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Report No: PAD4110

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US\$176.02 MILLION

TO THE

REPUBLIC OF THE PHILIPPINES

FOR A

PHILIPPINE FISHERIES AND COASTAL RESILIENCY PROJECT

May 8, 2023

Environment, Natural Resources and The Blue Economy Global Practice
East Asia and Pacific Region

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CURRENCY EQUIVALENTS
(Exchange Rate Effective: January 30, 2023)

Currency Unit = Philippine Pesos (PHP)

US\$1 = PHP 54.54

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ABC	Aqua-Industrial Business Corridor
ADING	Agriculture Dialogue and Information Network Group
ADMP	Aquaculture Development and Management Plan
AFF	Agriculture, Fisheries and Forestry
AIS	Automatic Identification System(s)
API	Aquaculture Performance Indicator
APZ	Aquaculture Production Zone
BARMM	Bangsamoro Autonomous Region in Muslim Mindanao
BFAR	Bureau of Fisheries and Aquatic Resources
BMB	Biodiversity Management Bureau
CNFIDP	Comprehensive National Fisheries Industry Development Plan
COA	Commission on Audit
CPHMAIP	Comprehensive Postharvest, Marketing, and Ancillary Industries Plan
CPF	Country Partnership Framework
CRM	Coastal Resources Management
DA	Department of Agriculture
DBM	Department of Budget and Management
DENR	Department of Environment and Natural Resources
E&S	Environmental and Social
EAFM	Ecosystem Approach to Fisheries Management
EAP	East Asia and Pacific
EEZ	Exclusive Economic Zone
EIRR	Economic Internal Rate of Return
ESA	Environmental and Social Assessment
ESCP	Environment and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRS	Environment and Social Review Summary
ESS	Environmental and Social Standards
FAO	UN Food and Agriculture Organization
FAO-r	Fisheries Administrative Order
FARMC	Fisheries and Aquatic Resources Management Council

FCU	Fisheries Management Area Coordination Unit
FishCORAL	Fisheries, Coastal Resources and Livelihood (Project)
FISHCORE	Fisheries and Coastal Resiliency (Project)
FishCRRM	Fisheries and Coastal Resilient Resource Planning and Management
FLA	Fishpond Lease Agreement
FM	Financial Management
FMA	Fisheries Management Area
FMP	Fisheries Management Plan
FP	Framework Plan
FPI	Fishery Performance Indicator
GAP	Good Aquaculture Practice
GCRF	Global Crisis Response Framework
GDP	Gross Domestic Product
GIS	Geographic Information System
GOP	Government of the Philippines
GRS	Grievance Redress Service
HCR	Harvest Control Rule
ICT	Information and Communication Technology
IEG	Independent Evaluation Group
IFAD	International Fund for Agricultural Development
IFR	Interim Financial Report
IPPF	Indigenous Peoples Planning Framework
ISM	Implementation Support Mission
IUU	Illegal, Unreported, and Unregulated (Fishing)
LGU	Local Government Unit
LMP	Labor Management Procedures
M&E	Monitoring and Evaluation
MARLIN	Modern and Resilient Livelihood Investment
MCS	Monitoring, Control, and Surveillance
MHMRP	Marine Habitat Management and Restoration Plan
MIS	Management Information System
MOA	Memorandum of Agreement
NCCAP	National Climate Change Action Plan
NFRDI	National Fisheries Research and Development Institute
NGA	National Government Agency
NGO	Nongovernmental Organization
NOL	No Objection Letter
NPMO	National Project Management Office
NPP	National Procurement Procedures
NSC	National Steering Committee
NSAP	National Stock Assessment Program
PAD	Project Appraisal Document
PCIP	Provincial Commodity Investment Plan
PDO	Project Development Objective
PFDA	Philippine Fisheries Development Authority
PIU	Project Implementation Unit

POM	Project Operations Manual
PMO	Project Management Office
PPSD	Project Procurement Strategy for Development
PRDP	Philippine Rural Development Project
RDE	Research, Development, and Extension
ReCIP	Regional Commodity Investment Plan
RFCU	Regional Fisheries Management Area Coordinating Unit
RFO	Regional Fisheries Office
RPF	Resettlement Policy Framework
RPIU	Regional Project Implementation Unit
SAG	Scientific Advisory Group
SEP	Stakeholder Engagement Plan
STEP	Systematic Tracking of Exchanges in Procurement
SuPrIM	Support to Project Implementation and Management
TA	Technical Assistance
TOC	Theory of Change
TTL	Task Team Leader
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
VMS	Vessel Monitoring System

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TABLE OF CONTENTS

DATASHEET	Error! Bookmark not defined.
I. STRATEGIC CONTEXT	7
A. Country Context.....	7
B. Sectoral and Institutional Context.....	9
C. Relevance to Higher Level Objectives.....	13
II. PROJECT DESCRIPTION.....	14
A. Project Development Objective (PDO)	14
B. Project Components	15
C. Project Beneficiaries	20
D. Results Chain	20
E. Rationale for Bank Involvement and Role of Partners	22
F. Lessons Learned and Reflected in the Project Design	23
III. IMPLEMENTATION ARRANGEMENTS	24
A. Institutional and Implementation Arrangements	24
B. Results Monitoring and Evaluation Arrangements.....	26
C. Sustainability.....	27
IV. PROJECT APPRAISAL SUMMARY	27
A. Technical, Economic and Financial Analysis	27
B. Fiduciary.....	30
C. Legal Operational Policies.....	31
D. Environmental and Social.....	31
V. GRIEVANCE REDRESS SERVICES	34
VI. KEY RISKS	34
VII. RESULTS FRAMEWORK AND MONITORING	37
ANNEX 1: Implementation Arrangements and Support Plan	54
ANNEX 2: Monitoring, Control, and Surveillance (MCS)	69

DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Philippines	Philippine Fisheries and Coastal Resiliency Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P174137	Investment Project Financing	Substantial

Financing & Implementation Modalities

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

Expected Approval Date	Expected Closing Date
30-May-2023	31-Dec-2029

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To improve management of targeted fisheries resources and enhance the value of fisheries production to coastal communities in selected Fisheries Management Areas (FMAs).

Components

Component Name	Cost (US\$, millions)
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Fisheries and Coastal Resilient Resource Planning and Management (FishCRRM)	50.20
Modern and Resilient Livelihood Investment (MARLIN)	112.67
Support to Project Implementation and Management (SuPrIM)	13.15

Organizations

Borrower:	The Republic of the Philippines
Implementing Agency:	Department of Agriculture - Bureau of Fisheries and Aquatic Resources

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	209.42
Total Financing	209.42
of which IBRD/IDA	176.02
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	176.02
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Non-World Bank Group Financing

Counterpart Funding	33.40
Borrower/Recipient	12.10
Local Communities	6.40
Local Beneficiaries	14.90

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030
Annual	0.00	10.05	10.37	17.68	24.14	41.37	45.75	26.66



Cumulative	0.00	10.05	20.42	38.10	62.24	103.61	149.36	176.02
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INSTITUTIONAL DATA**Practice Area (Lead)**

Environment, Natural Resources & the Blue Economy

Contributing Practice Areas

Agriculture and Food

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

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	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Substantial
8. Stakeholders	● Moderate
9. Other	
10. Overall	● Substantial

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 Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
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 Covenants

Sections and Description

Institutional Arrangement. Loan Agreement: Schedule 2, Section I.A.2

The Borrower, through the DA-BFAR, shall:

(a) by not later than three (3) months after the Effective Date establish and thereafter maintain, throughout the period of implementation of the Project, a National Steering Committee with a mandate, composition and resources satisfactory to the Bank.

(b) by not later than two (2) months after the Effective Date, establish and thereafter maintain, throughout the period of implementation of the Project, a National Project Management Office within DA-BFAR with a mandate,



composition and resources satisfactory to the Bank.

(c) by not later than two (2) months after the Effective Date, for each of the respective Selected Project Fisheries Management Areas (FMA), establish and maintain a FMA Management Board, a Regional Project Implementation Unit, and a Regional FMA Coordinating Unit; all with a mandate, composition and resources satisfactory to the Bank.

Sections and Description

Institutional Arrangement. Loan Agreement: Schedule 2, Section I.A.3. Recurrent, Continuous.

The Borrower, through the DA-BFAR, shall: (i) enter into a Memorandum of Agreement with each selected Local Government Unit under terms and conditions acceptable to the Bank; and (ii) exercise its rights under each Memorandum of Agreement in such a manner as to protect the interests of the Borrower and the Bank and to accomplish the purposes of the Loan.

Sections and Description

Institutional Arrangement. Loan Agreement: Schedule 2, Section I.A.4. Recurrent, Continuous.

The Borrower, through the DA-BFAR, shall: (i) enter into a Memorandum of Agreement with NFRDI and PFDA under terms and conditions acceptable to the Bank; and (ii) exercise its rights under the Memorandum of Agreement in such a manner as to protect the interests of the Borrower and the Bank and to accomplish the purposes of the Loan.

Sections and Description

Project Operations Manual. Loan Agreement: Schedule 2, Section I.B. Recurrent, Continuous.

The Borrower, through the DA-BFAR, shall, by not later than three (3) months after the Effective Date, adopt the Project Operations Manual (POM) in form and substance acceptable to the Bank and thereafter ensure that the Project is carried out in accordance with the arrangements and procedures set out in the POM.

Sections and Description

Annual Work and Financial Plan. Loan Agreement: Schedule 2, Section I.C. Recurrent, Due Date: October 31, Annually.

