Stephen N. Ndegwa
Practice Manager:	Marc Sadler
Task Team Leaders:	Iretomiwa Olatunji, Xavier F. P. Vincent

ABBREVIATIONS AND ACRONYMS

AM	Accountability Mechanism
CA	competent authority
CBRM	community-based resource management
CE	citizen engagement
CIU	Central Implementation Unit
DA	Designated Account
DECEM	Department of Environment, Climate Change & Emergency Management
DHSA	Department of Health and Social Affairs
DMR	Department of Marine Resources (Chuuk)
DOFA	Department of Finance and Administration
DRD	Department of Resources and Development
DREA	Department of Resources and Economic Affairs (Kosrae)
DT&PW	Department of Transportation and Public Works (Chuuk)
DTC&I	Department of Transportation, Communications and Infrastructure
E&S	environmental and social
EEZ	exclusive economic zone
EM	electronic monitoring
EPA	Environmental Protection Agency
ESF	Environmental and Social Framework
ESIA	environmental and social impact assessment
EU	European Union
F&W	Pohnpei Fish and Wildlife
FAD	fish aggregating device
FCV	fragile, conflict and/or violence affected
FFA	Forum Fisheries Agency
FM	financial management
FSM	Federated States of Micronesia
GAR	Gender Analysis Report
GDP	gross domestic product
GHG	greenhouse gas
GoFSM	Government of the Federated States of Micronesia
GRS	Grievance Redress Service
IA	implementing agency
ICT	information and communication technology
IDA	International Development Association
IMS	information management system
IRR	internal rate of return
ISA	Implementation Support Agency
IUU	illegal, unreported, and unregulated
KCSO	Kosrae Conservation and Safety Organization
KIRMA	Kosrae Island Resource Management Authority
M&E	monitoring and evaluation
MCS	monitoring, control, and surveillance
MPA	marine protected area
MRMD	Yap State Marine Resources Management Division
MTR	midterm review
NCP	National Control Plan
NDC	Nationally Determined Contribution
NGO	nongovernmental organization
NORMA	National Oceanic Resource Management Authority
OFA	Pohnpei Office of Fisheries and Aquaculture

OHS	occupational health and safety
PDO	Project Development Objective
PIC	Pacific Island Country
PIU	Project Implementation Unit
PNA	Parties to the Nauru Agreement
POM	Project Operations Manual
PP	Procurement Plan
PPSD	Project Procurement Strategy Document
PROP	Pacific Islands Regional Oceanscape Program
PROPER	PROP—Second Phase for Economic Resilience
PSMA	Port State Measures Agreement
R&D	Pohnpei Department of Resources and Development
RPF	Regional Partnership Framework
SAR	FSM Coastal Fisheries Situation Analysis Report
SDP	Strategic Development Plan
SDR	Special Drawing Rights
SEA/SH	sexual exploitation and abuse/sexual harassment
SEP	Stakeholder Engagement Plan
SIA	State Implementation Agency
SOP	Series of Projects
SPC	Pacific Community
SSF	small-scale fishers
STEP	Systematic Tracking of Exchanges in Procurement
SWMS	Solid Waste Management Strategy
TA	technical assistance
VDS	Vessel Day Scheme
WB	World Bank
WCPFC	Western and Central Pacific Fisheries Commission
WCPO	Western and Central Pacific Ocean
WG	Working Group
YFA	Yap Fishing Authority

TABLE OF CONTENTS

DATASHEET

BASIC INFORMATION

Project Beneficiary(ies)	Operation Name		
Micronesia, Federated States of	Pacific Islands Regional Oceanscape Program - Second Phase for Economic Resilience: Federated States of Micronesia (FSM PROPER)		
Operation ID	Financing Instrument	Environmental and Social Risk Classification	
P178237	Investment Project Financing (IPF)	Substantial	

Financing & Implementation Modalities

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

Expected Approval Date	Expected Closing Date
07-Oct-2024	30-Sep-2030
Bank/IFC Collaboration	
No	

Proposed Development Objective(s)

The Development Objective of the Series of Projects is to strengthen the shared management of selected Pacific Island oceanic and coastal fisheries, and the critical habitats upon which they depend.

The Development Objective of the objective is to strengthen stakeholder capacity for regional collaboration and enhanced sector performance in fisheries, and for improved habitat preservation of the Federated States of Micronesia.

Components

Component Name	Cost (US$)
Component 1: Oceanic fisheries	12,470,000.00
Component 2: Coastal fisheries	34,100,000.00
Component 3: Marine habitats	4,900,000.00
Component 4: Project Management	4,530,000.00

Organizations

Borrower:	Federated States of Micronesia
Implementing Agency:	Department of Environment, Climate Change, and Emergency Management
Contact:	Cynthia Ehmes
Title:	Assistant Secretary Environment Division
Telephone No:	6913208815
Email:	cynthia.ehmes@decem.gov.fm
Implementing Agency:	Department of Health and Social Affairs
Contact:	Marcus Samo
Title:	Mr
Telephone No:	691-320-2619
Email:	msamo@fsmhealth.fm
Implementing Agency:	Department of Resource & Development
Contact:	Camille Inatio
Title:	Assistant Secretary, Marine Division
Telephone No:	6913205133
Email:	Cinatio@rd.gov.fm
Implementing Agency:	National Oceanic Resource Management Authority
Contact:	Elina Akinaga
Title:	Secretary
Telephone No:	69132027000
Email:	eakinaga.fsmrd@gmail.com

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

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

SUMMARY

Total Operation Cost	**56.00**
Total Financing	**56.00**
of which IBRD/IDA	**56.00**
Financing Gap	**0.00**

DETAILS

World Bank Group Financing

International Development Association (IDA)	56.00
IDA Grant	56.00

IDA Resources (US$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Regional	0.00	42.56	0.00	0.00	42.56
National Performance-Based Allocations (PBA)	0.00	13.44	0.00	0.00	13.44
Total	**0.00**	**56.00**	**0.00**	**0.00**	**56.00**

Expected Disbursements (US$, Millions)

WB Fiscal Year	2025	2026	2027	2028	2029	2030	2031
Annual	5.68	15.19	17.84	9.57	6.76	0.33	0.00
Cumulative	5.68	20.87	38.71	48.28	55.04	55.37	55.37

PRACTICE AREA(S)

Practice Area (Lead)	Contributing Practice Areas
Environment, Natural Resources & the Blue Economy	Gender; Fragile, Conflict & Violence

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	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Substantial
7. Environment and Social	Substantial
8. Stakeholders	Substantial
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	Not Currently 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
Article IV of the Financing Agreement — Remedies of the Association 4.01. The Additional Event of Suspension is that the Marine Resources Act has been amended, suspended, abrogated, repealed or waived in a manner that is not compatible with international law, specifically the United Nations Convention on the Law of the Sea, or in a manner that would affect materially and adversely the ability of the Recipient to perform any of its obligations under this Agreement.
Schedule 2. Section I.A.5 of the Financing Agreement. Institutional Arrangements:5. The Recipient shall, maintain throughout the Project implementation period, a Project Implementation Unit within NORMA, with mandate, composition and resources satisfactory to the Association, which shall be responsible for day-to-day management and implementation of the Project. Without limitation to the generality of the foregoing, the Project Implementation Unit shall: (a) be led by a Project manager; (b) include at all times, at a minimum, a Project officer, Project assistant, and environmental and social officer; (c) include as needed a monitoring and evaluation officer, communications officer, State Project coordinators; and (d) be supported by specialists from the Central Implementation Unit as described in Section I.A.7 of this Schedule 2; each with terms of reference, qualifications and experience satisfactory to the Association.

Schedule 2. Section I.B.1 of the Financing Agreement. Project Implementation Agreements: The Recipient shall, prior to the carrying out of any Project activities in a Recipient's State, enter into and thereafter maintain throughout the Project implementation period, a Project Implementation Agreement with each State Government of such state on terms and conditions satisfactory to the Association, which shall include, inter alia, the State Government's obligation to facilitate the implementation of the Project activities within its territory in accordance with the provisions of this Agreement, the Project Operations Manual and the Environmental and Social Commitment Plan ("ESCP").
Schedule 2. Section I.C.1 of the Financing Agreement. Project Operations Manual: The Recipient shall maintain the Project Operations Manual, which shall set forth, inter alia, the following detailed arrangements and procedures for the implementation of the Project: (a) institutional arrangements for the day-to-day execution of the Project; (b) the preparation and successive updates of the Procurement Plan and its implementation arrangements; (c) implementation arrangements for the ESS Instruments; (d) budgeting, disbursement, auditing and financial management arrangements; (e) Project monitoring, reporting, evaluation and communication arrangements; (f) [National Working Group and State Working Groups' terms of reference]; (g) the division of the responsibilities and cooperative arrangements between NORMA, the Department of Finance and Administration, the Department of Resources and Development, the Department of Health and Social Affairs, the Department of Environment, Climate and Emergency Management, the State implementing entities, the Project Implementation Unit, the Central Implementation Unit, the National Working Group, and the State Working Groups; (h) procedures and processes for managing and maintaining equipment and assets financed by the Project; and (i) any other administrative, financial, technical and organizational arrangements and procedures as shall be necessary for the implementation of the Project and the achievement of its development objective.
Schedule 2. Section I.D.1 of the Financing Agreement. Annual Work Plans and Budgets: The Recipient shall cause the Project Implementing Entity to, by not later than: 1. The Recipient shall prepare and furnish to the Association by not later than: (a) four (4) months after the Effective Date (or such later date which, after consideration of the reasons for the delay, the Association has confirmed in writing is acceptable to the Association in its sole discretion); and (b) August 1 of each year for every subsequent year during the implementation of the Project (or such later date which, after consideration of the reasons for the delay, the Association has confirmed in writing is acceptable to the Association in its sole discretion); prepare and furnish to the Association, for the Association's review and no-objection, an Annual Work Plan and Budget
Schedule 2. Section II. 2 of the Financing Agreement. Mid-term Review: The Recipient shall: (a) ensure that, by not later than three (3) years after the Effective Date, or such other period as may be agreed with the Association, the mid-term review of the Project is carried out and, a mid-term report is prepared and furnished to the Association, in such detail as the Association shall reasonably request, documenting progress achieved in the carrying out of the Project during the period preceding the date of such report, taking into account the monitoring and evaluation activities performed pursuant to Section II.1 of this Schedule 2.

Conditions

Type	Citation	Description	Financing Source

I. STRATEGIC CONTEXT

A. Country Context

1. **The Pacific Island Countries (PICs) in the Western and Central Pacific Ocean (WCPO) region face common challenges and opportunities.** PICs are small, with limited natural resources and narrowly based economies, distant from major markets, and vulnerable to external economic and environmental shocks, such as the COVID-19 pandemic. In 2019, a quarter of Pacific Islanders were estimated to live below "basic needs poverty lines," according to the United Nations High-level Political Forum on Sustainable Development. The PIC coastal and marine ecosystems are under increasing global threats from climate change, and local threats from increasing anthropogenic pressure, such as local overfishing and habitat degradation, and including solid waste and water pollution. The PIC economies are among the world's most vulnerable to the effects of climate change and disasters; the World Risk Index 2020 ranks six PICs among the top 20 most at-risk countries.

2. **The Federated States of Micronesia (FSM) is a widely dispersed archipelago in the North Pacific Ocean, with the third-largest exclusive economic zone (EEZ) and one of the most productive tuna fishing grounds in the WCPO.** The FSM comprises four states: Yap, Chuuk, Pohnpei, and Kosrae, and over 607 islands of which 74 are inhabited. Many of the islands are extinct volcanic shields, with elevations up to about 760 meters and dense vegetation interiors, but some islands are low-lying atolls typically under five meters above sea level. The total land area is only 702 square kilometers, but there are 2,700 kilometers between islands in the western-most state of Yap and islands in the eastern-most state of Kosrae. The EEZ covers an area of around three million square kilometers. The capital of FSM, Palikir, is located in Pohnpei.

3. **FSM is considered a fragile, conflict and/or violence affected (FCV) country** because it has inadequate state capacity and constant vulnerability to external shocks. The fragility stems from the extreme geography and limited economic viability, lean institutional capacity and youth unemployment, poor land governance, and gender-based violence.

4. **As of 2023, FSM's estimated population was 115,244, with a gross domestic product (GDP) of US$460 million and GDP per capita of US$3,992.** Most of the population lives on the coast of the high islands, with more than half in rural areas. In 2019, the economy was predominantly service based (66.8 percent of GDP), with 22.5 percent made up of agriculture, forestry, and fishing, and 4.9 percent of industry, including construction. The annual revenue from oceanic fisheries' access fees was US$72.4 million in 2020, representing over 40 percent of public revenue. The government employs two-thirds of the working population, with 58 percent of its funding from development aid.

5. **Current demographic challenges include a decreasing population** due to a declining fertility rate and out-migration. The FSM has one of the youngest populations in the Pacific, with approximately 56 percent of the population aged zero to 24. There is increasing urbanization, with 22.7 percent of the population living in urban areas in 2017. Poverty rates are quite high; in 2013, the poverty headcount ratio at national poverty lines was 41.2 percent of the population. In 2014, fisheries ranked first in importance among income sources. Forty-seven percent of households engage in fishing activities, 23 percent of household expenditures is on seafood, and six percent of total household income and 28 percent of the value of subsistence consumption come from fisheries.

6. **The Global Climate Risk Index ranks FSM as the third most at-risk country among its PIC peers.** The FSM is located on the southern edge of the typhoon belt, and between the 1969 and 2017 seasons, an average of 74 typhoons developed within or crossed FSM's EEZ per decade. Climate- and weather-related hazards stress the already vulnerable ecosystems. Climate change projections predict that the average annual temperature is likely to increase, extreme rainfall days are likely to occur more often, sea levels are likely to continue to rise, and typhoons are likely to be less frequent but more intense. The negative impacts of climate change are already evident. These include a temperature warming of around 0.7 degrees Celsius (°C) between 1980 and 2017, a sea level rise of over 0.39 inches (10 millimeters) per year, and a 20 percent

increase in the chance of cyclones over the next 10 years.[1] Frequent natural disasters and climate change will continue to impose high costs and may even threaten the physical viability of some areas of the main islands and outer islands. Such events can and do cause severe damage to infrastructure and have adverse impacts on livelihoods. Saltwater intrusion from rising sea levels and more extreme storm surges has the potential to damage crops and contaminate freshwater supplies, while people living within the coastal zone are becoming more vulnerable to climate-related changes. Urgent action is required to mitigate and adapt to climate risks and ensure food security and livelihoods for coastal communities.

B. Sectoral and Institutional Context

7. **Fisheries underpin the revenue source of PIC economies and are vital for food, nutrition, and livelihoods, and all fisheries activities in the region are likely to be affected by climate change.** The well-being of island populations across the region depends on regional, national, and local capacities to manage fisheries for optimal sustainable productivity. Climatic variation, which is known to have profound effects on the distribution and abundance of fish and the productivity of aquaculture, is expected to grow in importance as a driver of the sector. Management remains the best approach to build fish resource and fisheries resilience to climate change for both oceanic and coastal fisheries.

8. **WCPO tuna fisheries account for more than half of global catch, representing a major source of revenue and foreign exchange for PICs.** Fishing access fees paid by vessels to Forum Fisheries Agency (FFA) members amounted to US$550 million in 2019, representing more than 40 percent of government revenue, and close to five times the fees paid in 2009 (US$114 million) before introduction of the Vessel Day Scheme (VDS). In addition, tuna fisheries are estimated to provide 25,000 jobs in PICs. While the fees represent close to 20 percent of the tuna first-sale value, PICs want more domestic benefits through better harnessing of the value chains supported by regional integration. This includes a hub-and-spoke model, exemplified by the Eastern New Britain initiative (ENBi),[2] where products caught in one PIC could be unloaded in another PIC and processed in yet another PIC.

9. **Coastal fisheries are essential for the population's well-being.** Coastal fisheries provide 50 to 90 percent of animal protein in Pacific Islanders' diet, and the first or second source of income for 50 percent of coastal households. The well-being of PICs' populations depends on coastal fisheries productivity, and national and local capacity to manage them effectively while promoting alternative sources of livelihoods to reduce pressure on fish stocks and creating enabling conditions for preserving quality and adding value to products.

10. **PICs use regional platforms to share experience implementing more sustainable and economically viable fisheries policies and practices and to agree on common management measures.** These platforms include the Western and Central Pacific Fisheries Commission (WCPFC), the FFA, the Parties to the Nauru Agreement (PNA), the Pacific Community (SPC), and the Forum Fisheries Committee (FFC). Reinforcing WCPO countries' capacities to participate actively in the WCPFC forum and to implement the WCPFC, FFA, PNA, and SPC resolutions is essential for the management and sustainable use of the fish resources, and for further harnessing the oceanic and coastal fisheries to the regional economy and enhancing their socioeconomic benefits for the PIC populations.

11. **Tuna fishery plays a pivotal role in generating revenue in the FSM.** In 2020, the domestic fleet comprised 27 purse seiners and 42 longliners, while 243 foreign vessels were also licensed to fish in the EEZ. The total provisional 2020 purse seiner catch in national waters was estimated at 148,145 tonnes and catches by national fleet at 177,905 tonnes. The average value to the FSM from access fees, catches by national fleets, and tuna exports was US$72.4 million, US$250 million, and US$70 million, respectively. However, domestic value-added and livelihood benefits are constrained by limited landings and onshore activities, and processing quantities remain low (5,331 tonnes) as does employment (around 1,105 persons). The National Oceanic Resources Management Authority (NORMA) affords a high priority to generating

[1] Climate Risk Country Profile: Micronesia (2021): The World Bank Group.
[2] https://www.ffa.int/what-we-do/economic-and-social-development/east-new-britain-initiative/.

revenues through foreign access fees and its domestic fishing fleet, and enhanced participation to regional and international value chains, by reinforcing institutional capacity for management, as well as certification of products' legality and food safety, so they can enter regional hubs-and-spokes and remain eligible to access high-end markets.

12. **Modelling suggests that climate change will impact the future distribution and abundance of the tuna species, and subsequently access fees.** Under global warming scenarios, tuna catches in the FSM EEZ could decline by 2.7 percent to 13 percent by 2050, resulting in a drop in access fees of US$1.8 million to US$8.9 million. With a predicted long-term climate-induced eastward shift of key tuna stocks, the FSM must be capable of adapting its management strategies to minimize the economic impacts such changes may have. In addition, FSM access to reliable information on ocean and fisheries forecasting and their impacts on future fishing opportunities inside the EEZ can be a valuable business decision-making tool for the Government of the Federated States of Micronesia (GoFSM).

13. **Increased domestic value-added and livelihood opportunities can be obtained by tapping into the international seafood trade, which requires compliance with food safety and compliance standards.** Seafood is the most internationally traded food commodity, and major importing countries have introduced progressively more rigorous food safety and legal compliance requirements. The European Union (EU) is the world's most important seafood importer, with stringent food safety, compliance, and traceability requirements. It is being used as a benchmark across the PICs, while the Australian, New Zealand, and U.S. markets have also increasingly tightened their requirements. To meet EU requirements and secure FSM seafood products access to regional seafood hubs-and-spokes, the FSM requires the establishment of a seafood safety competent authority (CA), as well as a monitoring, control and surveillance (MCS) system to ensure that only legally caught products, meeting food safety and traceability standards, are entering value chains. These are regionally integrated, which is key to realizing domestic benefits from seafood products.