The Borrower, through the DA-BFAR, shall prepare and furnish to the Bank for its no-objection no later than October 31 of each fiscal year an annual work plan and budget during the implementation of the Project containing relevant Project activities and expenditures proposed to be included in the Project in the following fiscal year, including a specification of the sources of financing.

Sections and Description

Environmental and Social Standards. Loan Agreement: Schedule 2, Section I.D. Recurrent, Continuous.

The Borrower, through the DA-BFAR, shall ensure that the Project is carried out in accordance with the Environmental and Social Standards and the Environmental and Social Commitment Plan in a manner acceptable to the Bank.

Sections and Description

Sub-projects and Sub-project Grants. Loan Agreement: Schedule 2, Section I.E. Recurrent, Continuous.

For purposes of carrying out Sub-projects under Part 2 of the Project, the Borrower, through the DA-BFAR, shall made Sub-project Grant available to the respective Beneficiary under a Sub-project Grant Agreement between the



Borrower, through DA-BFAR and the respective Beneficiary under terms and conditions acceptable by the Bank and in accordance with the Sub-project Grant Manual.

Sections and Description

Enforcement of Fisheries Laws and Regulations. Loan Agreement: Schedule 2, Section I.F. Recurrent, Continuous.

1. In order to ensure that monitoring, control, and surveillance activities under the Project are implemented in a manner designed to achieve the objective of the Project, and unless the Bank otherwise agrees in writing, the Borrower shall ensure that: (a) all fisheries monitoring, control, surveillance and related enforcement activities carried out under the Project shall be consistent with Article 73 of the United Nations Convention on the Law of the Sea; (b) all Eligible Expenditures provided for monitoring, control, and surveillance activities are used exclusively by civilian authorities or fishing communities for the sole purpose of enforcing the Borrower's fisheries laws and regulations, and shall not be used for any military purposes, or the enforcement of any other non-fisheries laws; and (c) the Loan shall not be used to purchase arms or ammunition or to train any personnel in the use of arms or ammunition.

2. Surveillance missions to be supported under the Project shall be governed by detailed protocols set forth in the Project Operations Manual and prepared in accordance with terms of reference satisfactory to the Bank.

Sections and Description

Procurement and Use of Unmanned Aerial Vehicles. Loan Agreement: Schedule 2, Section IV.A. Recurrent, Continuous.

Prior to procurement and/or use of unmanned aerial vehicles under the Project, The Borrower shall: (i) notify the Bank of such proposed procurement and/or use and afford the Bank a reasonable opportunity to assess any risks related to such procurement and/or use, including operational, legal and regulatory, institutional, technical, social and environmental, and fiduciary risks, and to recommend appropriate mitigation measures; and (ii) develop a risk mitigation plan for the procurement and use of unmanned aerial vehicles, in form and substance acceptable to the Bank.

Sections and Description

Use of Vessels and Monitoring Systems. Loan Agreement. Schedule 2, Section IV.B. Recurrent, Continuous.

Any vessels and/or monitoring and tracking systems procured under the Project shall be limited in applicability within the Selected FMAs.

Conditions

Type	Financing source	Description
Disbursement	IBRD/IDA	Section III. B.1 of the Loan Agreement. No withdrawal shall be made for Livelihood Grants under Category (2) or for Enterprise Grants under Category (3), unless and until the Borrower, through the DA-BFAR has adopted the Sub-project Grant Manual, in form and substance acceptable to the Bank.



I. STRATEGIC CONTEXT

A. Country Context

- 1. The Philippines has been affected by lingering COVID-19 impacts that threaten to reverse the recent development gains.** Between 2010 and 2019, the Philippines registered its strongest and longest stretch of growth, becoming one of the best performers in the region. Annual economic growth averaged 6.4 percent during this period—second only to China among the large economies in the East Asia and Pacific (EAP) region. With the advent of the COVID-19 pandemic, however, the prospect of gaining upper-middle-income status has been interrupted in the short term. At the early stage of the pandemic, the Government of the Philippines (GOP) tackled the crisis with a sweeping multisectoral response plan, including the ‘Build, Build, Build’ program augmenting public infrastructure investment and the ‘Plant, Plant, Plant’ program of the Department of Agriculture (DA) enhancing food security. The pandemic-driven economic downturn caused the country’s gross domestic product (GDP) growth rate to plummet close to negative 10 percent in 2020. Concurrently, its employment and labor force participation have also declined by over 3 percent with considerable implications for poverty and inequality.¹
- 2. While the post-pandemic economic recovery is under way, the strengthening of external headwinds and its impact on the domestic economy continue to weigh heavily on the Philippines’ medium-term inclusive growth prospects.** The Philippines’ recovery in 2022 was fueled by a wider economic reopening amid the decline in COVID-19 cases and buoyed further by the impact of election-related activities on domestic demand. GDP grew by 7.6 percent year-on-year in 2022 (5.7 percent in 2021), as output surpassed its pre-pandemic level in the second quarter of 2022. Recently released national poverty estimates show an increase in the poverty rate by 1.4 percentage points between 2018 and 2021 due to income and employment losses. This translates to 19.9 million poor people, an increase of 2.3 million over the same period. With labor market indicators recovering and economic growth rebounding, poverty is estimated to decline. However, rising global prices and supply chain issues represent risks to growth and could dampen the pace of poverty reduction.
- 3. Income inequality, although declining, remains stubbornly high and one of the highest in the region.** Despite rapid economic growth, the average real wage has been stagnant since 2000 partly owing to a lack of market competition. The geography of poverty reflects the strong nexus between poverty and vulnerability—both to conflict and to the impacts of natural hazards and climate change. While under 5 percent of the population in Metro Manila falls below the national poverty line, the highest poverty rates, exceeding 50 percent of the population, are in two areas: (a) conflict-affected areas of western Mindanao and islands of the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), which have significant indigenous populations and ethnic minorities and (b) provinces in the Eastern Visayas region, which have the highest typhoon exposure.
- 4. Natural capital makes a significant contribution to the Philippines’ wealth, but underperformance of related sectors leaves considerable unrealized potential for increasing its economic contribution.** Natural capital accounts for 18 percent of the country’s total capital without considering coastal and marine natural resources. While this percentage is lower than neighbors with rich fossil fuel reserves, such as Vietnam and Indonesia (34 percent and 20 percent, respectively), it is higher

¹ World Bank. 2021. <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=PH>.



than the average of developing countries in EAP (15 percent).² However, rapid economic growth and the changing climate put additional pressure on these already stressed resources. From 2002 to 2020, the Philippines lost 12 percent of its total tree cover and the total area of humid primary forest decreased by 3.3 percent.³ Fisheries and tourism have lost market share amid increasingly strong competition with neighboring countries.

5. The Philippines is highly vulnerable to climate impacts, particularly affecting the coastal areas and livelihoods of small-scale municipal fishers. More typhoons make landfall in the Philippines than any other country except China. The archipelagic nation was identified as one of the 15 countries that form over 90 percent of the world's most vulnerable population in the low-elevation coastal zone.⁴ Around three-quarters of Filipinos are vulnerable to natural disasters, which have killed 33,000 people and cumulatively affected 120 million over the last 30 years. The Philippines Country Climate and Development Report estimates the country can experience an average annual GDP loss of at least 5.7 percent by 2040 with adaptation measures, potentially rising to 13.6 percent without adaptation measures.⁵ Approximately 16.7 percent of the population resides in low-lying coastal zones that are subject to a variety of mutually reinforcing hazards. Coastal ecosystems, which provide valuable services including coastal defense, have been significantly degraded with less than 3 percent of coral reefs being in pristine condition, and more than 50 percent of mangroves having been lost since 1918.⁶ Pollution is also a severe problem in many sheltered coastal waters. Climate change is expected to increase the frequency and intensity of typhoons and storm surges while also jeopardizing remaining coastal ecosystems. Projections suggest a potential reduction of coastal GDP by up to 52.3 percent due to intensified storm surges by 2100 and that 45 percent of wetlands will be at risk.⁷ Small-scale municipal fishers, who play an important role in ensuring food security, bear the brunt of such compounded vulnerabilities since their livelihoods are critically dependent on the health of natural resources.⁸

6. The Philippines has underinvested in infrastructure, resulting in a large infrastructure deficit particularly in coastal areas. Among the 141 countries in the World Economic Forum's 2019 Global Competitiveness Index, the Philippines ranks 96 with respect to the overall quality of infrastructure—the worst among the East Asian peers on the list.⁹ Expenditures related to coastal infrastructure account for small shares of the total budget of the Department of Public Works and Highways. Gray infrastructure is prevalent along coastlines in the Philippines in areas such as the Eastern Visayas with seawalls and groins used extensively for protection from erosion, storm surges, and coastal flooding. However, the effectiveness of the coastal protection measures currently used is uncertain as many of the investments

² Lange, G., Q. Wodon, and K. Carey, eds. 2018. *The Changing Wealth of Nations 2018: Building a Sustainable Future*. World Bank.

³ Global Forestry Watch (2021).

⁴ World Bank. 2015. "Climate Change Impacts on Rural Poverty in Low-Elevation Coastal Zones." Policy Research Working Paper 7475.

⁵ World Bank. 2022. *Philippines Country Climate and Development Report*.

⁶ World Bank. 2014. *Philippine Rural Development Project—Project Appraisal Document*.

⁷ World Bank. 2015. "Climate Change Impacts on Rural Poverty in Low-Elevation Coastal Zones." Policy Research Working Paper 7475.

⁸ Macusi E. D., K. L. Camaso, A. Barboza, and E. S. Macusi. 2021. "Perceived Vulnerability and Climate Change Impacts on Small-scale Fisheries in Davao Gulf, Philippines." *Frontiers in Marine Science*.

⁹ World Economic Forum. 2019. *The Global Competitiveness Report 2019*.



are small scale and lack continuity along the coastline. Mangroves play a critical role in providing natural coastal protection services, with an estimated value of US\$1 billion annually.¹⁰

B. Sectoral and Institutional Context

7. **The Philippines' fisheries sector contributes significantly to the national economy, food security, nutrition, employment, and livelihoods.** The fisheries sector comprises the following subsectors: (a) aquaculture (including marine, brackish, and freshwater farming), (b) municipal capture fisheries (within 15 km of the shoreline) where vessels are limited to 3 tons (gross), and (c) commercial capture fisheries in the 24 fishing grounds of the Philippines outside municipal waters. In 2019, the total annual production from capture fisheries and aquaculture stood at 2.05 million metric tons and 2.35 million metric tons, respectively, producing a total economic value of PHP 163 billion (US\$3.3 billion) and PHP 117 billion (US\$2.3 billion), respectively.¹¹ Although its share has been shrinking in recent years, the fisheries sector accounts for 1.3 percent of GDP¹² and is ranked 8 globally in terms of volume of production. The Philippines is the third largest producer of seaweed in the world. The fisheries sector provides approximately 1.6 million jobs (4 percent of labor force), including for low-income families engaged in subsistence fishing, and contributes to food security through the provision of over 50 percent of animal protein for human consumption. According to the National Fisheries Research and Development Institute (NFRDI) and the Department of Science and Technology, Filipinos consumes an average of 36.8 kg of fish and fish products per year, nearly twice the world average of 20.5 kg per capita.¹³ However, the fisheries sector is among the poorest, with poverty incidence of 26.2 percent in 2018 compared to the national average of 16.7 percent.¹⁴

8. **Marine fish stocks have been declining, with an average decline of 20 percent in capture fisheries production across all major taxonomic groups over the last decade.** The first official publication of the National Stock Assessment Program (NSAP) released data at the national level in 2017, confirming that many of the fish stocks were overfished. The Comprehensive National Fisheries Industry Development Plan (CNFIDP) 2016–2020 reports that the Philippine fisheries sector is confronted with nine critical issues: (a) depleted fishery resources; (b) degraded fishery habitats due to destructive fishing methods, conversion of fishery habitats, and negative impacts from land-based activities; (c) intensified resource use competition and conflicts; (d) unrealized full potential of aquaculture and commercial fisheries; (e) uncompetitive products due to inferior quality and safety standards; (f) postharvest losses in terms of physical, nutritional, and value losses; (g) limited institutional capabilities; (h) inadequate and inconsistent fisheries policies; and (i) weak institutional partnerships.¹⁵

¹⁰ The total estimated land area covered by mangroves is approximately 25,000 ha spread across the Philippine coastline of 36,289 km. Mangroves provide annual benefits greater than US\$1 billion in averted property damages from flooding. (World Bank. 2017. *The Coastal Protection Services of Mangroves in the Philippines*. Technical Report for Philippines Wealth Accounting and the Valuation of Ecosystem Services (WAVES).

¹¹ Philippine Statistics Authority. 2020. *Fisheries Statistics of the Philippines 2017–2019*.

¹² BFAR (Bureau of Fisheries and Aquatic Resources). 2020. *Fisheries Statistics*.

¹³ FAO. 2021. *The State of World Fisheries and Aquaculture 2020*.

¹⁴ <https://psa.gov.ph/poverty-press-releases/nid/167972>.

¹⁵ Israel, D. C., M. Lunod-Carinan, and V. B. Paque VB. 2016. "Reducing the Unintended Consequence of Overfishing Due to Open Access: Learning from the Zamboanga Experience." Philippine Institute for Development Studies, Discussion Paper Series 44; Selgrath, J. C., S. E. Gergel, and A. C. J. Vincent. 2018. *Shifting Gears: Diversification, Intensification, and Effort Increases in Small-scale Fisheries (1950–2010)*.



9. **The Philippines has a large potential for aquaculture development, but production has fallen by around 10 percent over the last decade; most aquaculture producers are small family businesses producing unprocessed fish with limited value addition to the domestic market.** The top aquaculture commodities by volume are the following: seaweed (1,499,961 tons), milkfish (409,107 tons), and tilapia (279,386 tons). Small family-run farms are responsible for the majority of production, which is in contrast with neighboring countries that have embraced new technology, intensified aquaculture production and commercial growth, and become increasingly export oriented. There is an estimated 78,969 ha of brackish water ponds on Government-owned public lands leased to private parties under a long-term Fishpond Lease Agreement (FLA) with a lease duration of 25 years (renewable). Many of these ponds have low productivity or have been abandoned. New investment is needed to upgrade the ponds, introduce new technology to increase productivity, and reconvert abandoned FLAs back to mangroves. The country's aquaculture subsector is highly stratified with most of the small-scale family businesses characterized by limited capacity and little access to credit and limited access to quality aquacultural inputs (such as disease-free seed) and modern production and postharvest infrastructure. Public support to small businesses is insufficient due to (a) inadequate research and development capacity of public research institutions and (b) limited capacity of Local Government Unit (LGU) officials in aquaculture planning (including spatial zoning), environmental monitoring, and good aquaculture practices (GAPs), among others.¹⁶ These issues create bottlenecks to private sector investment in aquaculture.

10. **Annually, around 20–40 percent of total fish caught and farmed is lost due to poor postharvest practices linked to inadequate infrastructure for ice supply, safe handling, cold storage, and transport of seafood.** Export rejection is also an issue due to (a) food quality issues (for example, substandard end products), (b) food safety issues (for example, microbial and/or chemical contaminants), (c) noncompliance with regulatory requirements, and (d) sanitary and phytosanitary measures.¹⁷ There is an urgent need to effectively link production, processing, and marketing from the sea to table while ensuring the seafood's quality, safety, and sustainability. Barriers to reducing postharvest losses include widespread inappropriate fish handling practices, marketing, transport, and distribution facilities and infrastructure. Noncompliance with regulatory or market requirements (for example, traceability) is another deficiency. The Comprehensive Postharvest, Marketing, and Ancillary Industries Plan (CPHMAIP) 2018–2022 aims to reduce fisheries postharvest losses from 25 percent in 2015 to 10 percent by 2022 and increase the competitiveness of Philippine fish and fishery products in domestic and foreign markets.

11. **The fisheries sector bears the brunt of frequent and devastating typhoons and other adverse climate effects.** Damage to boats, fishing gear, fishery pens and cages, and landing sites is common during the typhoon and monsoon seasons and may increase as typhoon intensity is projected to rise in the future. The vulnerability of fishers is compounded by low levels of resilience planning, infrastructure designed without appropriate climate risk information, lack of protective structures for boats and equipment, and challenges with early warning systems (that is, low capacity among some coastal communities to understand hazard alerts when provided and lack of awareness of actions to take after receiving them). Increasing sea temperature, acidification, and hypoxia of seawaters results in (a) migration of some fish species (expected to result in a 24 percent drop in potential catches from marine fisheries by 2050); (b)

¹⁶ PRIMEX (Pacific Rim Innovation and Management Exponents Inc.). 2021. *Feasibility Study Report—The Philippine Fisheries and Coastal Resiliency (FISHCORE) Project*. March.

¹⁷ BFAR. 2018. *Comprehensive Post-Harvest, Marketing and Ancillary Industries Plan (2018–2022)*.



food web changes, slower growth, and decreasing fish size;¹⁸ (c) loss of coral reefs with negative consequences on fish habitats and storm surge protection services valued at US\$4 billion per year;¹⁹ and (d) damage to aquaculture. High sea temperatures associated with El Niño in 2016 caused seaweed production to drop by 16 percent due to increased diseases and epiphytes and a 3.4 percent decrease in fish farm harvests as a result of high mortality and slow growth.

12. Marine plastic pollution is an emerging issue in the Philippines where the fisheries sector is recognized as a major plastic pollution source while at the same time being severely affected by mounting volumes of marine litter. It is estimated that 20 percent of the marine litter in the world's oceans originate from marine-based sources such as abandoned, lost, or discarded fishing gear and marine transportation.²⁰ Global evidence suggests that a subset of seaborne marine litter such as fishing nets and gear causes disproportionate impacts on fisheries as well as marine ecosystems through ghost fishing and entangling sea creatures. Increasing volumes of marine litter have also been causing adverse socioeconomic impacts on Philippine coastal communities, particularly affecting coastal tourism. The GOP adopted the 2021 National Plan of Action on Marine Litter to address this challenge and is designing legislative measures to address plastic pollution including to limit and gradually phase out single-use plastics.

13. Fisheries value chains have been significantly affected by the COVID-19 pandemic with jobs, incomes, and food security at risk. Seaweed and shrimp exports to China have been disrupted since March 2020 because of the pandemic. Changes in consumption due to closure of restaurants, cancellation of both public and private events, and declines in domestic and international tourism have resulted in significantly reduced demand for certain fish products, particularly high-end products, such as lobsters, oysters, bluefin tuna, and mahi-mahi.²¹ At the very outset of the pandemic, the fisheries and aquaculture production together dropped by 3.2 percent for the first quarter of 2020 compared to the first quarter in 2019.²² Health and sanitation standards, which are on average low in the Philippines' fisheries sector, will need to be improved significantly to maintain competitiveness.