14. **Coastal fisheries in the FSM have an important role in food security and livelihoods, but they are at risk due to increasing overexploitation.** Coastal fishing is carried out for subsistence purposes and for sale in local markets and, increasingly, export markets. However, while subsistence fisheries are important to most FSM households and a critically important component of outer island food supply, there is considerable uncertainty concerning the levels of catches in the absence of a statistical system. Still, from the latest household income expenditure survey data in 2014, coastal subsistence, coastal commercial, and aquaculture production and values were estimated at 3,555 tonnes (valued at US$8.8 million), 1,725 tonnes (US$5.0 million), and eight tonnes (US$0.16 million), respectively. While there are more recent production and value estimates, these are acknowledged as using a weak methodology, and the lack of data highlights the national and regional need to improve coastal fisheries data and analysis. Fish consumption in both urban and rural areas is high, and annual per capita consumption is estimated to be 142 kilograms per person per year, one of the highest in the world. In the 2016 Agriculture Census, females made up 15.6 percent of fishers within the FSM coastal fisheries sector, who fished mostly for home consumption, not for sale. Men fish primarily in boats using gill nets and night spearing, with some sales to market. Women, when they fish, are typically accompanied by children, and glean and collect by hand. The Pacific Islands Regional Oceanscape Program (PROP)-financed FSM Coastal Fisheries Situation Analysis Report (SAR) 2018 found that overfishing is occurring in every state, and several key subsistence and commercial species are in decline, with unsustainable fishing practices and weak enforcement as primary causes. Landing and access infrastructure such as marinas can offer better access to markets and allow for improved enforcement of regulations. These can also provide co-benefits for accessibility, tourism, trade, and other activities that depend on maritime transportation.

15. **Coastal protection, food supply, and revenues from fishing are forecast to decline due to degradation of coastal habitats under various warming scenarios based on Intergovernmental Panel on Climate Change (IPCC) data.** Both the oceanic and coastal fisheries in the FSM depend on the natural habitats to sustain them, including coral reef ecosystems, mangroves, and wetlands. These habitats also serve the important function of protecting communities from storms and

flooding, the intensity of which is expected to increase with climate change. Increases in sea level rise, strong winds, ocean temperature, and acidification have the potential to impact natural resources, the economy, and livelihoods.

16. **Coastal and oceanic fisheries are at risk from degradation of the ecosystems on which they depend.** Like many PICs, the FSM struggles with waste and pollution that threaten ecosystems, affecting tourism and fisheries, and jeopardizing the livelihoods of communities dependent on those resources. The FSM states face similar challenges to manage waste efficiently because of a lack of infrastructure and equipment, treatment and disposal options, and policies to ensure a financially sustainable solid waste management system. Awareness raising and education are critical to changing mindsets of individuals and communities in waste management. When chemicals and hazardous waste are collected, there is limited available affordable technology and equipment to store and dispose of it in an environmentally sound manner.

C. National Policy Context and Institutions

17. **Fisheries is a key policy and development priority of the GoFSM.** The FSM's Strategic Development Plan (SDP) 2004–2023 fisheries goal is that "marine resources and fisheries of the FSM are managed and developed in consultation between designated authorities and stakeholders in a manner that ensures maximum possible economic and social benefit to the people of FSM and, at the same time, ensures sustainable resource exploitation and protects marine biodiversity." The FSM National Oceanic Fisheries Investment Policy, 2021–2026: A Policy for Maximizing Participatory Rights (Access) Under the VDS, focuses on economic activities in fisheries that can contribute to the economic growth of the FSM. The policy aligns with FSM's growth strategies as outlined in the FSM SDP 2004–2023 and NORMA's Strategic Plan 2018–2023, which details NORMA's three strategic goals to: (i) strengthen the governance and effectiveness of NORMA; (ii) ensure the long-term sustainable management of oceanic resources for the benefit of the FSM; and (iii) maximize the value of oceanic resources to the FSM.

18. The FSM SDP 2004–2023 includes individual goals for coastal fisheries, which are: (i) stakeholders and personnel contributing to fisheries and marine resource management and development are suitably trained and skilled to effectively participate in sectoral activities; (ii) inshore and coastal marine resources are monitored and managed in a consultative and participatory manner that respects traditional practice, uses established scientific methodology, sustains biodiversity and resource abundance; and (iii) inshore and coastal marine resources are effectively exploited to meet subsistence and artisanal needs and optimized stakeholder social and economic benefits within sustainable parameters. Fisheries inside the territorial seas are managed by the four individual states with national support from the Department of Resources and Development (DRD).

19. **The national and state governments have shared responsibilities for environmental and waste issues affecting marine health.** The FSM National Solid Waste Management Strategy (SWMS) 2015–2020 is the guiding document for waste management at a national level, with state solid waste management strategies in place that provide guiding principles and actions plans for improving waste management. The Department of Environment, Climate Change and Emergency Management (DECEM) is responsible for administering the national Environmental Protection Act that covers the development and implementation of the environmental regulatory framework, while state agencies are responsible for implementing state SWMSs. Marine protected areas (MPAs) are a key tool to complement fishing regulations and have been established in priority marine and coastal areas (for example, to protect shark habitat and nursery sites), with varying degrees of community-based resource management (CBRM) and fishing restrictions.

D. The Pacific Islands Regional Oceanscape Program (PROP)

20. This Project is the second phase of the PROP Series of Projects (SOP) in the FSM, named Pacific Islands Regional Oceanscape Program – Second Phase for Economic Resilience (PROPER). The first FSM PROP was implemented between 2015 and 2021 and established a long-term engagement nationally and regionally. The FSM PROP strengthened NORMA

and established a CA, which allowed the GoFSM to manage tuna fisheries sustainably and carried out initial assessments of the needs and opportunities of coastal fisheries but faced challenges in implementation, with a not fit-for-purpose multinational design. The FSM PROPER and other projects in the series have built on the lessons learned from previous PROP projects and the strategic shift of strengthened national and regional collaboration developed during the first phase, including refined design and implementation arrangements. Through the FSM PROPER, the SOP continues to support the most relevant sector in the FSM, unlocking its potential for contributing to climate-resilient jobs, public revenue, and food security. The FSM PROPER expands the institutional foundations developed under the FSM PROP by delivering priority infrastructure and capabilities to further capture the value of oceanic fisheries, expanding livelihood opportunities for coastal communities, and initiating efforts to maintain healthy coasts and fisheries. Annex 2 provides further details on the PROP series, and Table 1 provides information on the FSM PROP outputs and PROPER scale-up.

Table 1: Summary of the FSM first and second phase PROP projects

Outputs achieved under the FSM PROP 1st phase	Planned follow-on activities under the FSM PROPER
Sustainable Management of Oceanic Fisheries	
NORMA's strategic planning processes and institutional performance was strengthened through establishment of NORMA's first strategic plan 2018–2023 and improved information and communication technology (ICT) systems and staff capacity.	Strengthening the institutional performance and capacity of national and state agencies (i.e., DECEM, Department of Health and Social Affairs [DHSA], DRD, and State Environmental Protection Agencies [EPAs]) through improving capacity of staff, internal systems and processes, and upgrades to ICT systems. Technical experts will be engaged to provide further support and capacity building.
A CA was established through development of a legislative framework and framework documentation and through supporting staff procurement, training and goods, and equipment. The CA will allow export to high-value markets (i.e., EU) once functioning and validated.	Capacity and competency development of CA staff through training, goods and equipment, and implementation of CA regulations including the National Control Plan (NCP) and the completion of EU validation processes. Establishment of a reference laboratory.
VDS supported with a reinforced observer program through undertaking a functional, operational, and structural review of the observer program and expanding the staffing complement, and supporting observer training and awareness programs. State satellite offices supported a pilot program for collection of data including bycatch data.	VDS strengthened with the development of an information management system, including Observer Placement and Observer Recruitment modules and the enhancement of the electronic monitoring program through technological upgrades (i.e., potential artificial intelligence [AI] integration).
FSM's economic value from fisheries was increased with improved internal processes and systems and more effective control of fishing rights through modernization of the MCS system and transparent information technology [IT] and electronic monitoring systems.	Development of an implementation plan for the FSM National Oceanic Fisheries Investment Policy and a review to leverage VDS days through management actions, increasing economic value of the scheme.
Sustainable Management of Coastal Fisheries	
The FSM Coastal Fisheries SAR was developed and is the first comprehensive overview conducted of coastal fisheries in the FSM across all four states. The Sustainable Development of the Inshore Fisheries and Resources of the FSM Report details proposed investment options and Investment Project Profiles identified from the results of the SAR.	Activities focus on implementing key Investment Project Profiles identified in PROP including: - Updating national and state inshore fisheries legislation to strengthen sustainable management of coastal fisheries - Enhancing fisheries management data collection through development of protocols for data collection, procurement of equipment, and engaging with small-scale fishers (SSF) for data provision - Economic capacity development through training of SSF on quality control and investigating fish processing units

	- Development of fish aggregating device (FAD) management plans and deployment to shift inshore fishing pressure to offshore - Improving safety at sea through installation of navigational aids and distribution of safety grab bags for licensed SSF, particularly for the transition to offshore FAD fishing.

Note: A safety grab bag carries essential survival gear ready to go, should an emergency happen at sea.

E. Relevance to Higher-Level Objectives

21. **The Project aligns with the World Bank (WB) Pacific Islands Regional Partnership Framework (RPF) FY17–21, report #100997-EAP.** The RPF was extended to FY23 (report #145750-EAP) on February 6, 2022, and a new RPF is under preparation to be approved for implementation in late 2024. The RPF outlines four major focus areas of which the following three are relevant to the FSM and the Project: (i) Focus Area 1: Fully exploiting the available economic opportunities. The key focus will be on improved management of fisheries, increased incomes from agriculture, and expanded tourism opportunities; (ii) Focus Area 2: Enhancing access to employment opportunities. The key focus will be on broadening opportunities for labor mobility and addressing gender inequality and gender-based violence through entry points that offer economic opportunities for marginalized genders; and (iii) Focus Area 3: Protecting incomes and livelihoods. A key focus is on strengthened preparedness and resilience to natural disasters and climate change, through investments that offer climate-related co-benefits. The RPF recognizes the unique characteristics of each of the PIC-9[3] to tailor country-specific solutions such that it is aligned with the FSM SDP 2004–2023 key areas and aligns with the strategic goals of NORMA's Strategic Plan 2018–2023, especially the SDP key area, Long-Term Environmental Sustainability. A more recent Systematic Country Diagnosis (SCD)[4] identified constraints that the Project considers, including smallness, remoteness and internal dispersion, fragility, high vulnerability to disasters, and climate change.

22. **The Project will contribute to implementing the FSM's Nationally Determined Contribution (NDC).** Climate adaptation is the primary objective in the updated October 2022 NDC that the FSM submitted to the United Nations Framework Convention on Climate Change (UNFCCC). The Project will support the following NDC adaptation and mitigation targets:

- By 2030, effectively manage 50 percent of marine resources and 30 percent of terrestrial resources, including restricting commercial fishing in up to 30 percent of the FSM marine environment.
- By 2023, achieve full tuna fishery transparency, through electronic monitoring (EM) of all FSM-flagged longline fishing vessels.
- By 2030, develop Integrated Land Management Plans and Shoreline Development Plans to effectively protect and sustain terrestrial and coastal ecosystems.
- By 2030, expand the number of Protected Areas and their coordination through Protected Area Networks.

23. The Project is consistent with the FSM's Climate Change Act 2013, which outlined the importance of integrating climate change into all development activities; the Nation Wide Integrated Disaster Risk Management and Climate Change Policy 2013; and the WB/Asian Development Bank Climate Risk Country Profile: FSM (2021).[5] The Nation Wide Integrated Disaster Risk Management and Climate Change Policy identifies strategic outcomes relevant to the fisheries sector including robust fisheries able to rapidly recover from hazards and adapt to changing environmental circumstances; strengthened private and public investment in the green economy; reduced reliance on imported commodities; uninterrupted food supply for domestic consumption; and a climate-safe infrastructure able to withstand impacts of climatic hazards. At the state level, Joint State Action Plans (JSAPs) for disaster risk management and climate change

[3] The PIC-9 comprise Kiribati, Republic of the Marshall Islands, Federated States of Micronesia, Nauru, Palau, Samoa, Tonga, Tuvalu, and Vanuatu.
[4] https://documentsinternal.worldbank.org/search/34029025.
[5] Climate Risk Country Profile: FSM (2021): The World Bank Group and the Asian Development Bank.

adaptation have been developed, and adaptation has been addressed in varying degrees of detail in sectoral plans and strategies. Although not only focused on climate change, the Infrastructure Development Plan (IDP) (2016–2025) is a comprehensive and costed infrastructure investment plan that includes both mitigation and adaptation investments.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

24. The Development Objective of the SOP is to strengthen the shared management of selected Pacific Island oceanic and coastal fisheries, and the critical habitats upon which they depend.

25. The Project Development Objective (PDO) of the FSM PROPER is to strengthen stakeholder capacity for regional collaboration and enhanced sector performance in fisheries, and for improved habitat preservation of the Federated States of Micronesia.

26. The following definitions are provided to further support the project's results agenda and define the scope of the parameters pertinent to the project objectives:

i. **Key stakeholders** are NORMA, DRD, DECEM, DHSA, state agencies and councils engaged in fisheries management and development and habitat protection, fishers, their communities, and associations, and non-governmental organizations (NGOs).
ii. **Capacity** refers to the ability of the key stakeholders to carry out their mandate and role in fisheries management and development for more sustainable fisheries sector.
iii. **Regional collaboration** refers to the cooperation between PIC members of the FFA and SPC on the effective management and sustainable development of oceanic and coastal fisheries.
iv. **Sector performance** is achieved, among other, by maintaining or achieving a satisfactory status of fisheries resource and fishing (no overfished resource, no overfishing) through effective management, and by facilitating the participation of FSM-based operators in national, regional, and international seafood value chains through sustainable development including safe and hygienic working conditions as well as certification of establishments and products.
v. **Habitat preservation** focuses on establishing baselines and creating enabling conditions for the management of pollution.
vi. **Fisheries sector** includes oceanic and coastal fisheries subsectors.

PDO-Level Indicators

27. Progress will be monitored against PDO-level indicators to measure (1) Strengthened capacity for regional collaboration; (2) Strengthened capacity for sector performance; and (3) Strengthened capacity for improved habitat preservation:

(1) An operational fisheries monitoring and information management system facilitates dissemination of updated timely data to national and regional stakeholders (yes/no):

(i) New automated information management system (IMS)[6] modules providing timely access to fisheries data (number);

(ii) Domestic longliner trips monitored in real time via an upgraded electronic monitoring[7] system

(percentage); and
(iii) States' coastal fisheries data management systems regularly updated with recent data (number).
(2) Minimum number of establishments meeting the requirements for export to the EU market (number)
(3) Availability of digitalized datasets on marine health with updated baseline for all four states (number).

B. Project Components

Component 1: Oceanic Fisheries (US$12.47 million: US$2.99 million national IDA, US$9.48 million regional IDA)

28. This component will support improved oceanic fisheries management and maximization of the domestic value added through institutional strengthening of NORMA for certification for food safety and legal compliance to enable FSM fish products to enter regional value chains and reach high-end markets. These investments will contribute to the shared regional management of oceanic fisheries and enhanced regional integration of value chains and expansion of opportunities to access international markets, benefiting the FSM and other PICs through domestic value added.

Subcomponent 1.1. Strengthening the enabling environment for oceanic fisheries (US$12.22 million)

29. This subcomponent will strengthen the national enabling environment for seafood safety and traceability to enable entry of FSM products in regional export value chains, particularly to the EU, by: (i) strengthening the capacity of the CA, through training, consultants, and equipping CA state representations with vehicles and boats; (ii) including a feasibility study for establishing a reference laboratory; (iii) if supported by the feasibility study, design and construction of a new multipurpose reference laboratory building and equipment; (iv) upgrading the existing dockside landing site in Kosrae; (v) developing an IMS and procurement of data center equipment including software licenses; (vi) enhancing the electronic monitoring program through technical assistance (TA) and procurement of hardware and software; and (vii) design and construction of a new NORMA office building in Pohnpei and a new satellite office for NORMA in Kosrae State.

30. **Establishing and implementing the sanitary CA.** The CA is a function of the DHSA, with establishment supported during the PROP first phase, and is a priority outlined in the FSM National Oceanic Fisheries Investment Policy 2021–2026. Currently, the CA has not yet been listed by the EU, though an application has been submitted. To build on the foundational work established under the PROP first phase and to meet EU requirements, activities would include consultancies to implement the CA regulation, NCP, and industry standards, for consolidation of the EU process. The Project would support the scoping and feasibility work, a reference laboratory in Pohnpei and, if supported, construction and equipping of the laboratory, with energy efficient design, including a solar energy system to supply its energy requirements. The establishment of a multipurpose laboratory will reduce the need to send samples overseas, improving efficiency, reducing risks and costs, and building local capacity and domestic value. Training and awareness activities will be conducted in food safety as well as the establishment of sampling and analysis procedures and laboratory capacity. To support the CA, the Kosrae dockside landing site requires upgrades as it currently poses potential contamination risks to fish being transferred from vessels to containers or the tuna processing facility. To mitigate these risks, it is necessary to fully cement the landing site and install a water purification system to ensure washdowns and other activities do not contaminate the fish. These measures will enable the FSM to enhance its fisheries management practices, establish effective inspection and certification processes, and meet international standards, facilitating the sustainable development of oceanic fisheries in the region and increased revenue generation through increased market access and value.

31. **Oceanic fisheries IMS.** The Project will support the development of an IMS and the purchase and installation of equipment required for the existing IMS data center managed by NORMA in Pohnpei. An effective IMS contribution will improve the availability and quality of data for assessing the status of exploited resources, inform policy making, ensure food security for local communities, and promote sustainable use of resources by SSF and the industrial sector. The integration of port management modules, electronic catch documentation schemes, and observer programs into the IMS will improve MCS; negotiating powers for the FSM related to the VDS; and aid in combating illegal, unreported, and

unregulated (IUU) fishing. One of the key anthropogenic pressures for VDS integrity in managing stock yields is IUU fishing. In a 2020 report, the FFA estimated that approximately 192,000 tons of product, 6.5 percent of the total WCPFC convention area catch, is lost to IUU fishing, resulting in US$333.5 million in revenue losses. The Project will enhance management of stocks through scientific assessments, including IUU impacts on stocks, through the expansion of the EM program by supporting the purchase of goods and equipment required for monitoring and analysis, as well as undertaking a review of EM data analysis and program cost recovery to ensure sustainability of the program.

32. **Improving NORMA facilities.** The new NORMA facilities will be powered by renewable solar energy to allow the organization to operate under changing climate conditions and extreme weather events, use modern technology (for example, for EM and MCS), securely house the IMS data center, host a growing team including DHSA staff from the expanded CA, and respond to their mandate more efficiently, ultimately strengthening the oceanic fisheries sector value addition through international standards compliance and improving management of IUU fishing nationally and regionally.

Subcomponent 1.2. Maximizing the value of oceanic resources to the FSM (US$0.25 million)

33. This subcomponent will support national institutional strengthening of NORMA to meet current and future requirements and maximization of value of oceanic resources through: (i) development of an implementation plan for the FSM National Oceanic Fisheries Investment Policy; (ii) TA to review methods to enhance oceanic fisheries value; (iii) review of legal frameworks relevant to meet regional and international compliance for vessels entering FSM ports; and (iv) undertaking a feasibility study to increase Weno Port provision services.