14. Institutionally, the DA, through its Bureau of Fisheries and Aquatic Resources (BFAR), is responsible for the development, management, and conservation of the Philippines' fisheries and aquatic resources. Management responsibility of municipal waters (within 15 km of the shoreline) lies with LGUs with the DA-BFAR playing a supporting role to provide technical assistance (TA). While many LGUs are proactive in managing their shorelines and near coastal areas, approaches, priorities, and capacities of LGU administrations vary and the irregular configuration of the Philippines' 33,900 km of coastline and indistinct boundaries between some municipalities have resulted in unclear administrative mandates. In addition, the Department of Environment and Natural Resources (DENR) has the responsibility for establishing, administering, and managing 75 marine protected areas. The lack of

¹⁸ Based on habitat suitability models informed with local catch data, a moderate climate-change scenario could result in a 15–30 percent reduction in habitat suitability due mainly to projected increases in sea surface temperatures; Geronimo, R. C. 2018. *Projected Climate-Change Impacts on Philippine Marine Fish Distributions*. DA-BFAR; Cheung, W. W. L., et al., 2018. *Projected Changes in Global and National Potential Marine Fisheries Catch under Climate-Change Scenarios in the 21st Century*. FAO.

¹⁹ Tamayo, N. C. A., J. A. Anticamara, and L. Acosta-Michlik. 2018. "National Estimates of Values of Philippine Reefs' Ecosystem Services." *Ecological Economics* 146.

²⁰ Lebreton, et al. 2017. "River Plastic Emissions to the World's Oceans." *Nature Communications*.

²¹ OECD (Organisation for Economic Co-operation and Development). 2020. *Fisheries, Aquaculture, and COVID-19: Issues and Policy Responses*.

²² Philippine Statistics Authority. 2020. *Fisheries Situation Report January to March 2020*.



institutionalized mechanisms for coordination between the DA-BFAR and DENR has led to unstructured and fragmented coastal zone and fishery resources management.

15. **The Philippines' capture fisheries policy framework has progressively evolved from production maximization to conservation and sustainable use of resources.** The establishment of 12 Fisheries Management Areas (FMAs) in 2019 represented a fundamental transition from the open access nature of sectoral governance to an ecosystem approach to fisheries management (EAFM), whose operationalization is a key short-term priority. However, aside from some fishing effort restriction measures recently introduced, such as fishing licenses and seasonal closures for commercial fisheries sectoral governance essentially remains open access with no output control (for example, catch quota) in place. Meanwhile, the policy framework has seen recent improvements, including the 2015 amendments to the 1998 Philippines Fisheries Code tightening monitoring, control, and surveillance (MCS). Furthermore, in 2019, the Fisheries Administrative Order (FAO-r) 263 established 12 FMAs delineating Philippine waters. Underpinning the FMA concept is the recognition that sustainable fisheries management cannot be achieved at the level of individual LGUs but requires coordination across greater geographical areas. In this regard, the new FMA system has been conceptualized as a vehicle to introduce EAFM based on a cross-sectoral multi-stakeholder planning and decision-making structures informed by best available science, as a way of overcoming challenges associated with siloed and fragmented sectoral governance.²³

16. **Community-based fishery management has been piloted in some areas and has shown successful results.**²⁴ FAO-r 196 provides guidelines to establish Fisheries and Aquatic Resources Management Councils (FARMCs) and helps institutionalize the major role of fishers and other resource users in the planning and formulation of policies and programs for the management, conservation, protection, and sustainable development of fisheries and aquatic resources. The Philippines has experienced a transition in the past decade to involve the central government, the municipalities, and the fishers (through the FARMCs) to jointly manage the fisheries sector. In 2020, there were nearly 350,000 members registered for FARMC in both FMAs.

17. **The COVID-19 response in the fisheries sector has been guided by the Development Framework for Food Security and is aligned with the goals of a "food-secure and resilient Philippines with prosperous farmers and fishers."** Socioeconomic recovery and resiliency are at the heart of this framework's strategy to "survive, reboot, and regrow." Specifically, the strategy calls for prioritization of farm consolidation, modernization, industrialization, export promotion, and infrastructure development. This is to be achieved through farmers and fishers clustering and partnering with large businesses and cooperatives. This strategy is now being actively pursued by DA and is central to the design of the Fisheries and Coastal Resiliency (FISHCORE) Project.

18. **Focusing on coastal and municipal waters of FMA 6 and FMA 9, FISHCORE will assist the Philippines' fisheries sector in accelerating its sustainable sectoral transition to fulfill its full potential in supporting food security and poverty alleviation while enhancing its resilience to adverse climate impacts and other disturbances, including those related to COVID-19.** At the core of the FISHCORE

²³ With respect to harvest control with FMAs, it is envisioned that BFAR, LGUs, and other stakeholders, such as DENR and the FARMCS will continue to exercise their jurisdiction and be responsible for their mandates while adhering to the harvest reference points (HRPs) established and harvest control rules (HCRs) to be adopted for the FMA and implementing harvest control measures, as may be applicable.

²⁴ FAO. 2021. "Fishery and Aquaculture Country Profiles." <http://www.fao.org/fishery/facp/PHL/en>.



approach are (a) establishment of science-based and ecologically sound stock management systems and bearing in mind biological limitations to capture fisheries production and (b) expansion of sustainable aquaculture production and enhancement of value retention and addition across the sector. The FMAs will provide a vehicle for integrating EAFM into LGU planning processes where municipal waters and key coastal habitats will be managed in an integrated manner in coordination with stakeholders representing divergent interests. Development of fisheries and aquaculture enterprises will require organically linking finance, production, marketing, and clustering to overcome the scale and technical capacity constraints in existing micro- and small-scale enterprises, thus enabling them to seize market opportunities. In view of the acute climate vulnerability in the Philippines, climate considerations will be mainstreamed across the project activities. The project interventions would also provide a critical contribution to the COVID-19 response through both safeguarding an important component of food security and enhancing the livelihoods of poor households dependent on the sector heavily affected by the pandemic. The project is fully aligned with the World Bank Global Crisis Response Framework (GCRF), particularly Pillars 3 and 4: Strengthening Resilience and Strengthening Policies, Institutions, and Investments for Rebuilding Better, respectively.²⁵

C. Relevance to Higher Level Objectives

19. **FISHCORE is closely aligned with the Philippine Development Plan 2017–2022, which recognizes the critical contribution of the agriculture, fisheries, and forestry (AFF) sector in providing employment to one-third of the country's labor force and thus alleviating poverty.** The plan aims to augment the productivity and value addition of the AFF sector with a special focus on expanding economic opportunities for small farmers and fishers. To this end, the development plan envisages strengthening of the AFF extension system, expanded application of EAFM, diversification of AFF commodities, enterprise development through new and innovative production and marketing schemes, and support tailored to the specific needs of small farmers and fishers such as value chain-oriented capacity building and enhanced access to innovative financing and technologies.

20. **FISHCORE will support the achievement of key objectives of the GOP's CNFIDP, which is the overarching fisheries sector's development policy.** FISHCORE directly supports, among other things, the expansion of domestic and international marketing opportunities of fishery products, ensuring availability of food fish to contribute to national food security, increased numbers of competitive small and medium fishery enterprises, and enhanced compliance with relevant laws and regulations. The CPHMAIP represents a supplementary policy to CNFIDP on the postharvest and marketing aspects. CPHMAIP's main goals include reduction of postharvest losses and increased competitiveness of Philippine seafood products in domestic and international markets. The project will also assist the GOP in achieving priority outcomes under the 2010 National Climate Change Action Plan (NCCAP) 2011–2028, which is the country's guiding climate change policy. Among the seven NCCAP priority areas and corresponding outcomes, FISHCORE is particularly well aligned with Priority 1 (Food Security) and Priority 3 (Ecological and Environmental Stability), whose respective objectives are to “ensure availability, stability, accessibility, and affordability of safe and healthy food amidst climate change” and “to protect and rehabilitate critical ecosystems, thereby restoring ecological services.”²⁶

²⁵ World Bank. 2022. “Aligning World Bank Operations with the Global Crisis Response Framework: Guidance Note.”

²⁶ Climate-Change Commission. 2010. “National Climate-Change Action Plan (NCCAP) 2011–2028.”



21. **The project is also designed to contribute to the World Bank Group's twin goals of ending extreme poverty and boosting shared prosperity, as well as multiple focus areas and objectives under the World Bank Group's Country Partnership Framework (CPF).**²⁷ Specifically, the project supports Objective 7: Improved Income Opportunities in Agriculture under Focus Area 2 (Competitive and Economic Opportunity for Job Creation) and Objective 10: Increased Resilience to Natural Disasters and Climate Change under Focus Area 3 (Addressing Core Vulnerabilities by Building Peace and Resilience). Furthermore, by promoting sustainable use of fisheries resources, which constitutes an important source of protein in the Filipino diet, the project will contribute to the country's nutrition agenda, which complements the World Bank's existing nutrition programs that support Objective 2: Improved Access to Affordable Health Services. Moreover, the project will also contribute to the CPF cross-cutting themes: Governance and Promoting Digital Transformation. Governance is at the core of FISHCORE, which is to mainstream EAFM into LGU-level governance and planning processes, utilizing digital technology. The Project supports the Bank's Green, Resilient and Inclusive Development approach. Climate action is mainstreamed throughout the design of FISHCORE through (a) improving the management and health of marine resources and habitats, which is an effective form of adaptation to climate change impacts on marine ecosystems; (b) expanding and diversifying livelihoods of fisher communities, thereby increasing the resilience of an exceptionally vulnerable demographic; and (c) assessing and incorporating specific climate resilience and climate-smart measures into infrastructure and livelihood investments. The project is thus aligned with the World Bank Group's twin goals through its focus on supporting the sustainability and growth of a sector with a high level of absolute poverty.

II. PROJECT DESCRIPTION

A. Project Development Objective (PDO)

PDO Statement

22. **The PDO is to improve management of targeted fisheries resources and enhance the value of fisheries production to coastal communities in selected FMAs.**²⁸

23. **The two elements of the PDO, improved resource management and enhanced socioeconomic value of the sector, are interdependent and mutually reinforcing.** Both elements integrate and support coastal resilience to climate, economic, and environmental shocks. Healthy fish stocks and marine habitats are the foremost defense against the direct impacts of climate change on marine resources, while investments in fisheries and aquaculture value chains incorporating climate adaptation measures will help enhance the general economic resilience of a highly vulnerable population through expanding and diversifying the livelihoods of coastal communities. The coastal resilience supported by the project therefore encompasses a broader concept including socioeconomic and ecological resilience to climate change rather than focusing only on physical coastal protection.

²⁷ Discussed by the Board of Executive Directors on December 17, 2021; Report No. 143605-PH; for the period July 2019–December 2023.

²⁸ 'Fisheries production' in this context refers to both capture fisheries and aquaculture.



PDO-Level Indicators

24. The PDO-level indicators are

- Fisheries management plans formulated, implemented, and evaluated (number);
- Share of major fish stocks covered in Fishery Management Plans moving toward target reference points (percentage);
- Increase in household incomes (in real terms) derived from fishery-related sources in targeted areas (percentage);
- Reduction in postharvest losses from the targeted species in the selected LGUs (percentage); and
- Increase in value addition in targeted value chains (percentage).

Project Area

25. **The project area comprises the coastal and municipal waters of FMA 6 and FMA 9 (Selected FMAs) out of 12 established FMAs.** These two FMAs were selected through a two-stage, multi-stakeholder selection process with the following criteria: (a) level of vulnerability to natural and manmade threats, (b) status of fisheries resources, (c) access to sustainable- and resilient-investment opportunities, (d) contribution of fisheries production to the national economy, and (e) institutional capacity. The project will target capture fisheries of most importance to municipal fishers, particularly demersal and small pelagic species. Implementation of management measures will focus on municipal waters within 15 km from the shoreline. Combined, the Selected FMAs cover 11 regions and 24 provinces. FMA 6 comprises major fishing grounds around the northwest coast of Luzon, including Pagudpud Bay, Lingayen Gulf, Subic Bay, Manila Bay, and Lubang Island. Within FMA 6, all project interventions will be limited to coastal waters with depth up to a few hundred meters where these species are found. These areas can extend marginally beyond the 15 km limit of the municipal waters of FMA 6, typically to around 20 to 30 nautical miles (nm) and in all cases, no more than 48 nm from the shore. Any isolated deep ocean sea mounts are excluded from the project area. FMA 9 encompasses fishing grounds in archipelagic waters between the Visayas and Mindanao, including the Bohol Sea, Panguil Bay, Iligan Bay, Gingoog Bay, Butuan Bay and Sogod Bay.

B. Project Components

26. **The FISHCORE project will support the GOP in designing, establishing, and effectively operating fisheries management systems for sustainable utilization of targeted coastal and marine fishery resources in the coastal and municipal waters of FMA 6 and FMA 9.** Project financing will be provided for fisheries governance and management systems, capacity building, climate-resilient infrastructure, and other value-chain investments aimed at improving the sector's resource base, increasing productivity, and strengthening its resilience to climate change. FISHCORE comprises three components as outlined below.

27. **Following a framework approach, Components 1 and 2 aim to achieve, respectively, improved management of fishery and coastal resources and commercial development through infrastructure**



investments and fisheries enterprises.²⁹ Their sequencing is critical to ensure a strengthened enabling environment for infrastructure improvements and technology investments through upstream investment in policy and institutional development, planning, research, and measures for strengthening the Philippines MCS, improving safety of life at sea, and enabling effective fisheries management. In turn, support for livelihoods diversification, enterprise development, and infrastructure development provided under Component 2 will be informed by—and support the operationalization of—the outcomes of the planning and institutional capacity-building work undertaken under Component 1. Component 3 will finance project implementation management, communications³⁰ and stakeholder engagement, and monitoring and evaluation (M&E).

Component 1: Fisheries and Coastal Resilient Resource Planning and Management (FishCRRM) (IBRD US\$50.2 million)

28. This component aims to strengthen FMA governance through climate-resilient planning to recover fishery resources and build ecosystem resilience. Specifically, it will support FMA institutional and planning development for the coastal and municipal waters of FMA 6 and FMA 9, including formulation and implementation of framework plans (FPs), targeted FMPs, aquaculture development and management plans (ADMPs), and marine habitat management and restoration plans (MHMRPs) covering coastal habitats across the Selected FMAs, with a view to maximizing ecological and socioeconomic benefits and building resilience in coastal communities. The component will further support training, design, and implementation of monitoring and control systems for application within the project area, as well as habitat rehabilitation works and procurement and installation of equipment and small infrastructure. Research, capacity-building support, extension services, awareness raising, and education and communication campaigns will be carried out in close collaboration with the LGUs.

Subcomponent 1.1: Ecosystem Approach to Fisheries Management Planning and Institutions (IBRD US\$21.1 million)

29. The subcomponent will support

- (a) Development of institutional and planning mechanisms for fisheries governance and management in the Selected FMAs;
- (b) Formulation and implementation of marine resources management plans for each Selected FMA, including FMPs for target fisheries and MHMRPs, information management, and M&E in support of adaptive FMA management; and
- (c) Research, development, and extension (RDE) services for climate-smart fisheries management and development and implementation of communication and education strategies.

²⁹ Components 1 and 3 support GCRF Pillar 4: Strengthening Policies, Institutions, and Investments for Rebuilding Better; Component 2 is aligned with GCRF Pillar 3: Strengthening Resilience.

³⁰ Philippine Information Agency and existing regional mechanisms of Regional Development Councils will be tapped in the preparation of the communication plan and other education and communication activities.



30. More specifically, FISHCORE will support FMA institutional setup and FP development, as well as the formulation and implementation of at least one FMP for priority fish stocks³¹ and at least one MHMRP in each FMA within the project area through technical studies, provision of equipment, and stakeholder consultations. FMPs are comprehensive plans for the management of major fish species or a multispecies group to ensure their adaptive conservation and sustainable harvesting in a changing climate and in a manner consistent with the principles of EAFM. MHMRPs cover coastal habitats across the FMA and aim to identify and ensure the conservation and connectivity of key habitats to support the lifecycles of fish and other marine resources under escalating climate change impacts. To support project M&E, the project will review existing surveys and data-collection systems and support the design and establishment of a modern information management system. Implementation of the FMPs/MHMRPs will be reviewed annually, and a formal evaluation against their objectives and indicators will be conducted every 3 years to facilitate adaptive management. The project will also support climate-smart RDE services as well as the development and implementation of communication and education strategies to ensure stakeholder buy-in for the FMA management objectives and approaches.

Subcomponent 1.2: Aquaculture Development and Management (IBRD US\$12.7 million)

31. This subcomponent will support

- (a) Strengthening of aquaculture governance for Selected FMAs, including (i) formulation of ecosystem-based aquaculture development and management plans (ADMPs) to support the establishment of aquaculture zones, and design of aqua-industrial business corridors (ABCs) and (ii) integration of aquaculture information and establishment of an aquaculture registry system; and
- (b) Aquaculture quality and resilience enhancement through (i) climate, disaster, and disease risk assessment and identification of adaptation and risk management measures, (ii) testing and demonstration of experimental climate-smart and efficient aquaculture technologies and livelihoods, (iii) development of guidance materials on climate-resilient GAPs, and (iv) design and implementation of risk management and certification systems.

32. The ADMP formulation process comprises (a) zonation for aquaculture development according to different culture methods;³² (b) design of ABCs, including identification of development clusters; and (c) improvement of biosecurity and early warning systems for climatic hazards. In addition, the project will support the integration of vital information (for example, monitoring of licenses and production data) into the information management system. In conjunction with ADMP development, an integrated aquaculture registry system (AquaR) will be established, and a review of institutional responsibilities and coordination, policies, legislation, and licensing procedures will be conducted to inform regulatory reforms.

³¹ Here the stock refers to 'species baskets', comprising several species with similar biological and fishery features grouped together.

³² To minimize environmental risk and maximize economic returns, the project will use geographic information system (GIS) and remote sensing to map existing aquaculture production zones (APZs) for major aquaculture commodities, infrastructure and facilities, and services at both the ABC and FMA levels.



Subcomponent 1.3: Support to Local Government Units for Implementation of FMA Plans and Management Activities within Municipal Waters. (IBRD US\$16.4 million)

33. Under this subcomponent, support will be provided for

- (a) Integration of fisheries, aquaculture, and marine and riverine habitat management and restoration plans into the legal, policy, and planning frameworks of selected LGUs; and
- (b) Implementation of FMPs and marine and riverine habitat management and restoration plans at the municipal level and improvement of LGU contributions within municipal waters to FMA monitoring and information systems.

34. Stakeholder engagement and necessary technical and implementation assistance will be provided to translate the FMA management objectives developed under Subcomponents 1.1 and 1.2 into LGU-specific contexts, including (a) amendments of LGU ordinances in accordance with the FPs, FMPs, MHMRPs, and ADMPs and (b) development and/or strengthening of LGU-level coastal resources management (CRM) and integrated coastal management (ICM) plans. The project will also finance TA, equipment, small works, and initial operating costs to support implementation of FMPs and MHMRPs by select LGUs. FMP implementation will include (a) communications strategy development and implementation; (b) design and implementation of MCS programs and law-enforcement activities in the project area (see annex 2), including a vessel-tracking system for municipal boats³³ and an electronic catch documentation scheme (eCDS); and (c) capacity building for fishers' organizations. MHMRP implementation is expected to comprise habitat-specific use regulations, regulations of onshore activities that affect coastal habitats, establishment of community-led management regimes, and development of 'pay-for-work' programs to support protection and rehabilitation of coastal ecosystems. LGUs will also receive training and initial logistical support to regularly collect and share information and data to support project M&E.