34. **Increasing economic growth from fisheries.** The FSM National Oceanic Fisheries Investment Policy 2021–2026 was developed with the objective of contributing to increased economic growth through a structured approach that maximizes the VDS. The revenue from fisheries directly impacts all states, with 20 percent of fishing revenue directly deposited into the FSM Trust Fund, for a total of US$304 million in 2021. The Project will support TA for development of a climate-informed implementation plan addressing the policy objective. Complementary TA will identify opportunities to enhance oceanic fisheries value in the FSM and regionally, with a focus on management to increase value through measures such as MCS, leveraging of VDS days, and value addition to oceanic products. A review of the legal framework for authorizing fishing vessels entering FSM Ports will support achieving regional and CA compliance, and a feasibility study for increased service provisioning at Weno Port, Chuuk will guide decision-makers on available economic opportunities.

Component 2: Coastal Fisheries (US$34.1 million: US$8.19 million national IDA, US$25.91 million regional IDA)

35. This component supports improved management of coastal fisheries through strengthening institutional and legal capacity. This is underpinned by improved market data collection, as well as monitoring through vessel registration legislation. It will also strengthen existing CBRM and management tools such as MPAs. Investments will enhance the enabling environment to manage and derive benefits from coastal fisheries, including enhanced economic opportunities through reinvigorated mooring, market, fish aggregation and diversifying, and securing livelihoods by financing aquaculture facilities, improving value chain additions, and supporting activities to reduce inshore fishing pressures through FADs, and promotion of safety at sea.

Subcomponent 2.1. Strengthening coastal fisheries institutional and legal framework (US$1.94 million)

36. This subcomponent will strengthen the management of coastal fisheries through: (i) reviewing the legal and regulatory frameworks governing the states' coastal fisheries management including vessel registration, sea safety and identifying opportunities for improvement, and supporting implementation of any reforms, including stakeholder engagement, goods and equipment, and training and awareness activities; (ii) improving ecological data collection and storage for fisheries through existing data review and development, validation, and training of data collection protocols in all states; (iii) procurement and installation of hardware for data collection and storage for all states and procurement of a vehicle for the Chuuk Department of Marine Resources (DMR); (iv) refurbishing and equipping the Kosrae Department

of Resources and Economic Affairs (DREA) Fisheries office, including improved energy efficiency; (v) improving inshore MCS capacity in all states through procurement of goods to facilitate coastal MCS and trainings for MPA management; and (vi) engagement of a Fisheries Management expert to support fisheries activities under all components.

37. **Review of legislative framework.** There is a critical need to review, revise, and update existing coastal fisheries legislation in each state, which will support the expansion of CBRM identified in the FSM 2023 Action Plan.[8] Stakeholder consultations will be conducted in all four states, will include municipalities and communities, and involve representatives from outer islands, to ensure broad stakeholder engagement in the legislative review process and to inform revision and updates to the legislative framework. The finalization of vessel registration and sea safety minimum standards legislation is important to improve safety at sea, compliance, and data collection among SSF. The dissemination of materials to registered vessels in all states will incentivize vessel registration.

38. **Improving data collection capacity.** There is a critical need to address existing data gaps and improve data collection, storage, and management protocols in the coastal fisheries sector. Evidence shows declining fish stocks (both coastal[9] and offshore[10]), threatening community food, employment, and income. However, currently, coastal fisheries data (for example, catch, landings, and market data) are only recorded sporadically, and there is limited electronic recording. The Project will support evaluating the current data systems and protocols from which improved frameworks can be developed that meet international standards and align with practices in other PICs. This standardized and harmonized approach will enhance the accuracy, consistency, and reliability of fisheries data, and will enable integration of data across the FSM and the wider region. The provision of equipment for the collection and storage of fisheries and environmental data, such as vehicles and servers, respectively, is crucial for facilitating data collection and management activities. The current DREA office in Kosrae is in a state of disrepair and requires refurbishment to establish a suitable and secure location for data storage.

39. **Improving MCS.** The Coastal Fisheries SAR identified improving MCS capacity of coastal communities engaged in fisheries as a recommendation, and the Project is supporting enforcement activities including the procurement of equipment to facilitate improved enforcement of fisheries regulations and environmental laws. CBRM is supported through deployment of nine planned floating watch houses at MPAs, with complementary training for MPA management, empowering communities to monitor and manage their MPA. The Project will invest in expanded women's representation and leadership in local marine protected area management committees to increase women's involvement in decision making about fisheries management in their local inshore area.

Subcomponent 2.2. Delivering critical marina infrastructure (Chuuk, Pohnpei, and Kosrae) (US$30.55 million)

40. This subcomponent will support SSF through redevelopment of wharf and mooring facilities as well as landside infrastructure at Weno Marina in Chuuk to make them more resilient against climate change; the development of a new climate-smart renewable energy powered and energy efficient marina at Dehektik Causeway, Pohnpei; and improvements to Kosrae landing sites including replacement/installation of climate-safe mooring facilities. This infrastructure will be powered by renewable solar energy, and its design will be based on a climate modelling to minimize the risks associated with extreme weather events including sea level rise, storm surges, intense winds, and associated flooding risks. The infrastructure will also create a critical control point for all activities, covering aspects such as statistics and enforcement of fisheries, safety at sea, and pollution regulations. Activities include:

a. Redevelopment of Weno Marina (Chuuk) through: (i) consultancies for preparatory studies, design and supervision, and assessment of institutional arrangements for marina management; (ii) dredging and marine

[8] FSM Government, "Federated States of Micronesia 2023 Action Plan," 2014.
[9] FSM Government, "Final Report of the Federated States of Micronesia Coastal Fisheries Assessment."
[10] FFA and SPC, "Tuna Fishery Report Card," 2020; https://www.ffa.int/system/files/Tuna%20Fishery%20Report%20Card%202020.pdf.

works; and (iii) construction of buildings, marine facilities, and ancillary facilities including demolition of a fish market building.

b. Development of a marina in Dehektik Causeway (Pohnpei): (i) consultancies for preparatory studies and design and supervision; (ii) dredging and marine works; (iii) construction of buildings for fisheries, training, and workshops, and ancillary facilities; and (iv) goods and equipment such as ice makers.
c. Improve infrastructure and management in Pohnpei: (i) undertake an infrastructure needs and environmental impact assessment of potential locations for marinas across Pohnpei with the involvement of local associations; (ii) assessment of institutional arrangements for marinas management; and (iii) reinitiation of Pohnpei Menin Katengensed (Pohnpei Marine Council), a representative body for SSF.
d. Installing new, or improving existing, boat ramps and floating pontoons/jetties at Okat, Lelu, and Utwe marinas in Kosrae, to improve the small-scale fisher landing sites.
e. Engagement of an engineer(ing) expert to support infrastructure developments under all components.

41. **Marina developments.** Marina infrastructure is critical to allow the development of the coastal fisheries sector by improving safety and working conditions and expanding the berthing capacity. Fishing is important to most households in the country and a critically important component of the food supply in the outer islands. Currently, fishers encounter difficulties in landing their catch due to inadequate infrastructure, such as the lack of accessible boat ramps and suitable mooring points. The proposed marina developments directly contribute to the implementation of five of the 10 Investment Project Profiles outlined in the Coastal Fisheries SAR completed under PROP first phase. These developments directly contribute to IPP2: Data Collection, Management and Training; IPP3: Awareness and Staff Enhancement; IPP4: Enforcement of Fisheries Regulations and Management Plans; IPP9: Safety at Sea; and IPP5: Economic Capacity Development and Marketing. Prefeasibility studies have been completed during Project preparation for the Chuuk and Pohnpei marinas with initial surveys, conceptual master plan design, and budget estimate completed. The design takes into consideration climatic factors (that is, sea level rise and tidal variation) and climate scenarios. Marina development investments will support the livelihoods, food security, and climate resilience of the local population.

Subcomponent 2.3. Fish processing and value chain addition (US$1.61 million)

42. This subcomponent will strengthen all states and SSF to effectively process catch, while providing opportunities for livelihood diversification and value addition. Activities will include: (i) training fishers on value addition (that is, quality control and cold chain); (ii) a feasibility study for fish processing in Kosrae; (iii) improving the FAD management program through TA, training, and procurement of goods and equipment; (iv) improving sea safety through training and awareness programs and the provision of safety goods and equipment in all states; (v) supporting community-based aquaculture activities through assessments of habitat suitability, trainings, and a feasibility assessment of infrastructure needs; (vi) improving the National Aquaculture Center (NAC) capacity through development of training materials; and (vii) a feasibility assessment for collaboratively led commercial aquaculture production and a community training center in Kosrae.

43. **Harnessing coastal fisheries value.** The Project focuses on bottom-up fisheries development and local capacity building initiatives, such as the revival of the Pohnpei Marine Council (Subcomponent 2.2), which acts as a representative body for SSF and the planned involvement of local associations in the development of Pohnpei infrastructure. Training programs for fishers such as quality control, improved cold chain practices, and catch handling will further support SSF livelihoods and complement the investments in infrastructure. Women are involved in small-scale fishing, fish processing, and value addition, and the Project will specifically target women for extension services, training, equipment, and associated support toward their expanded participation in the sector. Skills and participation gaps among women due to less access to productive resources, training, and finance will be addressed by linking Project beneficiaries with key organizations such as the Chuuk Women's Council and the FSM Development Bank.

44. **Fish aggregating device program.** The Project recognizes the need to reduce reliance on reef fish species, shifting focus toward increasing production from pelagic fish sources through the implementation of FADs for use by fishing communities as identified in the Coastal Fisheries SAR. Deployment of FADs will encourage a shift in catch effort from inshore to offshore, requiring complementary sea safety investments to address increased navigation and fishing risks, and sea safety bags will be procured and provided to licensed fishers in conjunction with sea safety training.

45. **Strengthening aquaculture.** Currently, there is a bottleneck in the production of sea cucumber juveniles, limiting the expansion of sea cucumber aquaculture into commercially viable operations. This subcomponent will strengthen aquaculture to provide alternative livelihoods for communities through the establishment of demonstration sea cucumber farms at identified suitable sites and training on rearing and processing in Pohnpei and Yap, designs for a pilot processing facility for sea cucumbers in Pohnpei, and feasibility assessments for development of infrastructure needs for community-led commercial sea cucumber production in Pohnpei and Kosrae States. Women are typically presented fewer opportunities to formally generate income from the sector, and these activities will identify opportunities to increase their engagement and uptake.

Component 3: Marine Habitats (US$4.9 million: US$1.18 million national IDA, US$3.72 million regional IDA)

46. This component addresses impacts of land-based and marine pollution on coastal and marine ecosystems, which affect the health of fish stocks and fisheries, as well as sanitary conditions. The component is benefiting from TA support through the WB-executed Pacific Ocean Advisory Program (POAP), that is, technical guidance and inputs into technical documents and support to develop terms of reference, and will support strategic planning for future investments, even beyond the Project.

Subcomponent 3.1. Environmental protection and marine habitat management (US$1.74 million)

47. This subcomponent includes activities that focus on environmental protection and the management of marine habitats through: (i) environmental awareness campaigns in Chuuk and Yap; (ii) a capacity building program for the Chuuk Women's Council to enable expanded environmental outreach; (iii) pilot restoration of existing dredging sites in Yap State; (iv) an assessment of the Kosrae mooring buoy system, and repairing, upgrading, and expanding the system as required; (v) procurement of equipment for monitoring of dredging in Chuuk; and (vi) undertaking comprehensive ecological assessments in all states including training, goods and equipment, review, and dissemination of outputs.

48. **Environmental awareness and protection.** This subcomponent focuses on shifting community mindsets on environmental management and pollution through awareness campaigns to inform and educate the local population about appropriate waste management. In Chuuk State, the capacity of the Chuuk Women's Council to implement awareness campaigns and expand outreach efforts will be strengthened through a capacity building program for the council. To address the existing damage caused by dredging activities, pilot restoration of dredge sites in Yap will be conducted. The planned efforts will focus on rehabilitating and revitalizing these sites, and promoting the recovery and preservation of these habitats and the fish resources they support. Managing the environmental mooring buoy system in Kosrae will ensure the effective monitoring and protection of marine habitats in the state, promoting sustainable use and conservation practices.

49. **Marine habitat data.** The Project will build on the Coastal Fisheries SAR by improving data availability through comprehensive ecological assessments in all four states. The last comprehensive ecological assessment was conducted in 2006 and still serves as the baseline for marine environmental health[11]; thus, there is an urgent need to establish new baselines. Comprehensive marine ecological assessments will be carried out using regionally aligned new or revised data collection protocols supported under Subcomponent 2.1 to provide an accurate understanding of critical areas and

[11] Donaldson, T. J. et al., "Coral and Fish Surveys at Kosrae Island, July–August 2006, Federated States of Micronesia: Final Report," 2006.

habitats, identify actions to reverse declines in fisheries production, and inform decision-making for improved management strategies. These assessments will also support Subcomponent 2.1 by providing data to inform evidence-based decision-making for targeted management strategies, and will strengthen the legal foundations for sustainable practices and environmental protection. Dissemination of the results of ecological assessments to local fisheries communities and organizations is crucial to provide feedback to local stakeholders to derive the benefits from the data collection efforts.

Subcomponent 3.2. Improvements to waste management (US$3.16 million)

50. This subcomponent will support improvements to waste management across the states and the provision of equipment to improve the management of hazardous and nonhazardous waste in Kosrae, Yap, and Pohnpei. Activities include: (i) review state waste management strategies, emergency response protocols, and the pollution laws and regulations; (ii) a needs assessment and procurement of equipment for marine waste in Kosrae; (iii) procurement of equipment to manage marine oil and waste at Pohnpei landing sites; (iv) removal and transport of chemicals stored in Yap; (v) TA and goods and equipment to improve Yap solid waste management; (vi) TA on legislative improvements, infrastructure planning, cost recovery, and waste market creation in Chuuk; (vii) capacity building for staff in waste management and emergency response; and (viii) engagement of a Technical Waste Expert for capacity building and advisory services.

Component 4: Project Management (US$4.53 million: US$1.09 million national IDA, US$3.44 million regional IDA)

51. The Project has an extensive array of stakeholders and implementing agencies and is set within an FCV country context with capacity and geographic constraints. As such, the Project is investing in robust project management to facilitate timely implementation of activities and to reflect the lessons from implementation of PROP. Further details on implementation arrangements are provided in Annex 1. This component will finance the day-to-day management and implementation of the Project, including but not limited to consultancy costs for financial management (FM), procurement administration, monitoring and evaluation (M&E), management of environmental and social (E&S) risks, costs of ICT equipment, citizen engagement activities, and reimbursement of project preparation costs from the programmatic Project Preparation Advance. State Coordinators will be hired to coordinate and facilitate the implementation of state activities in a focal point role. It will also include costs associated with annual audits, and consultancy costs associated with the project midterm review and Implementation Completion and Results Report.

Strategic Alignment

Gender

52. **Livelihood opportunities.** Women are involved in small-scale fishing, processing, value addition, marketing and sales, CBRM, aquaculture, and government and administrative roles, but access to formal employment in the fisheries sector is limited. Women also contribute through informal exports and involvement in NGOs and conservation organizations. Globally, women are often found at the lowest level of fish and aquaculture value chains, and women traders have less access to resources, markets, and high-value fish.[12] The Project will focus on expanded participation in livelihood activities around value addition and gleaning. This aligns with Goal Four: Address barriers to women's participation in the workforce (FSM Gender Policy 2018).

53. **Decision-making.** Women's participation in fisheries sector decision-making processes in the FSM is limited. Efforts have been made to address this through endorsement of the National Gender Policy and establishment of women's interest officers in some states. Organizations like the Chuuk Women's Council and the Yap Women's Association are well

[12] Fröcklin, S., M. de la Torre-Castro, L. Lindstrom, and N. S. Jiddawi. 2013. "Fish traders as key actors in fisheries: Gender and adaptive management." *Ambio* 42: 951–962.

established. The Project will expand opportunities to participate in decision-making, promote gender mainstreaming in fisheries institutions, and establish stronger relationships between government agencies and women's organizations to encourage participation of women in decision-making at all levels.

54. **Gender activities under the Project.** A Gender Analysis Report (GAR) with a gender strategy and action plan has been developed and the strategy will be included in the Project Operations Manual (POM). The GAR recommends disaggregating fisheries data by sex, assessing existing data collection systems, and establishing baseline data on women engaged in marketing activities to enable strategies to be developed to engage and promote women in marketing activities. The FSM PROPER will help expand participation in decision-making and build on entry points in seafood value chains to create livelihood opportunities for women. Under Subcomponent 2.1, the Project will support enhanced women's representation in CBRM committees and apply evidence-based approaches such as enlisting support from community leaders and engaging established female networks. Subcomponent 2.3 training will be targeted to increase women's livelihood opportunities and reduce barriers to participation in value addition in seafood value chains, FAD management, sea safety, and community-based aquaculture activities.

55. **Results monitoring.** The results chain is centered around increased participation in, and access to, income-generating opportunities. Progress toward achieving this outcome will be measured by female fishers and fish workers benefiting from value addition activities (number) and will take into account activities under Subcomponents 2.2 and 2.3, including marina infrastructure, goods and equipment, technical assistance, access to markets, and training of fishers.

56. **Private capital mobilization.** Fisheries is one of the three priority sectors identified in the FSM SDP, making it important to national economic growth and development. The FSM is well positioned to glean additional value from its fisheries resources through expanded participation in value chains, predominantly ancillary activities. The FSM PROPER investment activities will support domestic industry and opportunities to improve the enabling environment and systems to participate in the value chains as well as greater access to markets, particularly through support to establish a CA and traceability through the MCS system. Investments in marina developments will enhance the capacity to accommodate fishing vessels and support the growth of tourism opportunities. In addition, it will support identification of income generation opportunities in the coastal fisheries and their value chains. The latter will support developing new business and investment opportunities for SSF and promoting livelihood diversification for SSF as well as facilitation of private sector investments on priority commercial commodities.

57. **Citizen engagement (CE).** CE considerations are incorporated in the Project design, notably in Component 2 and all its subcomponents. The objective is to connect beneficiaries' perception of the social impact of interventions on management decisions. The CE will be addressed in and or through the Environmental and Social Framework (ESF) instruments developed for the Project. During implementation, consultation procedures will be designed with attention to engagement of communities and all interested stakeholders as a tool to ensure there is support for the Project and the Project meets beneficiary needs. As much as possible, stakeholder engagement will use engagement structures within the national system (for example, community-, village-, chiefdom-, state-, and DRD-led events and meetings). The Project Implementation Unit (PIU) will conduct a beneficiary approval survey at the baseline, prior to the midterm review and prior to project closure for an all-inclusive CE process. The Results Framework will include the following intermediate indicators: (i) beneficiaries who believe project-financed activities respond to their needs (disaggregated by gender); and (ii) time for registered project-related grievances to be addressed through the Grievance Redress Mechanisms.

C. Project Beneficiaries

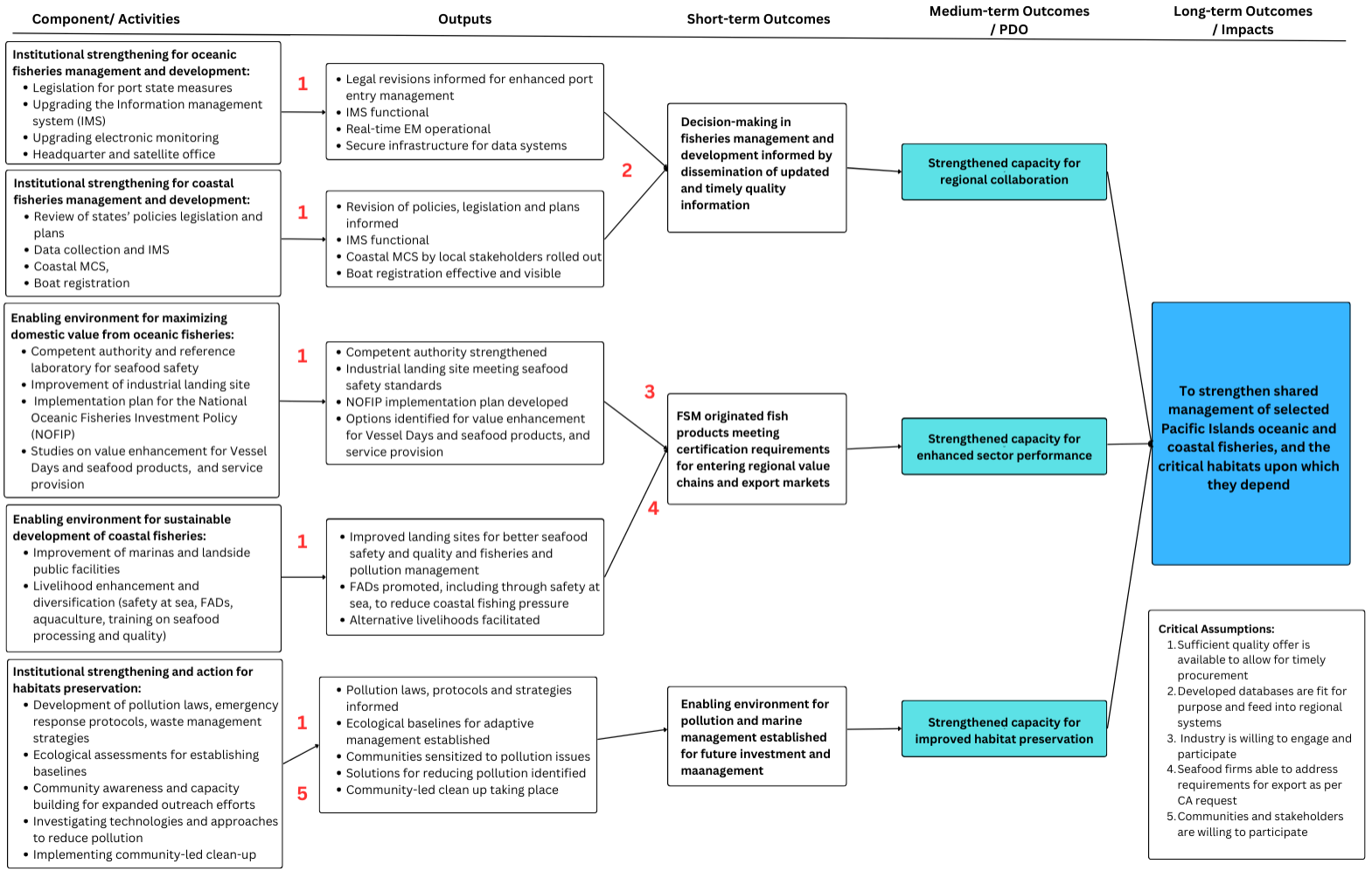
58. The total number of direct beneficiaries is estimated at around 11,704. The primary beneficiaries are the Micronesian people dependent on the country's fisheries, including fishers, fish workers, and their households, which will benefit from CBRM in target communities and improved monitoring and reporting systems in fishing fleets. National and state institutions i.e., NORMA, DRD, DECEM, and DHSA staff, and staff of state counterpart agencies engaged in fisheries

management, including community associations, NGOs, State councils, and government entities, will also benefit from improved capacity to formulate and analyze policy and undertake compliance activities that impact wider Micronesians.

59. Ultimately, the general population of the FSM will benefit from a healthier marine environment and increased food security as indirect beneficiaries. Women will benefit from CBRM activities through the protection and management of coastal resources and facilitation of access to livelihood and development programs, as well as climate change adaptation programs. Project activities and enhanced compliance will generate regional benefits to the countries sharing the common marine ecosystem. The citizens, ecosystems, and economies of other PICs will also benefit from the Project's investments that look for solutions to the challenges facing the various PICs and that promote regional public goods by managing shared resources, exploiting economies of scale, and facilitating collective action to address common goals. More broadly, operators and investors in the WCPO tuna value chain will benefit indirectly from a more sustainable resource base and decreased risks for their operations and investment, and consumers will benefit from more stable product flows and prices.

D. Results Chain

Problem Statement: Fisheries, the main economic activity in FSM is expected to deteriorate due to climate change, poor management and ecosystem degradation negatively affecting livelihoods, ecosystems and government capacities



E. Rationale for Bank Involvement and Role of Partners

60. The WB has been supporting the FSM fisheries sector since 2014. The Project builds on experience and knowledge gained from implementation of the first cohort of PROP Projects in the FSM and in other PICs. WB involvement will add value through (i) global knowledge and innovation; (ii) long-term engagement through the SOP, which offers the opportunity for setting long-term objectives and addressing complex sectoral challenges and development opportunities through capacity building, institutional reform and strengthening, and successive and adaptive management interventions that exceed typical project time frames; (iii) leveraging increased IDA resources from dedicated Regional IDA Window allocations and serving as a platform for leveraging additional sequenced financing; (iv) operational assistance to prepare and implement the Project while managing risks, and tapping into the WB's global knowledge networks for results monitoring, capacity development, strategic communication, and knowledge development; and (v) the WB's deep policy and operational engagement, partnerships, and convening power in the fisheries sector in the Pacific region.

F. Lessons Learned and Reflected in the Project Design

61. The FSM PROP strengthened NORMA's strategic planning processes and improved its institutional performance to fulfill its mandate in managing oceanic fishery resources, but there was unfinished work around the CA and MCS system, and while the SAR of the coastal fisheries sector was finalized, the findings were not fully absorbed by decision-makers at the state level. The original design was not fit for purpose or specific to national priorities, and implementation delays, due especially to the COVID-19 pandemic, resulted in reduced efficiency. The Project was restructured to address these challenges, and the FSM PROP achieved all restructured results indicators. The FSM PROPER builds on international experience in oceanic and coastal fisheries management, and on lessons learned from the FSM PROP and the other projects implemented in the PICs under the PROP Regional Program. Annex 2 further details the transition from PROP to PROPER. Some of the specific lessons informing project design point to the need for the following:

- **Country-tailored project design.** In some countries, PROP was not well aligned with national priorities, leading to limited government buy-in. While the SOP continues to provide a common regional framework and an overarching collective objective that fosters regional collaboration, the series of second phase projects are designed to better respond to specific country context and government demand. This Project also reflects the differentiation of the Results Framework across the SOP, by considering the intended outputs and outcomes based on country needs, the institutional context, and the specific project objectives. At a regional level, PROPER design is more closely linked with the regional fisheries strategies and operating frameworks such as the WCPFC, PNA, FFA, and SPC. In addition, this project design benefited from national ownership that informed investments.
- **Matching national implementation arrangements with quality regional TA to advance regional strategies.** Recent success in reducing IUU fishing in the region by one-third illustrates the importance of regional cooperation and national implementation. Sectoral line ministries participating in PROP have expressed increased demand for TA and capacity building from regional organizations and knowledge providers, such as the FFA and SPC, to support project implementation. This approach will be expanded under the new PROP phase. Close coordination with these regional organizations will offer a platform for cross-country knowledge transfer and capacity building, and further ensure regional coordination and convening power around shared goals. Parallel PROP projects are also under implementation with the FFA and preparation with the SPC, and will directly complement country-specific PROP interventions and activities. Involvement of the national and state actors in the project design further underscored integrating the right TA in the design.
- **Building implementation capacity at the state level.** To ensure the impact of project activities at the subnational level and create increased ownership of project activities, it is important to anchor project implementation arrangements in existing government structures at the state level to ensure long-term sustainability.

- **Empowering and training communities to effectively manage coastal fisheries is a critical part of project design.** The Project will promote CBRM, including the implementation of community-fisheries management plans and resource monitoring in selected pilot states. Communities dependent on small-scale fishing and aquaculture are likely to be part of the informal economy and often lack access to production inputs, markets, financial resources, and knowledge of production techniques. Such communities are inherently exposed to income and livelihood risks and other vulnerabilities, which are intensified by high exposure to climate risks and would benefit from social protection measures. The Project will explore opportunities for strengthening social protection through associated analytical activities with the aim of including them in future financing.
- **Incorporating gender considerations into project design.** PROP did not give due consideration to gender in project design, a critical dimension when implementing effective coastal fisheries management. To address this shortfall in PROPER, Gender Specialists have been engaged during project preparation and a Gender Strategy and Action Plan has been developed for the FSM PROPER to inform gender streamlining into implementation.
- **Identification and promotion of a range of income-generating opportunities are needed to support effective management of natural resources.** While CBRM will improve and maintain the productivity of coastal resources and fisheries in the medium term, communities are more likely to support management and conservation goals when these are supported by income-generating activities, including from local value chain investments and diversification of livelihood opportunities. To this end, the Project includes a study to inform potential additional financing to improve the development and diversification of coastal fisheries and ancillary and postharvest activities.
- **Investment in strong project management.** The original project management arrangements deployed at the beginning of PROP, where FFA had a role in supporting the management of national projects, involved functions beyond FFA's core role and mandate. As a result, there was a need to transfer project management to national line ministries and to add technical experts to ensure that gaps in expertise were filled and to build the capacity of counterpart project management staff. The FSM PROPER includes a staffed PIU, responsible for the Project administrative management with backstopping support from the Central Implementation Unit (CIU) to mitigate capacity constraint of the implementing agency (IA) and to minimize the risks of implementation delays. Increased implementation (hiring additional fiduciary staff- Finance and procurement officers in the PIU) and oversight of project management functions, including FM, procurement, E&S aspects, and introduction of state coordinators, has also been built into the FSM PROPER management arrangements.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

62. NORMA will be the lead IA for the overall Project and will be responsible for reporting to the WB. Implementation and reporting on progress with implementation of other subcomponents to NORMA will be the responsibility of the implementation support agencies (ISA) DHSA (Subcomponent 1.1), DRD (Component 2), and DECEM (Component 3). The Department of Transportation, Communications and Infrastructure (DTC&I) will provide support to the Project for infrastructure works. State Implementation Agencies (SIA) such as State Government Fisheries and the Chuuk Environmental Protection Agency (EPA) will also be involved in the implementation of activities with the support of NORMA and national agencies. NORMA has extensive knowledge of WB policies and procedures, having implemented the FSM PROP first phase.

63. The PIU will consist of a Project Manager, Project Officer, and Project Assistant, and will be supported by an E&S Officer, an M&E Officer, and a Communications Officer. Additional fiduciary staff - Finance and procurement officers would be hired into the PIU as the CIU transitions from an implementation role to an oversight role. Further technical support

will be provided by time-based experts in waste, fisheries management, and a Marine Coastal Engineer. The PIU will be responsible for the day-to-day management of the project, including consolidation of the workplan and budget, M&E and learning, and E&S risk management. The PIU, with the support of the CIU, will ensure appropriate actions and documents are maintained to ensure fiduciary functions and financial audit and compliance with WB ESF instruments are met. If required during implementation, additional individual consultants with specific specialized skillsets, including E&S, and preferably familiar with WB operations, will be recruited to provide support to the PIU. The PIU will be strengthened with four State Coordinators to support DHSA, DRD, DECEM, and the beneficiary states. The PIU already has experience in project management, procurement, and M&E, and will remain under the leadership of the NORMA Director. In addition, the CIU will also provide on call support to the PIU. The CIU is staffed with Procurement, FM, and E&S specialists supporting the entire portfolio in the country. The CIU will be responsible for the project fiduciary requirements, and for providing oversight and support on E&S risk management, and subsequently transition fiduciary implementation role to the PIU while maintaining an oversight role.

64. The PIU will operate based on a POM approved by the WB. A midterm review (MTR) will be jointly conducted not later than three years after the effective date, and the PIU will submit an MTR report at least one month prior to the MTR meeting to take stock of implementation progress, gaps, and results based on the agreed Results Framework. Further details of implementation arrangements are provided in Annex 1.

65. Project guidance and coordination will be carried out by the five Working Groups (WGs), one a national group chaired by the Department of Finance and Administration (DOFA)/NORMA on a rotating basis, and one per state. The WGs will act to support overall Project implementation, communications, and cohesion between states and activities (including cross-component), including at the national-level WG. The national WG will include the IA, ISAs, and SIAs, and the state-level WG will comprise state agencies and stakeholders. The WGs will facilitate collaboration, coordination, and decision-making among key stakeholders (including local fishing community representation). Twice a year, representatives from each WG and all members of the PIU will convene at an FSM PROPER Project Progress Workshop to share progress, discuss challenges, and adopt solutions to keep the Project on track and to improve overall Project outcomes.

B. Results M&E Arrangements

66. The PIU will use a results-based management approach to align implementation with the achievement of the Project's expected outcomes. Results monitoring will be done to assess progress toward the PDO and intermediate indicators, and as inputs to determine the outlook for meeting desired project outcomes. Key elements of the project M&E system are included in the POM, including responsibilities for activity, process, and progress monitoring, participatory monitoring to generate feedback from stakeholders and beneficiaries on a range of activity-related topics, outcome monitoring, and impact monitoring.

67. Project results will be monitored twice a year through a progress report submitted by NORMA to the WB and validated based on agreed data sources and methodology. A project report shall be prepared twice a year by NORMA (shared with the CIU for their records) and submitted to the WB within 45 days of the period covered in such reports. The WB implementation support missions will be carried out twice a year to assess progress on interim targets and agree on corrective measures. NORMA (through the PIU) will prepare and submit an MTR report to the GoFSM and the WB at least one month prior to the MTR. The MTR will occur not later than three years after the Project's effectiveness date.

C. Sustainability

68. **Institutional sustainability.** The GoFSM remains strongly committed to the improved management of its fisheries sector. The FSM's SDP 2004–2023, the FSM National Oceanic Fisheries Investment Policy 2021–2026, and NORMA's Strategic Plan 2018–2023 demonstrate a national commitment to strengthen conservation, management, development, and sustainable use of the oceanic and coastal fisheries resources of the FSM, areas to which the Project will contribute.

Investments are targeted toward enhancing NORMA's capacity in fisheries planning, management, and enforcement through training, and continued collaboration with the FFA, SPC, and Pacific Island governments through the Program. A core focus of the Project is to invest in establishing a strong technical foundation for the NORMA, DHSA, DRD, DECEM, and respective state counterpart agencies that can be sustained post-closure.

69. **Economic sustainability and resilience.** The Project contributes to maintaining revenue from oceanic fisheries through its support for continuous and enhanced regional, national, and state efforts while controlling the costs of monitoring through innovative technologies. It also contributes to maintaining or improving ecosystem services through the CBRM to support sustainable livelihoods for fishing communities. Improved management of oceanic and coastal fisheries resources will ensure a stronger resource base and economic activities they support, which in return will be more resilient to shocks.

70. **Climate, disasters, and environmental and economic sustainability and resilience.** The Project contributes to the management of climate change and disaster risks through its support for the alignment of the fisheries sector with best international practices and standards on environmental sustainability. It aims to advance CBRM and coastal adaptation measures to protect coastal resources, which support the food needs and livelihoods of FSM communities. The Project also supports the adoption of regional conservation and management measures and their implementation in national waters.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic, and Financial Analysis

71. **Technical analysis.** Achieving increased accessibility of the coastal fisheries sector while improving conditions and providing climate-resilient infrastructure, forms a fundamental part of the technical design of the Project. In terms of cost and scope, the major works to be implemented will primarily involve land- and marine-based civil infrastructure works, comprising development of fisheries infrastructure buildings and mooring and pontoon facilities. Preliminary designs have been developed for the Pohnpei (Dehektik) and Chuuk (Weno) marinas, with due consideration to specific analysis of current and future climate-related hazards, and consideration of options to address risks over the life of the infrastructure. These developments are aligned with the objectives and priorities for investment outlined in the SAR. The works, by their nature, will be relatively simple and will use conventional, well-tried and tested technical design, construction, and installation methods to best suit the remote locations and local resource constraints. All materials used in construction and installation will need to be of the highest quality to withstand the aggressive natural and physical environment, and general low levels of maintenance. To ensure this quality and sustainability, a technical expert in engineering will be hired to oversee the design, construction, and supervision of the works, in conjunction with DTC&I. An assessment for institutional arrangements for marina management will be conducted to determine the optimal management, ownership, and operations structure for marina developments. Marinas will be managed and operated at a state level with technical support from DTC&I, while the NORMA building will be managed at the national level.

The operation is aligned with the goals of the Paris Agreement on both mitigation and adaptation.

72. **Assessment and reduction of mitigation risks.** Project activities are not expected to contribute to a significant increase in greenhouse gas (GHG) emissions. Activities supporting climate mitigation include capacity building, training, technical studies and activities, information and communication technology and digital devices, conservation and restoration of marine habitats, water quality improvement, construction of buildings meeting their energy demand entirely by solar, solar microgrids with low lifecycle GHG emissions, and port/marina-related infrastructure investments in Chuuk, Pohnpei, and Kosrae that do not transport coal or other fossil fuels or finance conventional vessels using heavy bunker fuels and do not contribute to deforestation and are universally aligned. Activities supporting the data center and installation of data center equipment are low risk, as these will be positioned in the NORMA office building to be powered

largely through renewable solar energy. Refurbishment of the Kosrae DREA Fisheries office will also be low risk, as this will involve minor interior refurbishment, such as patching internal ceiling and walls, and the office will not use fossil fuel to operate any energy-intensive equipment and appliances. Solar microgrids have low or no adverse impact on the FSM's low-GHG emissions pathways and are considered to be low risk.

73. **Activities related to solid waste management support collection and transport of mixed waste and can be considered to have reduced mitigation risks to low,** as activities support the implementation of a solid waste management plan/strategy that includes waste recycling activities and safe waste disposal that also support closing and remediating existing dumpsites to develop a waste recycling and disposal facility. These activities have low carbon lock-in and transition risks, as they typically have a short lifetime (15 to 20 years), primarily aim to improve management of solid waste with limited lower-carbon alternatives, and are not expected to be at risk from the low-carbon transition. Activities supporting procurement of vehicles and boats are also considered to have reduced risks to low, as these are diesel and petrol-fueled vehicles and boats that do not provide barriers to future fleet improvements and are the most technically feasible and economically viable option in the given country context, with low carbon lock-in risk due to a short lifetime (6–12 years). Procurement of goods and equipment, including FADs, are assessed as low risk as they have a negligible impact on decarbonization and do no harm to the countries' transition to long-term low GHG. Thus, the operation is aligned on mitigation.