Component 2: Modern and Resilient Livelihood Investments (MARLIN) (IBRD US\$112.67 million)

35. The objective of this component is to enhance the economic value of fisheries and aquaculture to fishing communities through strategic and climate-resilient investments to reduce postharvest losses, expand aquaculture production, and add value to fisheries production. It aims to enhance the income-earning opportunities of capture fishers and fisher organizations as well as expand the overall value of the sector within the Selected FMAs. Through the implementation of grant subprojects and public sector infrastructure investments, the component will support critical value-chain infrastructure development and improved fish production, handling, and processing technologies, alongside related TA for technical extension and business advisory services to catalyze wider private sector and LGU investment. Individual subproject investments will be selected based on a 'traffic light' risk-assessment system linked to strengthening of capture fisheries controls—for example, licensing systems; vessel tracking; illegal, unreported, and unregulated (IUU) fishing reduction; and traceability and certification schemes. No high-risk investments will be considered that could directly increase harvesting capacity of capture fisheries

³³ Adoption will be voluntary, with the objective of encouraging boat owners to install the system on the basis of associated benefits, for example, spatial information systems to provide safety, fishing conditions, and market information services. As system adoption expands, other incentives could be applied such as access to improved landing facilities, credit or other support systems, and/or access to product certification schemes that provide higher prices for catch of verified origin.



outside of strictly controlled fishing gear replacement schemes to eliminate particularly damaging gear.

Subcomponent 2.1: Fishers' Livelihood Diversification & Development (IBRD US\$16.32 million)

36. This subcomponent will extend support for

- (a) Capacity-building support for fishers' associations and business formation;
- (b) Livelihood grants to eligible beneficiaries for implementing the relevant subprojects; and
- (c) Vocational training programs for livelihood diversification of fishers.

37. TA will be provided to new and existing fisher groups and associations to build capacity for enterprise formation and business development. This will include support for climate-resilient business plan preparation, based on which fisher groups and associations may access livelihood subproject grant assistance. Successful grant recipients will further receive tailored technical and managerial extension support, complemented by a vocational training program to support livelihood and income diversification beyond fisheries. Alternative livelihood grants will support financially viable, sustainable, and climate-resilient activities to catalyze fishers' transition from capture to culture and to other income-generation alternatives outside of the capture fisheries sector. A substantial portion of the grants are expected to support improved climate resilience (for example, provision of storm shelters). Project support will prioritize the LGUs most active in fisheries management and affected by HCRs.

Subcomponent 2.2: Aquaculture and Fisheries Enterprise Development (IBRD US\$37.55 million)

38. The subcomponent will support

- (a) Technical assistance in value chain analysis and preparation of business planning;
- (b) Enterprise grants to eligible beneficiaries for implementing the relevant sub-projects; and
- (c) Technical and marketing support for aquaculture and fisheries enterprises.

39. Value-chain analysis will be undertaken at the start of the project to improve the understanding of market gaps and additional investment needs for major products. TA will be provided to existing small and medium fisheries enterprises to build capacity for catalytic enterprise identification and business plan development. Enterprise grants will focus on catalytic investments needed to establish new climate-resilient technologies and practices. Subprojects will be clustered to support the development of ABCs, providing a geographically integrated set of facilities and services along aquaculture and fishery value chains from brood stock, hatchery, nursery, and grow-out farms up to postharvest, processing, and marketing. Subproject prioritization criteria and detailed subproject procedures have been developed, where climate vulnerability assessment is an important selection criterion. The project will enhance technical and extension services to support the development of start-ups and small fishery business enterprises through the delivery of an integrated bundle of services (for example, demand-driven technology development, entrepreneurship training). Market development support will also be provided.

Subcomponent 2.3: Aquaculture and Fisheries Infrastructure (IBRD US\$58.8 million)

40. The subcomponent will support civil works and provide relevant technical and operational support for the design and implementation of selected infrastructure, including (a) resilient fisheries infrastructure, (b) research and regulatory facilities, and (c) commercial service facilities.



41. Infrastructure investments will facilitate the establishment of ABCs in coordination with the enterprise and livelihood grant subprojects described above. Climate considerations will be mainstreamed into the design of all infrastructure subprojects, including use of renewable and lower-emission technologies, climate screening for both extreme and slow onset events, and design solutions to withstand adverse climate-change impacts. Support for the development of commercial service facilities will prioritize establishment of public-private partnerships whereby public investments may be needed to fill gaps in critical backbone services for ABCs and/or demonstration facilities for new technologies, standards, or production scales. A preliminary set of investments³⁴ has been identified and will be refined through the assessment of critical ABC requirements based on the ADMPs prepared under Subcomponent 1.2 as well as the preparation of value-chain analyses under Subcomponent 2.2.

Component 3: Support to Project Implementation and Management (SuPrIM) (IBRD US\$13.15 million)

42. The component will finance technical and operational support for project management and coordination, including financial management (FM), independent audits, procurement, environmental and social (E&S) impact management, stakeholder engagement, grievance redress mechanisms, monitoring, reporting and evaluation, capacity-building support, and development of a knowledge management system for sharing project-related knowledge products.

C. Project Beneficiaries

43. **FISHCORE project beneficiaries include fisherfolks and micro, small, and medium enterprises engaged in the fishery and aquaculture value chains, coastal communities, and national- and FMA-level management bodies.** Principal direct beneficiaries of FISHCORE are estimated at 1.15 million people in the two Selected FMAs whose livelihoods are largely dependent on sustainable use of coastal resources (including 547,000 registered fishers at the provincial level, of which 70 percent are male and 30 percent female). Additional project beneficiaries are people employed in other segments of the fisheries and aquaculture value chains, including producers and providers of fishing gear and aquaculture equipment and materials, cold chain actors, seafood processors, and market operators and exporters, many of whom are located outside the physical boundaries of the project area. Evidence suggests that women's labor participation is pronounced in the preparation and processing stages of the value chains. By extension, fishery cooperatives and industry associations will also benefit from FISHCORE. Capacity developed within officials of the DA-BFAR, researchers at fishery-related public research institutes, and other fisheries professionals will further benefit fisheries-dependent communities across the country as the FMA governance model supported by the project is rolled out.

D. Results Chain

44. **The long-term objective of the project is to enhance ecosystem and community resilience in the Selected FMAs.** FISHCORE strives to augment biological and socioeconomic aspects of resilience in Philippine coastal communities, which are mutually reinforcing. More concretely, it is anticipated that enhanced resilience would manifest itself in the following forms: (a) improved overall fish-stock states, (b) enhanced food security, (c) reduced poverty incidence among fishers, and (d) increased competitiveness of select seafood commodities. Achieving these long-term objectives would require concerted efforts aimed at simultaneously improving fisheries management and increasing value addition

³⁴ All physical investments under the project will be limited to municipal water and onshore coastal areas in the Selected FMAs.



upon solid institutional arrangements supported by targeted TA, capacity building, and awareness raising. FISHCORE is designed to provide such critical building blocks for resilient coastal communities.

45. **The PDO captures the two aspects instrumental for such a long-term sustainable transition, namely improved fisheries management and enhanced value of fishery commodities.** These two aspects are interdependent in many ways. For instance, improved management includes compliance of LGUs and fishers with regulations applicable in the project area, which could include temporal and/or spatial restrictions on fishing. On the other hand, planned infrastructure investments and enterprise development along the fisheries' value chains will contribute to reducing postharvest losses and increasing the market values of fishery products, thus mitigating temporary income losses from resource-management measures needed for stock recovery. Furthermore, the reduced fishing efforts are expected to translate into improved fish stock status, which leads to increased catch and income. Likewise, in aquaculture, improved management practices will reduce disease-related losses and have positive impacts on the value of aquaculture production, which would in turn incentivize further improvements in management. The project aims to support such positive feedback loops in both capture fisheries and aquaculture.