74. **Assessment and reduction of adaptation risks.** A screening of the Project using the WB Climate and Disaster Risk Screening Tool deemed the exposure of the Project's location to be High Risk due to the occurrence of climate events in the past, and the expectation that the FSM will experience future events of higher intensity, duration, and frequency. The impacts of climate change on the Project's physical infrastructure and assets have been assessed as Moderate. While climate and geophysical hazards are likely to impact investments, design considerations have been incorporated in the Project design. The Project includes soft components that can help modulate the risks from climate change through strengthening evidence-based decision-making and compliance with fisheries management, empowering communities to manage fisheries through CBRM, and strengthening data collection, storage, and processing.

75. Furthermore, all infrastructure including solar microgrids will be constructed with climate-resilient design to address projected climatic risks. For example, the pre-feasibility study reports for the Chuuk and Pohnpei marina development provides analysis on representative concentration pathways and shared socioeconomic pathways (SSP). Based on the recommendations from the reports, the investments will be designed for a projected sea level rise to 0.72 meters for Chuuk and 0.79 meters for Pohnpei by 2100. Infrastructure design will include a climatic risk assessment to ensure the design considers current and future climatic risks (that is, flooding, wind shear) and will be constructed in accordance with international best practice or the National Building Code currently under development in partnership with the Pacific Regional Infrastructure Facility (PRIF). These combined measures reduce risks from climate hazards to Moderate and are considered acceptable.

76. **Economic and financial analysis summary.** A simple cost-benefit analysis of the Project is used to estimate the quantifiable direct benefits generated by the project. The "business-as-usual scenario" assumes that oceanic and coastal marine resources and ecosystems deliver substantial benefits to the FSM and to the WCPO regionally. In its National Strategic Plan 2020–2030 (FSM, 2020), the GoFSM has identified priorities to increase benefits or prevent them from eroding, from IUU activities in tuna oceanic foreign and domestic fishing activities, and from resource overexploitation driving losses of natural capital and services in coastal and reef ecosystems.

77. The activities planned in Component 1 are assumed to prevent an erosion of revenue under the status quo from lack of training, technical expertise, and a suitable data system to monitor, evaluate, and learn. In addition, benefits (improved trade, public health, veterinary health) are expected from the newly established seafood safety CA.

78. Benefits from activities to effectively manage coastal fisheries and habitats under Component 2 are assumed to

stem from the improved management capacity of local communities to support or improve the value of both subsistence and commercial reef and near-reef pelagic fisheries production. However, the Project assumed benefits can all be attributed to improved (or preserved) coral reef ecosystem services, well within a likely Total Economic Value between US$1.45 billion to US$6.09 billion per year across the four states.

79. Activities under Component 3 directly concern the description and protection of marine habitats, of near-shore reefs, lagoons, and mangroves near communities where waste has accumulated. However, most activities concern descriptions, surveys, data collection, and monitoring. They are expected to deliver relatively small returns from avoided habitat losses, in addition to benefits from activities improving waste management and pilot restoration projects.

80. As a whole, including project management Component 4 and Project Preparation Advance, for which no benefits are estimated, the overall economic internal rate of return (IRR) estimated at the end of the project (6 years) – IIR (6) – is high (15 percent), rising to 25 percent after 10 years – IRR (10). Institutional strengthening activities in Components 1, 2, and 3 are expected to deliver benefits over at least 10 years with no additional investment. The IRR (10) is not overly sensitive to a decrease in expected returns or to increased costs, estimated to be 16 percent after 10 years, with expected benefits decreased by 20 percent and costs increased by 20 percent.

B. Fiduciary

(i) Financial Management

81. **The project's FM risk is assessed as Substantial.** The CIU will have the fiduciary responsibility under the project.[13] The GoFSM FM regulations and policies will govern the project FM arrangements, and the Project's accounting and financial reporting will be established in the government *fundware* system. The borrower and the Project IAs are required to maintain FM arrangements acceptable to the WB to provide reasonable assurance that the proceeds are used for the purpose for which they were granted. The project FM risk is due to the expected complexities in coordinating project activities among the multiple agencies, including DOFA, which houses the CIU, the designated IA, and multiple ISAs. FM reporting arrangements will require consolidation and submission of annual work plans and budgets and interim and annual financial statements, an exercise that requires diligent coordination. An assessment of NORMA's prior experience in implementing a previous WB-financed project[14] observed some weaknesses in financial reporting, noncompliance with internal control procedures, and inadequate coordination with the CIU. A failure to sufficiently address these weaknesses is likely to result in delays in disbursement and project implementation progress. DOFA has an outstanding portfolio-wide audit report for FY22 and FY23, the audits of which, once completed, would be submitted to the Bank.

82. **FM risk mitigation measures.** Proposed FM arrangements include assigning an FM focal point in the IA responsible for FM coordination within and across the agencies. The focal point will liaise with the CIU Finance Specialist to support the project FM functions, including the adoption of the POM detailing the coordination and collaboration mechanism with a clear delineation of FM responsibilities. These arrangements are proposed to be in place before the disbursement of project funds.

(ii) Procurement

83. **A procurement assessment was carried out and completed during appraisal.** The procurement risk both before and after mitigation is assessed as Substantial. The PIU is experienced in the selection of individuals; however, they are not experienced in procurement processes for consultancy firms and civil works. The main risk relates to potential contract implementation challenges and delays, noncompliance with procurement procedures, poor-quality evaluation

[13] The project FM function will be carried out in accordance with the Bank Guidance, "Financial Management Manual for World Bank Investment Project Financing Operations," issued on September 7, 2021.
[14] FSM PROP (P151754) – US$4.56 million.

deliverables, reduced competition, and low market interest due to country location. The WB will provide relevant procurement training and implementation support. The existing Procurement Specialist in the DOFA CIU is providing support, and hands-on, expanded implementation support procurement arrangements currently exist in the country. The project shall assign project procurement responsibility to NORMA in the Financing Agreement, with specific arrangements detailed in the POM, including agreed decision-making flow. The IA will prepare a Project Procurement Strategy Document (PPSD) and Procurement Plan (PP) in line with paragraphs 4.1, 4.2, and 4.4 of the Procurement Regulations, applicable by project appraisal. The Project would use the Systematic Tracking of Exchanges in Procurement (STEP) tool, which is currently being used for the procurement activities as part of the project preparation phase and will also use advance procurement without contract signing until after effectiveness to support implementation readiness.

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

84. The overall E&S risk rating is Substantial, with mostly temporary impacts, which would be managed through conventional E&S risk management approaches, apart from the marina upgrades in Chuuk and Pohnpei, which carry a higher level of risk, which is to be assessed by an environmental and social impact assessment (ESIA). The Project is expected to have a largely positive environmental impact through improved management and sustainability of fisheries. International and local E&S specialists are already in place within the CIU and will provide addional on call E&S support for the proposed project implementation.

85. Capacity building, community awareness activities, and TA impacts are expected to be positive via improved fisheries management, including sustainability, increased capacity in regulatory institutions and local communities, reduction of land and waterway pollution, and improving data collection, analysis, and coordination of information. Investigation of suitable technologies and approaches for management of land and marine waste, and improving existing waste management systems, will result in positive downstream impacts.

86. General construction risks for the small-scale works, though minimal, may include handling and disposal of hazardous materials, waste, community and worker occupational health and safety (OHS) impacts, contamination of water sources and marine water, dust and noise nuisance, soil erosion, and unsustainable sourcing of materials/use of finite resources. Operational impacts could include minor pollution and OHS risks. Provision and replacement of safety-at-sea equipment, and office and electronic equipment, may generate ongoing waste, including e-waste, which will require end-of-life management. Risks associated with the larger-scale marina upgrades will be assessed in the ESIA.

87. This project will investigate the use of FADs in Yap to boost coastal restoration by reducing fishing pressure on coastal resources. The potential for FADs to contribute to depletion of oceanic fish stocks is low, since the stocks are in good health due to regional management efforts, and SSF catches are marginal compared to industrial ones. In addition, FADs reduce emissions and other waste from boats searching large areas for stocks and contribute to improved sea safety due to known locations. TA for aquaculture operations associated with sea cucumbers will provide background data for suitable habitat requirements and design for a pilot processing facility, together with training and educational materials. It is anticipated that the outputs will contribute to a more sustainable industry, with lower environmental risk.

88. The risk of sexual exploitation and abuse/sexual harassment (SEA/SH) is assessed as moderate, due to the potential for workers to be in remote locations, and the underlying SEA/SH risks in the FSM. Worker behavior can be informed by appropriate training and codes of conduct and good oversight/supervision. SEA/SH service providers are available in the FSM and will be consulted during Project preparation. The engagement of fishing observers may result in OHS risks. While there is an existing long-term observer program in the FSM, which has not experienced substantial negative impacts, there are inherent risks with observers working alone in often isolated areas and in potentially contentious situations.

89. To address potential inequities in accessing project benefits, the POM and Stakeholder Engagement Plan (SEP) will include procedures to promote the empowerment of women and other vulnerable groups through improved voice in planning, prioritization, and implementation subprojects. The SEP will include the project Grievance Redress Mechanism.

90. The Project will develop and implement a Labor Management Plan that will establish labor guidelines for all categories of project workers and include a code of conduct and functional Grievance Redress Mechanism for labor grievances. Land can be a complex issue in the FSM; however, all planned land use relates to government land, and no land acquisition is anticipated. There is potential for temporary relocation of activities if demolition is required.

V. GRIEVANCE REDRESS SERVICES

91. ***Grievance Redress.*** Communities and individuals who believe that they are adversely affected by a project supported by the WB may submit complaints to existing project-level grievance redress mechanisms or the WB'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 WB's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of WB noncompliance 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 WB Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the WB's GRS, visit http://www.worldbank.org/GRS. For information on how to submit complaints to the WB's Accountability Mechanism, visit https://accountability.worldbank.org.

VI. KEY RISKS

93. **Overall risk.** The overall risk is assessed to be Substantial, with Political and Governance, Stakeholders, Fiduciary, and Environmental and Social risks rated as Substantial.

94. **Political and governance.** The FSM is a fragile state with thin institutional and technical capacity of government agencies, making it an operating environment that can be impacted by the interplay of national, state, and local interests. From a sector perspective, there is an inherent risk of politicization of fisheries sector management and development in the FSM, due to contestation to capture benefits, particularly around the sea cucumber harvest and the limited capacity for government oversight in remote areas. These risks are mitigated by a high level of political commitment from central and state governments toward sector objectives; experience with an existing sector program; and through increased investments in compliance operations, community participation, stakeholder engagement, and efforts toward greater transparency, including through the Tuna Transparency initiative (the T3 challenge). However, the extent to which project-specific measures can mitigate political and governance risks is limited. The residual political and governance risk is therefore rated Substantial.

95. **Stakeholders.** The Project relies on a range of public institutions at both the national and state levels, as well as the participation of communities and fishing associations. Some of these have no experience participating in similar

Projects, and may be difficult to reach due to their geographic isolation and limited phone or internet connectivity. The Project will allow sufficient time for this to be addressed, and will work through existing government channels to ensure all relevant stakeholders are part of the Project. Despite the mitigation efforts, this risk remains Substantial, as it may hinder the implementation of the Project and require time to resolve possible disputes.

96. **Fiduciary.** The residual fiduciary risk is Substantial, mainly due to previously experienced delays in FM and procurement processes, noncompliance with procedures, and poor-quality documentation due to weak and lean capacities. Diligent coordination mechanisms that will be required for an effective FM (including budgeting, financial reporting, and accounting) and procurement implementation. The IA's previous experience in implementing WB-financed projects had weaknesses with FM noncompliance and inadequate coordination, now compounded with implementation involving multiple ISAs. The proposed implementation arrangements safeguard against these risks by detailing the coordination mechanism and the delineation of roles and responsibilities in the POM, requiring a dedicated FM focal point for coordination purposes, working with an experienced CIU Finance and procurement specialist responsible for the Project's fiduciary functions. To mitigate these gaps, the Project, as with other projects in the FSM portfolio, would be supported by the CIU. In addition, the PIU has a Project Officer and Project Assistant who will support the Project in meeting fiduciary obligations (that is, procurement and FM requirements, respectively). The CIU and PIU would also benefit from hands-on expanded implementation support with enhanced fiduciary World Bank supervision. Additional mitigation measures for procurement are in Annex 1.

97. **Environmental and social.** The inherent environmental and social risk is Substantial predominantly due to the environmental risk associated with the upgrades of the Chuuk and Pohnpei marinas. The highest risk is associated with the works impacting the Chuuk marina waterway (that is, dredging and rock wall). These risks will be assessed and mitigation measures identified for management in the ESIA, as well as informing detailed design. For the remainder of the scope, the risks are low to moderate, with the potential for minor and temporary impacts during construction that are readily manageable with conventional E&S risk management approaches and mitigation measures (to be included in Contractor Environmental and Social Management Plans).

VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Period 1	Period 2	Period 3	Period 4	Period 5	Closing Period
1. Strengthened capacity for stronger regional collaboration						
An operational fisheries monitoring and information management system facilitates dissemination of updated timely data to national and regional stakeholders (Yes/No)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
No	No	No	No	Yes	Yes	Yes
➢New automated information management system (IMS) modules providing timely access to fisheries data (Number)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	3	3	3	3
➢Domestic longliner trips monitored in real time via an upgraded electronic monitoring system (Percentage)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	20	40	40	40
➢States' coastal fisheries data management systems regularly updated with recent data (Number)						
Aug/2024	Aug/2025	Aug/2026	Aug/2027	Aug/2028	Aug/2029	Aug/2030
0	0	0	2	3	4	4
2. Strengthened capacity for enhanced sector performance						
Minimum number of establishments meeting the requirements for export to the EU market (Number)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
4	4	4	6	6	6	6
3. Strengthened capacity for increased habitat preservation						
Availability of digitalized datasets on marine health with updated baseline for all four states (Number)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	1	2	3	4

Intermediate Indicators by Components

Baseline	Period 1	Period 2	Period 3	Period 4	Period 5	Closing Period
Component 1: Oceanic fisheries						

Legal framework for authorization of fishing vessels requesting to enter FSM ports reviewed (Yes/No)						
Aug/2024	Aug/2025	Aug/2026	Aug/2027	Aug/2028	Aug/2029	Aug/2030
No	No	Yes	Yes	Yes	Yes	Yes
EM data reviews and program cost recovery designed (Yes/No)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
No	No	Yes	Yes	Yes	Yes	Yes
Component 2: Coastal fisheries						
Infrastructure Design, Environment & Social Assessment and Procurement Packages completed (Number)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	1	2	3	3
➢In Kosrae state (Yes/No)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
No	No	No	Yes	Yes	Yes	Yes
➢In Pohnpei state (Yes/No)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
No	No	No	No	Yes	Yes	Yes
➢In Chuuk state (Yes/No)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
No	No	No	No	No	Yes	Yes
Female fishers and fish workers benefiting from value chain addition activities (Number)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	0	50	150	350
Renewable energy capacity enabled with direct support (Megawatt) [CRI]						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	0	0.55	0.83	0.83
Component 3: Marine habitats						
Municipalities engaged with findings from ecological surveys in each State. (Percentage)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	10	80	80	80
Component 4: Project Management						
Project beneficiaries receiving project support (Number)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	1,600	4,126	6,652	9,178	11,704

➢Female project beneficiaries receiving project support (Number) (Number)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	160	413	665	918	1,170
➢Beneficiaries who believe project-financed activities respond to their needs (Percentage)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	0	0	0	80	80	80
Time for registered project-related grievances to be addressed through the Grievance Redress Mechanisms (Days)						
Sep/2024	Sep/2025	Sep/2026	Sep/2027	Sep/2028	Sep/2029	Sep/2030
0	21	21	21	21	21	21

Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

1. Strengthened capacity for stronger regional collaboration.	
An operational fisheries monitoring and information management system facilitates dissemination of updated timely data to national and regional stakeholders (Yes/No)	
Description	The indicator is achieved when all the sub-indicators are achieved. This indicator measures the strengthened stakeholder capacity for stronger regional collaboration of the PDO.
Frequency	Biannual
Data source	See sources below
Methodology for Data Collection	Yes when all subindicators (a), (b), and (c) are on target.
Responsibility for Data Collection	PIU
New automated information management system (IMS) modules providing timely access to fisheries data (Number)	
Description	The indicator will assess progress made in the operationalization and expansion of new and existing IMS modules and assess whether the three modules – Observer Placement, Observer Recruitment, and Port Management Workflow System modules – have been included in the IMS.
Frequency	Annual
Data source	IMS reports
Methodology for Data Collection	Assess progress in operationalizing existing and new IMS modules using evidence of data submitted to the IMS
Responsibility for Data Collection	NORMA
Domestic longliner trips monitored in real time via an upgraded electronic monitoring system (Percentage)	
Description	Measures the percentage of [fishing trips of] nationally flagged longline vessels being monitored at the end of the reporting period by the upgraded EM system. This system allows for nearly real time access to data in comparison to the existing EM system that required to access the hard disk, what could take several months. Once new EM components are installed and tested, a completion installation report is filed and logged and the upgrade is completed. Currently, 100% coverage for longliners under existing EM system.
Frequency	Annual
Data source	IMS
Methodology for Data Collection	Count total EM vessels from installation reports including trip reports.
Responsibility for Data Collection	NORMA
States' coastal fisheries data management systems regularly updated with recent data (Number)	
Description	Indicator measures the design and development of the coastal fisheries data collection and management system and the number of states uploading data into the system. Regularly is defined as at least semi-anually. Recent is defined as data for periods not older than one year before the data entry.
Frequency	Annual
Data source	Data Management System
Methodology for Data Collection	Count system reports from each state
Responsibility for Data Collection	DRD Coastal Division
2. Strengthened capacity for enhanced sector performance	
Minimum number of establishments meeting the requirements for export to the EU market (Number)	
Description	This indicator is achieved when the Competent Authority (CA) audits confirm the compliance of export establishments (companies and vessels) with the European Union (EU) requirements to enter their market .

Frequency	Annual
Data source	Competent Authority Records
Methodology for Data Collection	Reports/records from DHSA and NORMA
Responsibility for Data Collection	CA DHSA
3. Strengthened capacity for increased habitat preservation.	
Availability of digitalized datasets on marine health with updated baseline for all four states (Yes/No)	
Description	This indicator measures the establishment of marine health ecological baselines at state level through the development of data collection protocols and baseline assessments. It is considered completed when all four states have them available for planning and management decisions.
Frequency	Annual
Data source	Rapid Ecological Assessment Reports
Methodology for Data Collection	Count Final Reports endorsed by GoFSM
Responsibility for Data Collection	DRD Coastal Division

Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

Component 1: Oceanic Fisheries	
Legal framework for authorization of fishing vessels requesting to enter FSM ports reviewed (Yes/No)	
Description	This indicator will assess the review of FSM's fisheries legislation and policies on alignment with the requirements and provisions of the Port State Measures Agreement (PSMA).
Frequency	Annual
Data source	Reports on recommendations from consultancy and resultant draft legislation/policy.
Methodology for Data Collection	Review consultancy report to confirm review of legislation with the PSMA.
Responsibility for Data Collection	NORMA
EM data reviews and program cost recovery designed (Yes/No)	
Description	Measures the successful design of a cost recovery system for EM equipment and monitoring.
Frequency	Annual
Data source	Final report on EM data review and cost recovery.
Methodology for Data Collection	Confirm report details
Responsibility for Data Collection	NORMA
Component 2: Coastal Fisheries	
Infrastructure Design, Environment & Social Assessment and Procurement Packages completed (Number)	
Description	Measures the completion of infrastructure packages across three states (Cumulative number).
Frequency	Annual
Data source	Detailed design, completed environmental and social assessments and procurement packages.
Methodology for Data Collection	Count both procurement packages completed and approved detailed design and environmental and social assessments.
Responsibility for Data Collection	DRD/PIU
In Kosrae state (Yes/No)	
Description	Completion of floating docks/pontoons at Okat, Lelu, and Utwe marinas.

Frequency	As per parent indicator
Data source	As per parent indicator
Methodology for Data Collection	As per parent indicator
Responsibility for Data Collection	As per parent indicator
In Pohnpei state (Yes/No)	
Description	Completion of marina upgrade at Dehektik.
Frequency	As per parent indicator
Data source	As per parent indicator
Methodology for Data Collection	As per parent indicator
Responsibility for Data Collection	As per parent indicator
In Chuuk state (Yes/No)	
Description	Completion of landside facilities at Weno Marina and improvement of dockside wharf and pontoon mooring facilities.
Frequency	As per parent indicator
Data source	As per parent indicator
Methodology for Data Collection	As per parent indicator
Responsibility for Data Collection	As per parent indicator
Female fishers benefiting from value chain addition activities (Number)	
Description	This indicator measures the number of females directly benefiting from marine infrastructure improvements (i.e., uses of fish markets) and from value chain addition activities (i.e., training, goods and equipment). Approximately 10% of fishers in the FSM are women, and it is estimated that 10% of fishers with access to the local marina markets are women, which amounts to 350 female beneficiaries in the context of the Project with improved access to (i) income generating opportunities, (ii) markets, (iii) technical skills, (iv) goods, (v) and equipment.
Frequency	Annual
Data source	State reporting data, beneficiary surveys, and training attendance sheets.
Methodology for Data Collection	Count total number of direct beneficiaries of marine infrastructure from beneficiary surveys and relevant state reporting data and training attendance sheets.
Responsibility for Data Collection	PIU and State Coordinators
Renewable energy capacity enabled with direct support (Megawatt) [CRI]	
Description	Measures the renewable energy capacity installed (Pohnpei and Chuuk marinas and NORMA office).
Frequency	Annual
Data source	Energy Efficiency Reports and Design Specifications.
Methodology for Data Collection	Calculate total renewable energy capacity from installed solar panels.
Responsibility for Data Collection	Measures the renewable energy capacity installed (Pohnpei and Chuuk marinas and NORMA office).
Component 3: Strengthening the sustainable management, protection, and resilience of marine habitatsMarine Habitats	
Municipalities engaged with findings from ecological surveys in each state (Percentage)	
Description	This indicator measures effectiveness of citizen engagement through the minimum percentage of municipalities adjacent to the ecological survey area engaged in disseminating the findings of the ecological assessment.
Frequency	Annual
Data source	Ecological assessment awareness training and workshops attendance sheets.
Methodology for Data	Count total number of adjacent municipalities and number of municipalities engaged in disseminating the findings of the

Collection	ecological asessment.
Responsibility for Data Collection	PIU and State Coordinators
Component 4: Project Management	
Project beneficiaries receiving project support (Number)	
Description	Indicator measures direct project beneficiaries receiving financial or technical support from the Project.
Frequency	Quarterly
Data source	Project Records
Methodology for Data Collection	Training attendance sheets, memorandums of understanding – vessel registration, safety grab bags, etc.
Responsibility for Data Collection	PIU
Female project beneficiaries receiving project support (Number)	
Description	Number of female project beneficiaries receiving project support.
Frequency	Quarterly
Data source	As per parent indicator
Methodology for Data Collection	As per parent indicator
Responsibility for Data Collection	As per parent indicator
Beneficiaries who believe project-financed activities respond to their needs (Percentage)	
Description	This indicator measures the outcomes of project beneficiary surveys sampled across all project activities
Frequency	Quarterly
Data source	Beneficiary surveys
Methodology for Data Collection	As per parent indicator. Count number of surveys that have positive responses to project support.
Responsibility for Data Collection	As per parent indicator
Time for registered project-related grievances to be addressed through the Grievance Redress Mechanisms (Days)	
Description	Measures the timely processing of grievances by the implementing agency.
Frequency	Annual
Data source	Individual grievance files.
Methodology for Data Collection	The duration for the handling of the grievance will be monitored. The indicator will be achieved if the average duration for addressing cases is equal to or less than 21 days.
Responsibility for Data Collection	PIU

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Federated States of Micronesia
Pacific Islands Regional Oceanscape Program – Second Phase for Economic Resilience:
Federated States of Micronesia:

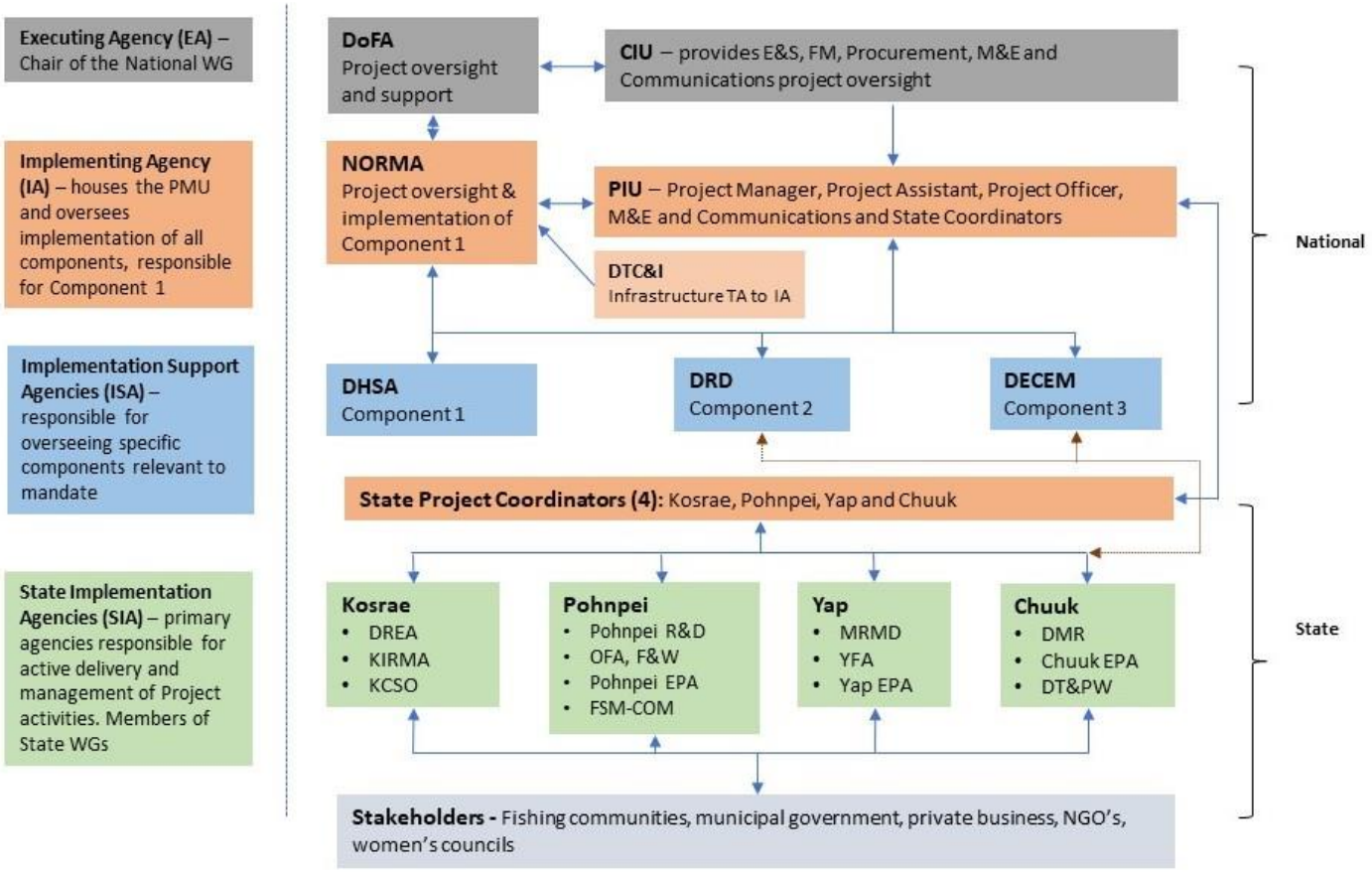
1. The proposed implementation structure for the FSM PROPER Project adopts a multilevel approach involving the national government, state governments, and local community organizations (Figure A1.1). The proposed structure consists broadly of the:

- Executing Agency (EA) – Department of Finance and Administration (DFA)
- Implementing Agency (IA) – NORMA
- PROPER Project Implementation Unit (PIU)
- Central Implementation Unit (CIU)
- Implementation Support Agencies (ISAs) (DHSA, DECEM, DRD, and DTC&I)
- State Implementation Agencies (SIAs) (state government agencies including fisheries and environmental)
- Working Groups (WGs) (one national and four state WGs).

2. At the national level, the FSM PROPER Project will be overseen by the IA (NORMA), responsible for overall project management, coordination, and strategic decision-making, and the CIU. In addition, the state governments (as SIAs) will play a vital role in implementing the project within their respective jurisdictions. Each state will have a WG responsible for coordinating activities, engaging with local communities, and managing project interventions at the state level. The state-based implementation roles (state Project Coordinators and SIAs) will collaborate with NORMA and the Technical Experts for each component to ensure alignment with the overall project objectives within WB guidelines. Furthermore, the involvement of local communities is a crucial aspect of the proposed implementation structure. Community-based organizations (for example, NGOs) and stakeholders (for example, local fishers) will be engaged through participatory approaches, including consultations, capacity building, and awareness programs. Their active involvement will promote ownership, collaboration, and local empowerment, leading to sustainable outcomes and the long-term success of the FSM PROPER Project.

3. The implementation structure is designed to complement the decentralized nature of the FSM, with multiple state governments and diverse local communities. The project implementation, therefore, must address specific challenges and opportunities at each level (national and per state) while maintaining coherence and alignment with the overall project goals. Implementation will require effective coordination, communication, and cooperation among stakeholders to ensure that activities are well synchronized and contribute to the broader-scale objectives within PROPER.

Figure A1.1: FSM PROPER implementation structure and responsibilities.



PROPER Working Groups

4. Five WGs (Table A1.1) will act to support overall Project implementation, communications, and cohesion between states and activities. The national WG will be chaired by DOFA and will provide guidance and decision-making functions for the overall Project at the national level. The state WGs will facilitate collaboration, coordination, and decision-making among key stakeholders (including local fishing communities), as well as preparing implementation status reports that highlight items to be discussed at the national WG (that is, progress, issues, and challenges). Twice a year, representatives from each WG and all members of the PIU will convene at a Project Progress and Planning Meeting to assess the workplan, budget, and progress; to discuss challenges; and to adopt solutions to keep the project on track and to improve overall Project outcomes.

Table A1.1: Working groups and members.

Working Group	Members
National WG	DOFA, NORMA (Chair), DHSA, DRD, DECEM, PIU
Kosrae WG	DREA, KIRMA, KCSO, PIU, and Stakeholders (Rotating chair)
Pohnpei WG	Pohnpei R&D, OFA, F&W, Pohnpei EPA, FSM-COM, PIU, and Stakeholders (Rotating chair)
Yap WG	MRMD, YFA, Yap EPA, PIU, and Stakeholders (Rotating chair)

Chuuk WG	DMR, Chuuk EPA, DT&PW, PIU, and Stakeholders (Rotating chair)

Note: DECEM = Department of Environment, Climate Change & Emergency Management; DHSA = Department of Health and Social Affairs; DMR = Department of Marine Resources (Chuuk); DOFA = Department of Finance and Administration; DRD = Department of Resources and Development; DREA = Department of Resources and Economic Affairs (Kosrae); DT&PW = Department of Transportation and Public Works (Chuuk); EPA = Environmental Protection Agency; F&W = Pohnpei Fish and Wildlife; R&D = Department of Resources and Development, FSM-COM = Federated States of Micronesia- Federated States of Micronesia College of Micronesia; KCSO = Kosrae Conservation and Safety Organization; KIRMA = Kosrae Island Resource Management Authority; MRMD = Yap State Marine Resources Management Division; NORMA = National Oceanic Resource Management Authority; OFA = Pohnpei Office of Fisheries and Aquaculture; PIU = Project Implementation Unit; Pohnpei EPA = Environmental Protection Agency; YFA = Yap Fishing Authority.

Roles and Responsibilities

Department of Finance and Administration (DOFA)

5. DOFA will provide oversight, coordination, and support for Project implementation through the national WG.

Central Implementation Unit (CIU)

6. The CIU will provide FM, procurement, environmental and social, communication, and M&E support to the PIU. The CIU will be responsible for fiduciary oversight aspects of the Project. The CIU specialists will manage project funds and disbursements and provide procurement and environmental and social expertise advise to the PIU as required.

National Oceanic Resources Management Authority (NORMA) (Primary IA)

7. The primary IA for the Project will be NORMA, the national government department responsible for oceanic fisheries management with jurisdiction over the 12 to 200 nautical mile zone. NORMA, through its experience in implementing the previous PROP project, is well placed to oversee the overall implementation of the PROPER. NORMA will be responsible for the implementation of all major component assistance from ISAs and SIAs where necessary. NORMA will also provide support to the Fisheries Management Expert for Oceanic Fisheries component activities and will chair the national WG to facilitate dialogue among departments and combine efforts to ensure the holistic implementation of all FSM PROPER components.

Department of Resources and Development (DRD) (National) (ISA)

8. The national DRD will serve as an ISA focused on the Coastal Fisheries component of the FSM PROPER Project. DRD will provide support to each state's fisheries department for the implementation of their Coastal Fisheries activities under PROPER. In addition, DRD will assist the Fisheries Management Expert, as well as the Project Coordinators of the PIU, as required. DRD's primary responsibility will be to ensure a constant dialogue between the relevant PIU roles and internally, and to provide feedback on the Coastal Fisheries component activities to the national government via the national WG, to ensure cohesion between states and components.

Department of Environment, Climate Change, and Emergency Management (DECEM) (ISA)

9. DECEM will serve as an ISA focused on the Marine Habitats component of the Project. DECEM will provide support to each state's environmental protection-related department(s) for the implementation of their Marine Habitats activities under PROPER. In addition, DECEM will assist the Project Coordinators of the PIU, as required. DECEM's primary responsibility will be to ensure a constant dialogue between the relevant PIU roles and internally, and to provide feedback on the Marine Habitats component activities to the national government via the national WG, to ensure cohesion between states and components.

Department of Health and Social Affairs (DHSA)

10. DHSA will serve as a secondary IA focused specifically on the Competent Authority and Reference Laboratory subcomponents of the Oceanic Fisheries component, in collaboration with NORMA. The DHSA will be responsible for the implementation of these two subcomponents and will work closely with NORMA and with state government departments, where necessary, to implement activities outside of Pohnpei state and to ensure nationwide benefits from the activities. DHSA will also provide support to the Fisheries Management Expert, as necessary.

Department of Transportation, Communications, and Infrastructure (DTC&I) (ISA)

11. DTC&I will provide TA on infrastructure planning and procurement to NORMA for all infrastructure activities. These include (but may not be limited to): Chuuk state marina redevelopment, Chuuk state dock development, and Chuuk waste facilities; Kosrae state fisheries office renovation, and Kosrae state marina (Lelu, Okat, and Utwe) improvements, including new floating docks and boat ramps; Pohnpei state marina developments, building of the Pohnpei state NORMA office building, and Pohnpei state Reference Laboratory building.

State Implementation Agencies (SIAs)

12. The SIAs will be the primary agencies responsible for the active delivery and management of the project activities, supported by the Project Coordinator for each state. State agencies include the DREA, Kosrae Island Resource Management Authority (KIRMA), Kosrae Conservation and Safety Organization (KCSO), Pohnpei Department of Resources and Development (R&D), Pohnpei Office of Fisheries and Aquaculture (OFA), F&W, Pohnpei EPA, FSM College of Micronesia (COM), Yap State Marine Resources Management Division (MRMD), Yap Fishing Authority (YFA) Yap EPA, DMR, Chuuk EPA, and DT&PW.

PROPER Project Implementation Unit (PIU)

13. The FSM PROPER Project will have a dedicated Project Implementation Unit (PIU) to manage the implementation and monitor the success of all project activities throughout the six-year project period. The PIU will consist of at least 10 formal roles, working at both the national and state level, and will be situated within the IA, NORMA.

- The **Project Manager**, with the support of the Project Officer and Project Assistant and CIU, will oversee and coordinate the implementation of the project. Responsibilities will include planning, organizing, and managing all aspects of the project to ensure successful project execution. They will be responsible for assessing completion of project objectives, developing detailed work plans, and monitoring progress to ensure timely completion of activities. The Project Manager will also be responsible for ongoing budget management and resource allocation to ensure efficient and effective use of project resources as well as submitting Project reporting in a timely manner. In addition, they will facilitate communication and collaboration among project stakeholders to ensure alignment and achievement of project goals.
- The **Project Officer** will manage support for the Project Manager in project implementation. Responsibilities include acting as the designated FM focal point for coordination across agencies; monitoring the fiduciary aspects of the Project with leadership from the CIU, including overseeing the Project Assistant in preparation of FM documentation; assisting the Project Manager in monitoring and updating the project budget and work plans; maintaining the PP on the STEP; assisting in the management of vendors and contracts; and assisting in Project reporting.
- The **Project Assistant** will support the Project Manager and Project Officer in implementing the Project. Responsibilities will include supporting the Project Officer in the fiduciary management of the Project, including the monitoring and maintenance of FM records, preparation of documentation required for raising and processing payments, and supporting the Project Officer with procurement and vendor and contract management.

- The **E&S Officer** will support the CIU E&S Specialists in managing the environmental and social aspects of Project implementation, including monitoring, compliance, and updating of Project ESF documentation. The E&S officer will effectively communicate environmental and social commitments to all Project staff, consultants, and stakeholders.
- The **M&E Officer** will conduct regular assessments, collect feedback, and prepare reports to track progress, identify challenges, and recommend improvements. The role will ensure effective communication, transparency, and accountability throughout the project.
- The **Communications Officer** will work closely with the CIU and be responsible for developing and implementing effective communication strategies, ensuring clear and timely dissemination of Project information to relevant agencies and the public (particularly fishing communities).
- **State Project Coordinators** will be based in each FSM state and will be responsible for the oversight of all Project activities taking place in that state. Each Project Coordinator will work closely with the SIAs for their respective state to monitor and support the implementation of activities and assist in gathering M&E data. The Project Coordinators will be responsible for planning and facilitating the WGs for each state and reporting on the outcomes of each WG meeting to the Project Manager and M&E Officer. The Project Coordinators will act as a point of contact between each state's IAs and the Technical Experts to facilitate information sharing and ensure support is given to the IAs when needed, and act as the main "face" of the PROPER Project in each state for stakeholder communications (for example, addressing any concerns of local fishing communities). The Project Coordinators will report to the PIU Project Manager.