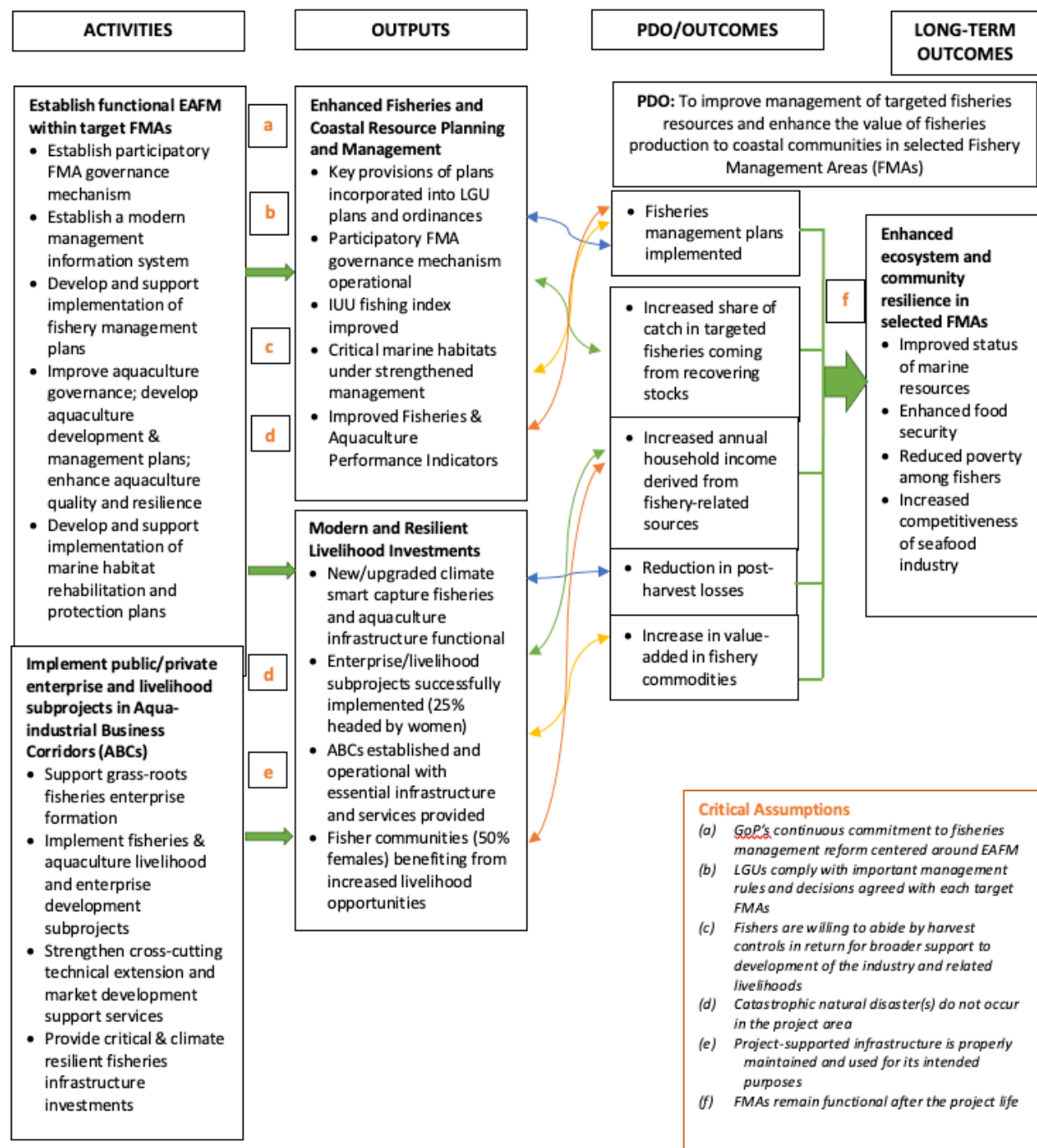
46. **The proposed PDO-level indicators are appropriate metrics to measure the anticipated project outcomes as the project shifts the direction of sectoral development toward a more sustainable and resilient trajectory.** The PDO indicators are intended to measure the anticipated consequences of project interventions. For example, the implementation of FMPs will be underpinned by, among others, a functional FMA governance mechanism as well as a robust MCS regime. The improved fisheries management measures, coupled with enhanced protection of critical marine habitats, would result in stock recovery in the medium term. The intended reduction in postharvest losses would largely result from the planned infrastructure investments. The improved infrastructure combined with dedicated technical and entrepreneurial assistance in the ABCs will lead to annual increases in value added in targeted value chains. Finally, increased annual household income derived from fishery-related sources would be achieved mainly through the implementation of enterprise and livelihood subprojects, some of which will be designed as job-focused interventions.

47. **The proposed outputs will be supported by activities under two components that are focused on management and value addition, respectively, while being cognizant of the links between the two.** Component 1 will focus on the establishment of functional and participatory EAFM within the Selected FMAs, comprising activities aimed at improving management of capture fisheries, aquaculture, and habitat protection/rehabilitation in a holistic manner. The improved management mechanism would provide a solid basis for the implementation of enterprise and livelihood subprojects under Component 2.

48. **The Theory of Change (TOC) matrix (figure 1) demonstrates how these interventions will result in the expected outcomes.** The TOC also shows how the outcomes will contribute to achieving the long-term objective of enhanced ecosystem and community resilience in Selected FMAs.



Figure 1. Theory of Change Matrix



E. Rationale for Bank Involvement and Role of Partners

49. The World Bank has played a pivotal role in the Philippines' agriculture sector reform agenda over the past two decades in partnership with the DA. Since 2014, the World Bank has been supporting the Philippine Rural Development Project (PRDP), which aims to increase rural incomes and enhance farm



and fishery productivity in project areas by supporting smallholders and fishers to increase their marketable surpluses and market access through a value-chain approach. The World Bank has developed robust working relationships with stakeholders in the agriculture sector and gained valuable insights into value chains for key seafood commodities through the PRDP.

50. **The World Bank will mobilize its global expertise in the Blue Economy and climate mainstreaming.** The holistic EAFM to be facilitated by FISHCORE is aligned with the World Bank's integrated and sustainable Blue Economy approach to coastal and marine development. The World Bank's extensive expertise and experience in supporting the Blue Economy across the world will help inform the implementation of the project. Moreover, the World Bank is a global leader in climate co-benefits with its growing commitment to mainstreaming climate mitigation and adaptation considerations across its operations. This is particularly relevant to the Philippine country context characterized by acute vulnerabilities to climate-change impacts. Climate considerations have thus been mainstreamed in all relevant aspects of FISHCORE.

51. **Engagement with the World Bank also enabled the DA-BFAR to benefit from complementary TA through the World Bank's strategic partnerships with other development partners and a multi-donor trust fund for which the World Bank is the trustee.** Assistance from several international capture fisheries and aquaculture experts was mobilized through the World Bank's partnership with the United Nations (UN) Food and Agriculture Organization (FAO). The World Bank team also mobilized grant financing from the PROBLUE Trust Fund to inform key aspects of FISHCORE, including conducting the DA-BFAR's institutional capacity assessment, a value chain and infrastructure investment needs analysis, and a baseline survey on ecological and socioeconomic conditions.

F. Lessons Learned and Reflected in the Project Design

52. **EAFM has become the new global norm as an approach to fisheries management.** Early lessons from EAFM implementation from around the world have been incorporated into FISHCORE. EAFM departs from the traditional fisheries management approach centered around fishing input control and adopts a more holistic viewpoint where fisheries are considered an integral part of the broader ecological and socioeconomic landscape. EAFM has gained high-level international support, including explicit endorsement by the UN General Assembly (2012) and the UN Conference on Sustainable Development (Rio+20). It has also been implemented by internationally recognized actors in the fisheries sector, such as the FAO, United States Agency for International Development, and the Global Environment Facility, which has led to the identification of key ingredients of success, including cross-sectoral decision-making, integration of co-management, and protection of key ecosystems. Such practical lessons have been incorporated into the project design.³⁵

53. **FISHCORE draws on insights gained from the ongoing PRDP.** The PRDP comprises interventions focused on the fisheries sector commodities and has demonstrated that financing local rural infrastructure and enterprise development along key seafood commodity value chains is an effective means of increasing rural incomes and enhancing the productivity of the fisheries sector in the context of the Philippines. The PRDP has demonstrated that a carefully designed cost-sharing mechanism between a government entity, the LGUs, and beneficiary groups can provide effective incentives that encourage

³⁵ EAFM Learn. 2021. "Why the Ecosystem Approach to Fisheries Management." <http://www.eafmlearn.org/why-eafm>.



active participation from the latter in infrastructure investments.³⁶ This has informed the typology of infrastructure subprojects under Subcomponent 2.3 with cost-sharing ratios tailored to different types of infrastructure.

54. **The project further builds on the recent experience of the Fisheries, Coastal Resources, and Livelihood (FishCORAL) Project.**³⁷ Implemented from 2015 to 2021 by the International Fund for Agricultural Development (IFAD) with a total financing of US\$30 million, FishCORAL is the most recent sizable development partner-supported investment project focused on the fisheries sector. FishCORAL has been instrumental in successfully creating bay-wide fisheries and coastal resources management of the institutional frameworks that underpin the implementation of multi-LGU coastal resource planning, management, and protection activities. Another key lesson is the usefulness of clustering technical and infrastructure support for livelihood and enterprise development to achieve economies of scale and ensure lasting impacts. Accordingly, FISHCORE plans to support livelihood and enterprise subprojects clustered around the ABCs to be established in strategic locations within the project area.

55. **FISHCORE project interventions also draw on the World Bank's recent fisheries sector engagement in East Asia and Africa.** The successfully completed Vietnam Coastal Resources for Sustainable Development Project (CRSD) has demonstrated the viability of co-management mechanisms in nearshore waters while achieving significant reductions in postharvest losses through targeted value-chain support. Furthermore, based on a performance review of two recent World Bank fisheries investment projects in Senegal, the Independent Evaluation Group (IEG) concludes that supporting alternative revenue-generating activities can potentially reduce the poverty-conservation tradeoff if the following three conditions are met: (a) the activities are designed to generate sufficient income based on rigorous feasibility studies, (b) the project adequately covers the necessary investment costs, and (c) a sustainability mechanism is put in place to ensure the longevity of the activities beyond the project life.³⁸ Such lessons have been incorporated into FISHCORE's design.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

56. The DA-BFAR will manage and implement the project, adopting the new institutional arrangements and mainstreaming the operational systems entailed by the new ecosystems approach to fisheries management. Structures for project oversight, coordination, and implementation will be established at the national level and mirrored at the FMA level, with more inclusive membership built on existing coordination platforms. Key organizational arrangements for the project would be as follows:

- (a) **Project oversight and coordination would be undertaken by a National Steering Committee (NSC).** The NSC would expand upon the existing Fishery Oversight Committee, through inclusion of other relevant sector representatives. The NSC will be chaired by the Secretary of Agriculture and include representatives from the national government agencies

³⁶ World Bank. 2021. *Implementation Completion and Results Report (ICR) for PRDP*.