PROPER Technical Experts

14. Three Technical Experts will be employed under Components 2 and 3 to provide specialized knowledge and expertise to support the implementation of specific components and subcomponents of the Project, as follows:

- **Fisheries Management Technical Expert:** Will support the Oceanic and Coastal Fisheries and Marine Habitats components of the Project in all FSM states, working closely with the Project Coordinators and SIAs (including any consultants) in each state to provide TA for implementation and monitoring of each subcomponent and to maintain a national view of the Oceanic and Coastal Fisheries and Marine Habitats components. Where activities are implemented at the state level, but are part of a national program (for example, Coastal Fisheries data, Marine Ecological Assessments, and Safety at Sea), the role of the Technical Expert will be particularly important to minimize duplication of effort among states and to ensure a holistic approach to activities. The Technical Expert will also have a crucial role in ensuring strong communications between the national government and state governments and stakeholders, to ensure a shared understanding of fisheries activities and their benefits across the board. The role will be based within NORMA at the national level, working in close collaboration with the national DHSA, DRD, and DECEM (ISAs), and will likely require frequent travel to all FSM states. The role will report to the PROPER Project Manager of the PIU.
- **Engineer(ing) Technical Expert:** Will provide technical expertise and support to all infrastructure projects within the Project, such as the marina (re-)developments, NORMA office building, Chuuk waste infrastructure (in collaboration with the Waste Technical Expert), and Reference Laboratory. This will include working with state-level infrastructure departments to aid with feasibility studies, design and oversight of construction (including project timelines), and ensuring compliance with engineering standards and the ability of FSM firms (if selected instead of external, non-FSM contractors) to carry out long-term maintenance of any new buildings. Their role will also include communication with local stakeholders and governments and will be crucial to build local capacity to

manage and maintain infrastructure builds in the future. The Engineer(ing) Technical Expert will be based within NORMA at the national level, working in close collaboration with the DTC&I, and will require frequent travel to sites across Pohnpei, Chuuk, and Kosrae. The role will report to the PIU Project Manager.

- **Waste Technical Expert:** Will bring expertise in waste management to support the waste subcomponent of the Marine Habitats component. The role will be crucial to garner wider community support through outreach initiatives to promote awareness and education on proper waste disposal, sharing lessons learned, and promoting collaboration on waste management among FSM states. The Waste Technical Expert will be present within NORMA but share office space with Chuuk EPA. Occasional travel will be required to other FSM states. The role will report to the PIU Project Manager.

Period of Employment

15. It is envisaged that not all the proposed FSM PROPER PIU roles will be required for the full duration of the project (six years), due to the planned implementation of the activities to which their roles are relevant. The proposed period of employment for each role is shown in Table A1.2.

Table A1.2: Proposed period of employment for each PIU and technical expert role

PIU Role	Y1	Y2	Y3	Y4	Y5	Y6
Project Manager						
Project Officer						
Project Assistant						
Technical Expert: Fisheries Management						
Technical Expert: Engineer						
Technical Expert: Waste						
Project Coordinators (all)						
M&E Officer						
Communications Officer						
E&S Officer						

M&E Arrangements

16. Due to the scale of the Project, multiple agencies will be involved in the collection of data for M&E. This will primarily involve the ISAs and SIAs, who will feed information to the Project Coordinators and Technical Experts. Project Coordinators will provide state-specific updates, and the Technical Experts will provide component-specific updates to the M&E officer. This will then be collated and reported to the PROPER Project Manager.

17. At the commencement of the Project (following finalization of the project activities and M&E plan), specific indicators will be assigned to individual roles to ensure responsibilities in terms of data collection are clear, and individuals can be held accountable. This will facilitate efficient reporting of progress and any issues preventing successful implementation (progress against indicators) to be identified and addressed promptly during project implementation.

Financial Management Arrangements

18. **FM implementation arrangements.** The DOFA, through the CIU maintains FM of the WB portfolio in the FSM, and hence will be responsible for the fiduciary aspects of this project. The CIU is operational and has accumulated sufficient experience in FM. There are five FM staff within the CIU to manage the project funds and disbursements, and additional resources are being hired to support a growing portfolio in the FSM. A dedicated CIU finance specialist will support the project's day-to-day FM activities including ensuring FM arrangements, controls, and procedures are in compliance. The

Project will be implemented over a six-year period. The WGs will oversee the implementation of all components. A PIU will be established within NORMA and will be responsible for coordinating the overall Project implementation. The responsibilities of the PIU project officer will include coordinating FM activities across the project IA, especially in accounting, reporting, and budgeting.

19. **Budgeting.** The PIU Project Manager in NORMA will lead the project budget preparation and monitoring. The first budget will be submitted no later than three months after the effective date, and then no later than 1 August for each subsequent year during the project implementation period. The project budget will be cleared in NORMA before submitting it to the WB for clearance. NORMA also has experience preparing project budgets through the implementation of the PROP first phase Project. The PIU will prepare an overall planned project budget for the proposed Project of US$56 million (US$20 million national IDA and US$36 million regional IDA grant) of project funds and split this into annual budgets, which will be revised at least every six months. The budget should be consistent with the PP, and NORMA will coordinate with the CIU for project budget guidance and review.

20. **Accounting and maintenance of accounting records.** The GoFSM *fundware*[15] system will be used to account for the project-eligible expenditure and has a chart of accounts, and transactions or line items can be further classified by cost center, organization (department/division), and geography, if required on a cash basis. This system can maintain accounting records that meet the WB's reporting requirements for this project. A new chart of accounts will be developed for the project with a separate cost center, with all related payments centralized in the Ministry of Finance. The Project will follow the GoFSM financial year, which is October 1 to September 30.

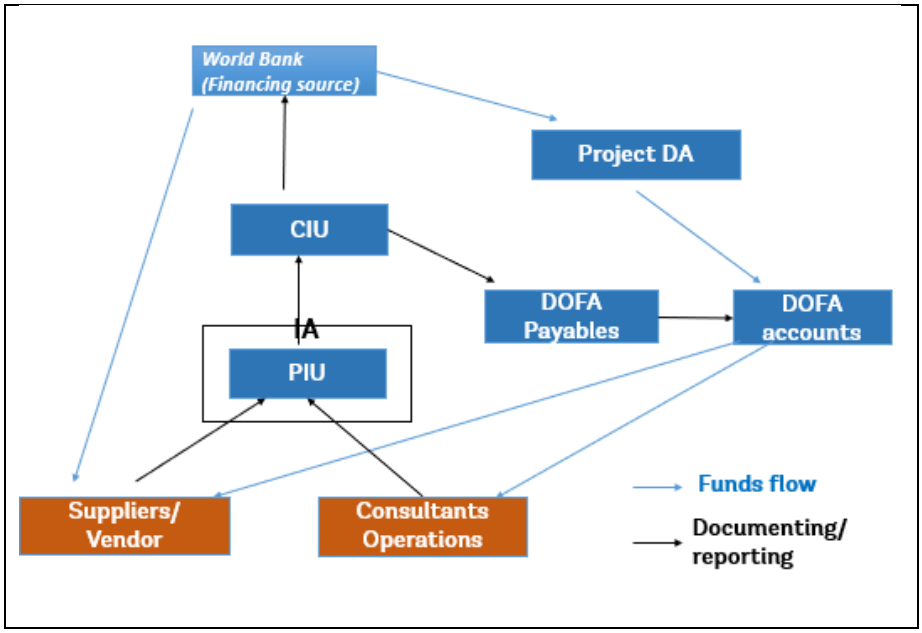
21. **Internal control.** The GoFSM and CIU use a Standard Operations Procedure Manual, which outlines the internal controls and procedures. However, compliance within agencies has been moderate. This risk should be mitigated by ensuring that the PIU project team is aware of the Standard Operations Procedure Manual requirements and that the CIU should ensure compliance with the manual is included in the terms of reference of the positions that will be hired by the PIU. The PIU will have mechanisms in place to verify the quality of deliverables before submission to the CIU for processing payments with all supporting documents. The POM will include a section on budgeting, disbursement, and FM arrangements that will reference relevant government legislation, procedures, and the Standard Operations Procedure Manual, and will outline more detailed FM arrangements specific to the project, including controls on project assets and contracts. The government's internal audit function is weak, and the CIU should explore mechanisms to provide internal audits for all projects. The POM will be developed and adopted within three months of the Project's effective date. The government FM policies and procedures will be followed by the CIU. However, if there are procedures not in compliance with the World Bank Finance agreement, then the World Bank FM procedure will apply. Such deviations will be covered in the POM.

22. **Funds flow.** Funds will flow from the World Bank to the Designated Account (DA) of the GoFSM, as detailed in Figure A1.2. Expenditures will be tracked through the government accounting system and paid from the treasury account. Before completing a replenishment withdrawal application, the equivalent funds expended from the treasury account will be transferred from the DA into the treasury account, and the DA will be replenished by that amount. After the Project becomes effective, funding can be withdrawn up to the ceiling limit set in the Disbursement and Financial Information Letter. Adequate documentation will need to be maintained to ensure easy reconciliation of payments made from the treasury account to payments authorized by the project. For larger project payments, such as those covering construction, the direct payment disbursement method could be chosen for use by DOFA. Under this mechanism, the withdrawal

[15] The WB Public Financial Management project is currently being implemented, and the new Financial Management Information System will include capability to account for WB-financed projects. It is anticipated that there will be a transition period for the project.

application enables funds to flow directly from the World Bank to the supplier. The CIU will be responsible for ensuring that the Project follows WB FM policy and procedure requirements, including documentation and reporting.

Figure A1.2: Funds flow



23. **Periodic financial reporting.** Financial reporting will be fully integrated into the government's national accounting system. Reports will initially be generated from the *fundware* accounting system. The financial reports will include an analysis of actual expenditure for the current period, (sources and uses) year to date, and the cumulative to date, plus outstanding commitments, compared against the total project budget, disaggregated by components and/or sub-activities. The project, through the CIU, will be required to prepare semester unaudited interim financial reports (IFRs) in a format agreed with the World Bank. The IFRs will need to be submitted no later than 45 days after the end of the reporting periods, 31 March and 30 September. The CIU will also prepare periodic financial reports and submit them to the PIU for periodic monitoring of the annual budget and reporting to the implementing agency.

24. **External audit.** An annual audit of the Project's financial statements will be required to be conducted in a manner acceptable to the Bank and aligned with the WB auditing requirements. The financial statements will be prepared in accordance with acceptable accounting standards and will be audited by an independent auditor under acceptable auditing standards. The audited financial statements and copies of management letters will be submitted to the Bank within nine months after the end of each reporting period. The audited financial statements will be published on the government's websites and by the Bank.

25. **Disbursement methods and supporting documentation arrangements.** IDA financing of the Project will be at 100 percent, inclusive of taxes. The disbursement methods to be used under this Project will be advance, direct payment, and reimbursement (Table A1.4). For larger project payments, the direct payment method can be used by the Project, and the withdrawal application enables funds to flow directly from the WB to the supplier. Adequate documentation will need to be maintained to ensure easy reconciliation of payments made from the treasury account to payments authorized by the Project. The POM will further detail the disbursement aspects of the Project. The CIU will maintain a Statement of

Expenditure (SOE) to document eligible project expenditures of the Project in Client Connection. There is no counterpart fund anticipated under the Project.

Table A1.4: Financing agreement disbursement categories and amounts

Category	Amount of financing allocated, XDR (Rounded)	Percentage of Expenditures to be Financed (Inclusive of taxes)
(1) Goods, works, training, operating costs, non-consulting services, and consulting services for the Project	41,370,000	100%
(2) Refund of Preparation Advance	830,000	Amount payable pursuant to Section 2.07 (a) of the General Conditions
TOTAL AMOUNT	42,200,000	

Procurement Management Arrangements

26. Under PROPER, procurement management arrangements will be carried out in accordance with the World Bank Procurement Regulations for Investment Project Financing (IPF) Borrowers (latest update dated September 2023), hereafter referred to as the World Bank's Procurement Regulations. The World Bank's Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, referred to as the World Bank's Anti-Corruption Guidelines (latest update July 2016), will also apply. NORMA will prepare a PPSD and PPs in line with paragraphs 4.1, 4.2, and 4.4 of the Procurement Regulations, applicable by project appraisal, and the Guidance Manual "Pacific Procurement Guidance 2023" and the provisions stipulated in the Financing Agreements. Under the proposed Project, the World Bank's procurement planning and tracking system, STEP, will be used to prepare, clear, and update PPs and conduct all procurement transactions for the Project. Accordingly, all the procurement activities under the proposed Project will be entered into, tracked, and monitored online through the system.

27. Procurement activities under PROPER include: (i) consulting services (for example, TA, feasibility studies, design and supervision of works); (ii) individual consultants; (iii) goods and non-consulting services; and (iv) large, multi-lot, complex works (that is, construction of port marinas and plants in various states). To ensure implementation readiness of the procurement activities, the project would use advance procurement arrangements.

28. **To mitigate the above-identified risks and strengthen the procurement capacity of the Project, the following measures have been established and agreed to be implemented:** (a) the existing Procurement Specialist in the CIU at DOFA is providing support, advising and guiding the implementing agency as it proceeds to carry out implementation functions under the World Bank-financed projects; (b) the Project Manager and the Program Officer terms of reference will include procurement-related functions, among others; (c) NORMA will be supported by an international project engineer housed within NORMA to supervise small civil works activities, and perform all design verification in addition to design and supervision firms; (d) the STEP system will be used to prepare, clear, and update PPs and conduct all procurement transactions for the Project (accordingly, all the procurement activities under the Project will be entered into, tracked, and monitored online through the system); and (e) a POM with a detailed Procurement Module will be prepared to guide the Project in carrying out procurement. In addition, the World Bank will carry out procurement post-reviews annually with an initial sampling rate of 20 percent, which will be adjusted periodically during Project implementation based on Project performance.

29. **Procurement strategy.** Based on Project requirements, operational context, economic aspects, technical solutions, and market analysis, a draft PPSD is developed for the Project. The PPSD will finalize the appropriate procurement approaches under the Project. The PPSD includes detailed assessments of the markets for goods, works, and

services required for project implementation, procurement approaches, and procurement risk analysis along with corresponding proposed risk mitigation measures (Table A1.5). Based on the PPSD conclusions, the PP for the first 18 months of project implementation was prepared by the PIU. The PP will be updated at least annually or as required during project implementation to reflect any substantial changes in procurement approaches and methods to meet the actual implementation needs, market fluctuations, and improvements in institutional capacity.

Table A1.5: Procurement risks and mitigation measures

Key risks	Mitigation measures	By whom
Delays, noncompliance with procedures, and poor-quality deliverables due to weak and lean capacities, and high-level decision-making.	(i) Assign procurement responsibility to NORMA for procurement internationally, to be defined in the Financing Agreements, and detailed in the POM; (ii) establish the process flow in each IA for procurement decision-making; (iii) appoint a Procurement Evaluation Committee comprising representatives from NORMA (composition to be detailed in the POM); (iv) assign Project Manager, technical experts (firm), and/or national procurement officers to liaise with NORMA on procurement activities, and provide technical inputs as required; and (v) establish contract management systems within IA, with technical advisory support as required.	IA (primary) and CIU
2. Reduced competition and low market interest due to small- size packages and remoteness of participating countries.	(i) Invite bids under regional packages, where appropriate. (ii) Tailor evaluation criteria toward local content to improve bidder participation. (iii) Pre-bid engagement to promote the opportunity.	IA and CIU
3. Potential for mis-procurement due to inadequate oversight. Price escalation to improper cost estimation.	(i) Online tendering system to publish contract awards. (ii) Publish contract award decisions and other relevant information on external websites. (iii) Verify cost estimates with WB technical experts and project engineer for quality assurance to ensure value for money is achieved.	IA and CIU

30. **Implementation support for procurement.** The World Bank will provide procurement support through prior and post-reviews, and guidance during implementation support missions. The designated procurement specialist will visit NORMA at least biannually, and other IAs as necessary, during implementation.

31. **Procurement of works.** Procurement of works includes construction of waste collection plants for two separate marinas, and construction of new NORMA operations center. Small works – Request for Quotes procedures (in accordance with paragraph above) will be followed for civil works activities.

32. **Procurement of goods.** Goods to be procured include marine vessels and communication equipment, ICT equipment, hardware and software, and office equipment and facilities. Goods will be procured based on the method thresholds agreed for the Pacific. All goods procured at the national level will be carried out under Request for Quotation (RFQ) procedures.

33. **Selection of consultants.** Consultants will be hired for specialized technical services, project management, fiduciary, safeguards, and M&E services. NORMA will be responsible for processing the selection of consultants to be hired internationally. The respective IAs will be represented in the selection evaluation committees and in negotiations. Firms will possess highly capable and experienced professionals equipped in design and supervision of large, complex works.

34. **Prior review thresholds.** The procurement method and prior review thresholds for different types of procurement applicable to Bank operations in fragile and small states in the Pacific shall be applicable for PROPER, as per Table A.1.6.

I. Works and Goods and Non-Consultant Services

1.1. Prior Review Threshold: Procurement Clearances subject to Prior Review by the Bank as stated in Annex II of the Procurement Regulations:

Table A1.6: Procurement method and prior review thresholds for works, goods and non-consultant services

Category	Procurement method thresholds		Prior review thresholds	
	Applicable thresholds (US$)	**Remarks**	**Applicable thresholds (US$)**	**Remarks**
Works				
RFP/RFB (International market approach)	≥ 10.0 million	None	≥ 2.0 million	
Request for Quotations	< 2.0 million	None		
Direct Selection	None	No threshold; meet requirements of Procurement Regulations 7.13–7.15		
Goods and Non-Consulting Services				
RFP/RFB (International market approach)	≥ 2.0 million	None	≥ 500,000	
Request for Quotation	< 2.0 million	None		
Direct Selection	None	No threshold; meet requirements of Procurement Regulations 7.13–7.15		

Note: RFB = request for bids; RFP = request for proposal.

II. Selection of Consultants

2.1 Prior Review Threshold: Procurement Clearances to Prior Review by Bank as stated in Annex II of the Procurement Regulations:

Table A1.7: Procurement method and prior review thresholds for consultants

Category	Procurement method thresholds		Prior review thresholds	
	Applicable thresholds (US$)	**Remarks**	**Applicable thresholds (US$)**	**Remarks**
QCBS, QBS, FBS, LCS[a] (Using the most appropriate market approach)		Methods for consulting services are specified in paragraphs 7.3–7.12, Section VII of the Procurement Regulations.	≥ 500,000	
CQS[b] (Open or limited competition through national or international market approach, specified in the PP and agreed with the Bank			≥ 500,000	

Direct Selection of firms	None	No threshold; meet requirements of regulations 7.13–7.15.	Same as for competitive selection	
Individual Consultants		Essential individual assignments will be defined in the PP agreed with the Bank and in line with regulations 7.34–7.39 using the most appropriate market approach.	≥ 0.3 million and for the positions as specified in the PP agreed with the Bank	Risk-based approach

Note: a. FBS = fixed-budget-based selection; LCS = least-cost-based selection; QBS = quality-based selection; QCBS = quality- and cost-based selection. b. CQS = consultant's qualifications-based selection.

ANNEX 2: Overview of PROP and Phase 1 PROP Project in the FSM

1. **This Project is the 13th under the PROP SOP and the fifth in the PROP second phase (PROPER).** PROP was developed in 2013 as an IDA Regional Window program and SOP. PROP's first phase began in 2014 with implementation in the FSM, the Republic of the Marshall Islands (RMI), the Solomon Islands, Tuvalu, and the FFA (first cohort), and expanded in 2019 and 2020 to Samoa, Tonga, and Kiribati (second cohort)) (Table A2.1). The FFA, Solomon Islands, RMI, and Tuvalu have started implementation of PROP's second phase. The SOP development objective is to strengthen the shared management of selected Pacific Island oceanic and coastal fisheries, and the critical habitats on which they depend, while each project can have a specific PDO.

2. **PROP is promoting a sequenced approach in which each new country project scales up successes, builds on lessons learned from the previous project, and expands to new domains of activities to move toward achieving the Program Development Objective.** The series is designed as a long-term, multiphase approach, building on each consecutive phase. While the first phase of PROP focused on fisheries management through national contributions to regional management efforts and strengthening national capacities, the second phase further enhances these aspects, scaling up successes and building on lessons from the first phase, while paving the way for a third phase to further harness oceanic fisheries to the regional economies, develop and diversify domestic value chains, and promote regional integration. The PROP first phase faced numerous implementation challenges, including the COVID-19 pandemic, clients unfamiliar with WB procedures, suboptimal design, and insufficient implementation arrangements to manage challenges associated with fragile, conflict and/or violence affected countries. PROP delivered several key national outcomes, while critically strengthening national and regional engagement and developing and aligning strategic plans. PROPER focuses on implementing the lessons learned and continuation of PROP work to deliver critical outcomes both nationally and regionally.

3. **Key outcomes of the implementation of the first phase PROP Project in the FSM include:** (i) enhancing NORMA's strategic vision and planning processes through development of NORMA's first strategic plan; (ii) developing the framework and enabling environment to establish and operationalize a CA, including staff trainings; (iii) expansion of the observer program increasing the FSM's capacity to effectively manage oceanic fisheries and to collect regionally important data on catch; and (iv) undertaking a comprehensive overview of coastal fisheries in all four states through the FSM Coastal Fisheries SAR from which priority investments were identified in Volume 2: Sustainable Development of the Inshore Fisheries and Resources in the FSM.

4. **The FSM PROPER builds on PROP activities by:** (i) expanding the capacity building focus beyond NORMA to national and state agencies, including DECEM, DRD, and DHSA; (ii) progressing the CA process toward certification with the EU through staff development, implementing the CA regulation, NCP, and standards, and establishing a reference laboratory to undertake the required testing and analysis for seafood safety; (iii) building on NORMA's oceanic management capabilities through the EM program, development of an IMS to support regional and national decision-making and increasing economic opportunities for the contribution to GDP by leveraging VDS days; (iv) implementing priority recommendations from the Coastal Fisheries Assessment report and supporting community capacity development; (v) expanding livelihood opportunities for coastal communities; and (vi) delivering key infrastructure required to enable value addition, safety, and compliance, which will also provide important disaster risk management and connectivity co-benefits. Table A2.1 summarizes PROP outputs and PROPER incremental follow-on support.

Table A2.1: Summary of PROP first and second phase projects

PROP individual projects	Financing (US$ million)	Key focus	Period status
First phase projects			
Solomon Islands	IDA: 6.10 GEF: 1.37	**Management of oceanic fisheries** *Strengthen capacity of national & regional institutions to manage tuna fisheries* *Ensure equitable distribution within PICs of benefits of managed tuna fisheries* **Management of coastal fisheries** *Manage coastal fisheries that can generate export earnings* *Support livelihoods, food security, and dietary health* *Empower stakeholders to manage targeted coastal fisheries* *Link sustainable coastal fish products to regional markets* *SPC involved in regional implementation of management of sea cucumber*	2014–2021 Completed
Federated States of Micronesia	IDA: 5.50		2014–2021 Completed
Marshall Islands	IDA: 6.75 GEF: 1.83		2014–2021 Completed
Tuvalu	IDA: 7.00 GEF: 0.91		2014–2022 Completed
FFA	IDA: 3.97 GEF: 2.19	**Sustainable financing of the conservation of critical fishery habitats** *Establish Pacific Marine Conservation Development Financing mechanisms to support large marine protected areas* *Pilot Pacific Blue Carbon regional program for small to medium-sized fishery habitats*	2014–2021 Completed
Samoa	IDA: 9.00 for fisheries	Samoa: *Agriculture & Fisheries Productivity and Marketing Project (SAFPROM)* **Strengthening National Institutions** *Institutional capacity building for crops and livestock* **Strengthening the performance of selected value chains** *Public-good infrastructure* *Matching Grant Program*	2019–2025 Ongoing
Tonga	IDA: 10.00	Tonga: *Pathway to Sustainable Oceans* **Strengthening Fisheries Governance** *Strengthen fisheries compliance capacity* *MCS in Tonga's EEZ* **Strengthening the Knowledge Base for Fisheries and Aquaculture** *Improve fisheries science for decision-making of selected fisheries* *Develop high-potential aquaculture technologies* *Strengthen Tonga's Special Management Area Program* **Investing in Sustainable Fisheries Management and Development** *Develop an effective policy and regulatory framework to support aquaculture development and inshore commercial fisheries*	2019–2026 Ongoing
Kiribati	IDA: 19.50	**Strengthening MCS of Large-Scale Oceanic Fisheries** *Strengthen MCS capacity* *Improve enforcement, including facilities and infrastructure* **Diversifying Marine-Based Revenue Streams for Outer Island Coastal Communities** **Improving Seafood Toxicology and Safety Measures in selected fisheries** *Develop pollution & seafood toxin assessments for Tarawa lagoon and coastal fisheries* *Build capacity in seafood toxicology & construction of supporting laboratories* *Develop legal and regulatory frameworks*	2020–2027 Ongoing
SPC	IDA	To be determined	Proposed
Second phase projects			
Solomon Islands	IDA: 13.50	**Strengthening Regional Collaboration and National Capacity for Oceanic Fisheries** *Improve oceanic fisheries management* *Harness oceanic fisheries to the regional economy* **Strengthening Regional Collaboration and National Capacity for Coastal Fisheries** *Strengthen policies and institutions* *Strengthen coastal fisheries management and CBRM* *Develop and diversify local value chains*	2022–2027 Ongoing
FFA	IDA: 9.00	**Consolidating Oceanic Fisheries Management** *Strengthen MCS and IUU capacity of members* **Harnessing Economic Benefits of Oceanic Fisheries to the Regional Economy** *Improve modelling of economic and social benefits* *Enhance negotiations capacity of members*	2023–2028 Ongoing

		Strengthening FFA's Operating Environment *Strengthen FFA's ITC capabilities, and decarbonization* *Enhance capacity to engage citizens on regional importance of fisheries*	
Marshall Islands	IDA: 18.00	**Strengthening Policy and Institutions** *Improve the capcaity to manage and maintain sustainable fisheries* *Strenghten seafood and environmental monitoring* *Improve infrastructure and their operation* **Strengthening Regional Collaboration and National Capacity for Oceanic Fisheries** *Consolidate management of oceanic fisheries* *Harness oceanic fisheries to regional economy* **Strengthening Regional Collaboration and National Capacity for Coastal Fisheries and Conservation of Critical Coastal Habitats** *Strengthen coastal fisheries and habitat management* *Develop and diversify livelihoods in support of coastal fisheries management and improve the sustainability of outer islands infrastructure*	2023–2029
Tuvalu	IDA: 13.05	**Strengthening Policy and Institutions** *TA to support transition into a fisheries authority* *Meet Tuvalu's flag and port state responsibilities* *Strengthen seafood safety standards* **Strengthening Regional Collaboration and National Capacity for Oceanic Fisheries** *Consolidate management of oceanic fisheries* *Harness of oceanic fisheries* **Strengthening Regional Collaboration and National Capacity for Coastal Fisheries** *Strengthen coastal fisheries monitoring and management* *Develop research and small-scale aquaculture*	2023–2029
Micronesia, Fed. Sts.	IDA: 56.00	This project	Proposed

5. **PROPER projects will be aligned with the original overarching regional objectives of the SOP and will contribute to the regional goals of strengthening sustainable oceanic and coastal fisheries management.** PROPER is designed as a set of stand-alone projects, to be implemented by countries or regional organizations, linked with the collective aim of improved fisheries management, improved climate change adaptation, and economic resilience. PROPER is structured to allow these projects to work together, and for all national projects to contribute toward regional policy objectives and focus on addressing national priorities. Table A2.2 provides a summary of national and regional IDA funds. The FSM PROPER will contribute in the short and medium term to socioeconomic recovery from the COVID-19 pandemic by contributing to the creation of employment and livelihood opportunities and, in the longer term, to the economic resilience of the sector and the country by maintaining and enhancing the economic value of both oceanic and coastal fisheries. PROPER will be the first in the SOP to include pollution prevention activities – that is, activities aimed at protecting the ecosystems upon which fisheries depend.

Table A2.2: FSM PROPER summary of national and regional IDA funds, U.S. dollars

Component	**National**	**Regional**
Component 1: Oceanic Fisheries	**$2,990,000.00**	**$9,480,000**
Subcomponent 1.1. Strengthening the enabling environment for oceanic fisheries	$2,933,551	$9,286,449
Subcomponent 1.2. Maximizing the value of oceanic resources to the FSM	$60,015	$189,985
Component 2: Coastal Fisheries	**$8,186,096**	**$25,913,904.36**
Subcomponent 2.1. Strengthening coastal fisheries institutional and legal framework	$465,719	$1,474,280.78
Subcomponent 2.2. Delivering critical marina infrastructure (Chuuk, Pohnpei, and Kosrae)	$7,333,877	$23,216,122.53
Subcomponent 2.3. Fish processing and value chain addition	$386,499	$1,223,501.06

Component 3: Marine Habitats	**$1,176,301**	**$3,723,698.87**
Subcomponent 3.1. Environmental protection and marine habitat management	$417,707	$1,322,293.07
Subcomponent 3.2. Improvements to waste management	$758,594	$2,401,405.80
Component 4: Project Management	**$1,087,478**	**$3,442,521.61**

ANNEX 3: Climate Co-Benefits

1. The Project has prioritized climate action to address the vulnerability of the FSM as the third most at-risk PIC from climate change. The fisheries sector is particularly vulnerable to climate change due to climate migration patterns of the main fisheries and increasing intensity and frequency of extreme weather events. The migration patterns of key fisheries such as tuna are predicted to drive them away from the FSM's exclusive economic zone, negatively affecting the climate resilience of the country, particularly in terms of food and livelihood security, and government fiscal resilience and budget to respond to a changing climate. Extreme weather events threaten fishers at sea and their livelihoods, including vessels and coastal infrastructure that was not designed to withstand wind and wave activity or rising sea levels associated with climate change, putting lives at risk and threatening livelihoods and the assets they depend on.

2. At the same time, fishing activities also use low-efficiency infrastructure, primarily sourced from diesel, which contributes to significant emissions. In addition, biodiversity and the natural environment would face extreme pressure if current fishing practices are maintained despite climate change, with potential loss of marine and terrestrial species expected if effective conservation actions are lacking and fish populations collapse.[16] The importance of improving fisheries management to build sustainability into the sector as a response to climate change has been widely recognized.[17] Ultimately, fisheries management is a "no regrets" approach that builds resilience to climate change for the fish populations, for sensitive habitats such as coral reefs, and for dependent communities and nations, with the bonus of creating wealth and economic growth.

3. Considering the relevance of climate change for the future of the FSM, the Project has been designed to address climate as part of the investments, going beyond traditional fisheries interventions. See detailed climate co-benefits per subcomponent in Table A3.1.[18]

Table A3.1: Climate co-benefits by subcomponent

Subcomponent	Climate co-benefits
1.1	(i) Provides critical staff with knowledge about climate change who will bridge capacity gaps during early periods of the CA establishment and help prepare the regular staff in terms of climate change adaptation and resilience (e.g., to respond to extreme weather events and adapt to fish climate migrations). In addition, it finances capacity building in climate scenarios, and adaptation and risk mitigation measures for government institutions. It also finances energy efficient vehicles and boats that will equip the government to better respond to climate emergencies and natural disasters (i.e., assistance during extreme weather events, improve search capacity, strengthen surveillance, etc.). (ii) Contributes to improving data collection and analysis capabilities to understand climate-induced ecosystem changes through a reference laboratory that will analyze climate data and the effects of climate change in environmental conditions and fish stocks. In addition, the new Reference Laboratory will increase independence from external laboratories (currently, New Zealand) and increase resilience of the local fisheries against extreme weather events. (iii) A new Kosrae landing site will be designed with a climate lens to allow for safer work conditions under extreme weather events and increase resilience by serving as a supplementary port against climate-related disasters. (iv) The IMS and data center will allow tracking the oceanic fish stock response to climate change and inform management decisions, accordingly. (v) The EM will allow tracking oceanic fisheries vessels to understand and better inform management adaptation decisions to respond to migrating fisheries and ensure sustainable fish stocks are maintained to allow marine ecosystems to better adapt to climate change.

[16] "Climate Risk Country Profile: Micronesia." 2021. The World Bank Group and the Asian Development Bank.
[17] Bahri, T., M. Vasconcellos, D. J. Welch, J. Johnson, R. I. Perry, X. Ma, and R. Sharma, eds. 2021. *Adaptive management of fisheries in response to climate change.* FAO Fisheries and Aquaculture Technical Paper No. 667. Food and Agriculture Organization, Rome. https://doi.org/10.4060/cb3095en.
[18] This table was added to compensate for the lack of climate information due to the strict main text limitations and to provide information on the Project's climate design.

	(vi) The new NORMA office building will be climate-smart and energy efficient, and have solar energy installed with excess capacity, which will export to the local power grid. It will also increase NORMA's capacity to understand climate change in marine ecosystems and ocean conditions, and climate-driven migrations, and to support climate-informed management decisions. Finally, the NORMA buildings will meet EDGE certification.
1.2	(i) Will develop a climate-informed action plan for the FSM National Oceanic Fisheries Investment Policy, with concrete climate-adaptation actions, including adapting to climate-driven migration of fisheries. (ii) Enhancement of the oceanic fisheries value based on climate-driven migration of fisheries will help mitigate impacts and increase the sector and country's adaptive capacity to changing climate conditions, securing its main source of revenue and livelihoods under future scenarios. (iii) Regional compliance will allow responding to changing conditions due to climate change and complement (ii) by allowing to increase the value of oceanic fisheries to mitigate revenue losses from climate-driven migration of fisheries. (iv) Feasibility study for new infrastructure will require infrastructure to be resilient under future climate scenarios, including sea level rise and extreme weather events.
2.1	(i) Will finance improvements to legislation and compliance through technical review, consultancies, workshops, equipment, and training. These will contribute to improving safety of fisheries against extreme weather events, improving the capacity of coastal fishers to adapt to changing climate conditions, and to improving the adaptive capacity of policies to respond to changing climate conditions and migrating fisheries. It also mainstreams the fisheries sector into climate change adaptation and food security policies and vice versa, promoting an integrated management adaptable to future climate scenarios. (ii), (iii), and (iv) Will improve data collection, capacity, equipment, and management to inform ecological changes due to climate change, and inform policy, planning, and management decisions. This will be targeted primarily at oceanic fish species most affected by climate-driven migrations, including tuna, but also at coastal fish species affected by acidification and rising sea levels, which are degrading their habitat, food chain, and nursing grounds. Infrastructure will be designed to withstand extreme weather events and protect assets and lives, including considerations such as location away from the coast, height, and materials used, among others. (v) Through MCS, develops the capacity for monitoring and understanding climate change impacts in fisheries. In addition, finances the infrastructure (designed to withstand sea level rise and extreme weather events) and training that will support climate-responsive MPA management. As with (i), it supports CBRM and MPAs as adaptive tools to respond to climate-driven changes in marine and coastal ecosystems, so that they can serve as climate refugia when relevant. (vi) A Fisheries Management expert will advise on expected fish migrations, extreme weather events, and other impacts of climate change, and best practices on adaptation action to respond to these.
2.2	(i) Will finance a redevelopment of the Weno Marina to withstand extreme weather events and sea level rise due to climate change and offer safe harbor for vessels. A solar grid will be installed on the site for self-consumption and potential export to the grid. Buildings will meet EDGE certification. (ii) Development of a marina in Dehektik that will be placed and designed to be resilient to sea level rise and extreme weather events and offer safe harbor to vessels, considering changing climate conditions. A solar grid will be installed on the site for self-consumption and potential export to the grid. (iii) The new marina in Pohnpei will be improved, including climate change and storm surge considerations to minimize risks from coastal flooding and erosion, as well as from extreme weather events, offering a safe harbor for fishing vessels during extreme weather events. A solar grid will be installed on the site for self-consumption and potential export to the grid. Buildings will meet EDGE certification. (iv) Improved landing sites in Kosrae will allow continued operations and increase safety of fisheries under more difficult weather conditions through provision of safe mooring sites during inclement weather. They will also be designed to withstand sea level rise and extreme weather events. (v) The engineer will contribute to ensuring all activities are compliant and well designed and will provide advice on best practices and techniques to further reduce climate change vulnerability.

2.3	(i) Value addition for fishers affected by climate-driven migration will allow them to adapt to new ecosystem conditions and natural resource availability and to understand the new and future expected conditions under which they will have to operate and how to respond to them. This will contribute to maintaining healthy revenues and more stable livelihoods, further improving the climate resilience of the sector. (ii) The fish processing site will help compensate for revenue losses due to the climate-driven migration of fisheries, and help build independence to increase food security and livelihood resilience. The prefeasibility will help identify a site that is more resistant to sea level rise. (iii) Expands the use of FADs to mitigate the impacts of climate-driven fish stock migrations. As fish migrate to new areas due to changing ocean temperatures and food availability, FADs can be deployed in these new areas to help fishers maintain their livelihoods without having to travel extreme distances. They will simultaneously contribute to reducing bycatch and to reducing pressure on ecosystems as they adapt to changing conditions and migrate to new areas. (iv) Strengthens the resilience of vessels and crews at sea to respond to increasing threats of storms and extreme weather events. (v), (vi), and (vii) Accelerate livelihood and food source diversification through aquaculture techniques to respond to climate-driven migrating fisheries, serving as an alternative to fisheries income and strengthening food security. Cultures that are resistant to extreme weather events, acidification, and ocean warming will be identified and promoted.
3.1	(i) and (ii) Provide training on how to address pollution and environmental management under climate change considerations and contribute to reducing methane emissions associated with poor waste management. (iii) Will contribute to restoring coastal ecosystems associated with dredging and mining sites, which would not otherwise be able to recover naturally. This will allow coastal ecosystems to be healthier and, hence, able to adapt to climate change better and faster. Will also identify best practices for similar efforts in the future considering climate change impacts (i.e., how to increase the success rate under acidifying, warming, and worsening oceanic conditions). (iv) Mooring site review will consider the impacts of climate change, including sea level rise and extreme weather events, and propose improvements to increase security of vessels and fishers. (v) Contribute to understanding the ecological condition of coastal ecosystems, particularly those affected by dredging, to ensure that management and restoration efforts are viable. Develop the capacity for monitoring and understanding climate change impacts in coastal fisheries and establishment of ecological baselines to inform ecosystem-based management under future climate change scenarios. This is critical to the survival of coastal ecosystems and the sustainability of coastal fisheries against acidifying and warming of the ocean, and extreme weather events.
3.2	All activities will contribute to improving the health of coastal ecosystems, effectively making them more resilient to climate change and reducing methane emissions. They will also improve the capacity to respond to oil spills, which mostly originate from extreme weather events.