³⁷ IFAD. 2018. *Philippines Fisheries, Coastal Resources, and Livelihood Project Mid-term Review: Main Report and Appendices*; IFAD. 2021. *Philippines Fisheries, Coastal Resources, and Livelihood Project: Supervision Report*.

³⁸ World Bank Group. 2015. *Project Performance Assessment Report: Senegal Integrated Marine and Coastal Resources Management Project; Sustainable Management of Fish Resources Project*. IEG.



(NGAs), fishery associations, industry, academia and research community, and nongovernmental organizations (NGOs).

- (b) **National-level implementation would be undertaken by a National Project Management Office (NPMO) reporting to the Director of the DA-BFAR and led by a National Project Coordinator.** The NPMO would have a component leader for each of the project components, who will lead a small team of specialists providing oversight and coordination. The component leaders would be drawn from the DA-BFAR's staff to ensure sustainability of the institutional reforms. The NPMO would also serve as secretariat to the NSC.
- (c) **For each FMA, a Management Board has been established, chaired by the Lead Regional DA-BFAR Director and co-chaired by a Local Chief Executive.** FMA Board membership includes representatives from the DA-BFAR, Integrated Fisheries Aquatic Resources Management Councils, and Protected Area Management Boards, as well as stakeholder representatives from municipal, commercial, and aquaculture fisheries; private sector traders/processors; academia; indigenous peoples; NGOs; and NGAs. Scientific Advisory Groups (SAGs) would be established to provide technical guidance to the Management Boards in accordance with FAO-r 263. The Lead DA-BFAR Director for FMA 6 has been identified from Region 3 (Central Luzon), while the Lead DA-BFAR Director for FMA 9 would be from Region 10 (Northern Mindanao).

57. **A Regional Project Implementation Unit (RPIU) reporting to the Lead DA-BFAR Director will serve each FMA.** The RPIU staff will be organic personnel drawn from each of the Regional Fisheries Offices (RFOs) encompassed by the FMA. The unit will serve as a secretariat to the FMA Management Board and be responsible for overseeing and facilitating the implementation of the project activities within the FMA while also coordinating with relevant NGAs and key private sector partners. Regional Fisheries Management Area Coordinating Units (RFCUs) will be established at other DA-BFAR-RFOs within the FMA to facilitate implementation of FMA plans and programs within the provinces and municipalities served by that RFO. Key activities include provision of TA and advice to LGUs and the private sector as well as proactive support for the integration of FMA plans into the Provincial Investment Planning Frameworks and the Annual Investment Programs of the LGUs.

58. **Responsibilities for implementation of project activities are based on inherent mandates and responsibilities of the DA-BFAR, NFRDI, Philippine Fisheries Development Authority (PFDA), and LGUs according to the 1991 Local Government Code and will support devolution planning under the Mandanas Ruling.** The DA-BFAR will be responsible for direct implementation of FMA-level analytical work, planning, research, and monitoring activities. DA-attached agencies, specifically NFRDI, will facilitate, monitor, and implement various research needs and activities of the project. LGUs have primary responsibility for implementing fisheries and habitat management measures within municipal waters in alignment with agreed FMA-level plans. The RPIU and RFCUs in each FMA will augment the DA-BFAR role in supporting FMA management activities related to planning and coordination, technical training, and quality assurance. Fisheries infrastructure investments under joint BFAR-LGU responsibility will be mainstreamed into the local planning process for integration into the Provincial Commodity Investment Plan (PCIP), Comprehensive Development Plans, and Annual Investment Programs. The responsibilities of the participating LGUs will be defined with memoranda of agreement (MOAs), to also include specific



schedules for handover and assumption of operation and management responsibilities.³⁹ Livelihood and enterprise subprojects will be implemented by grant recipients with technical support and oversight from the project. More details of the project implementation arrangements can be found in annex 1.

59. **The project will support substantive changes in the operations of the DA-BFAR to realize the EAFM based on the FMAs and more active and collaborative engagement by LGUs.** Formal and on-the-job training will be delivered to the DA-BFAR and LGU staff by specialized service providers in new operational functions (including formation of clusters and enterprises and business planning). To promote learning by doing under the project and provide time for institutional arrangements to evolve, project implementation will initially be supported by a significant complement of technical and administrative contract staff in RPIUs and RFCUs, working alongside part-time, seconded DA-BFAR staff and under the leadership of project component leaders drawn from regular DA-BFAR staff. As experience with FMA implementation evolves, functions will become more mainstreamed within routine DA-BFAR responsibilities, similar to the trajectory that has been followed with the mainstreaming of PRDP functions by the DA over time.

60. **Implementation procedures will be detailed in the Project Operations Manual (POM).** The POM would provide details on how fiduciary, M&E, environmental, and social aspects are to be managed, along with a communication/advocacy strategy on the ecosystem approach to fishery management and roles and responsibilities of the different partners. For the implementation of Component 2 subprojects, relevant Operations Manuals already mainstreamed within the DA will be adopted fully or substantially, that is, I-Plan and I-Build for infrastructure and I-Reap for enterprise development.

B. Results Monitoring and Evaluation Arrangements

61. **The intended results, results indicators, means of verification, and arrangements for results monitoring are specified in the Results Framework and Monitoring (section VII).** The project will build an information and communication technology (ICT)-enabled, web-based management information system (MIS)-M&E system, which integrates geo-tagging and geo-mapping information. The system would also incorporate features for citizen feedback, submission of grievances, and ‘good-example’ case studies/stories to share experiences and best practices, which build on the world-class MIS-M&E system developed by the DA through the ongoing PRDP. FISHCORE will conduct baseline, midterm, and end-of-project surveys and evaluation studies to strengthen project M&E. Evaluation of management effectiveness in each Selected FMA will employ statistically rigorous analysis of key variables (for example, targeted stock levels, IUU incidence, and fisheries-related income) as well as qualitative assessment of key impact trajectories based on impact evaluation methodologies, to the extent possible. The MIS-M&E system would also incorporate the requirement of FAO-r 263, that each FMA Management Board will establish a peer review mechanism and submit a consolidated Management Board report to the DA-BFAR by February 15 of each year. At least one M&E staff member or consultant will be appointed or recruited within each project implementation entity at different levels (national, FMA, and regional). A series of training and capacity-building activities are planned for the appointed/recruited M&E staff on different aspects of M&E and the use of the MIS-M&E system to ensure that they will be able to satisfactorily perform the respective functions. Furthermore, the project will also engage a consulting firm, if needed,

³⁹ Examples could include app-based early warning system for approaching typhoons to allow farmers to harvest fish before landfall.



to assist the DA-BFAR in managing the MIS-M&E system for the first few years of project implementation, thereby consolidating information from the components and preparing the quarterly M&E reports.

C. Sustainability

62. **The project is designed to operationalize the new fisheries management paradigm as well as support the governance devolution processes, both underpinned by high-level GOP commitment and policy.** Stipulated in the Fisheries Code and FAO-r 263, EAFM represents the country's fisheries management approach for which the newly established 12 FMAs are expected to function as a vehicle of transformation. The project will be implemented in such a way to support the DA's devolution strategy in response to the Mandanas Ruling—specifically through identifying and building capacity for complementary roles of LGUs and the DA-BFAR. For this reason, the project places considerable emphasis on translating the FMA-level policy framework into LGU-level regulations and corresponding actions on the ground. Incentives for LGU participation include increased project investments and recognition of performance in the short term. The successful FMA model coupled with enhanced LGU capacity to be demonstrated and established by FISHCORE could be emulated in the remaining 10 FMAs after the project life, thus contributing to GOP-led long-term fisheries sector reform processes.

63. **The project is designed to ensure the longevity of livelihood and enterprise activities and infrastructure investments.** Under Component 2, livelihood diversification and enterprise development support will be provided by way of grants that require contributions by recipients to foster their ownership. The livelihood subprojects will be complemented by vocational, enterprise formation, and business development training, including provision of tailored technical and managerial advice. Likewise, the enterprise subprojects will be accompanied by technical and extension services through Fisheries Technology Business Incubators, which provide dedicated support for innovative technology application, entrepreneurship, and access to financing.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Technical⁴⁰

64. **The project supports improved management approaches based on international experience, and their application to the Philippines' context, particularly in relation to the decentralization of government functions in the sector.** It also promotes a range of improved technologies for stock assessment and monitoring, fisheries enforcement, aquaculture production, and fish handling and processing.

65. **Gender.** The roles of men and women in fishing communities in the Philippines are deeply integrated yet unequal. Women are at a disadvantage compared with their male counterparts⁴¹ because they have disproportionate household and caregiving responsibilities. Additionally, their management of

⁴⁰ As part of technical appraisal of the project, a full climate co-benefits assessment was conducted. The result is summarized in a climate appendix to the PAD accessible at: <https://bit.ly/40I31br>.

⁴¹ Castro, Lazarte, Bilecki. 2020. *Analyses of Gender Roles and Participation within Fishing Communities*. This paper finds that there are gender inequalities in access and control over fisheries resources and that women and men have different spheres of traditional knowledge and leadership.



household finances, including funding household needs and taking out loans to fund fishing activities, can lead to a disproportionate debt burden.⁴² These activities impede women from taking on larger fishery leadership roles. Of the 5,256 registered fisher organizations and cooperatives in the project area, only 4 are women's organizations. Female entrepreneurs tend to have less access to credit and fewer opportunities to upgrade machinery and equipment required to expand their business in the fisheries sectors. Around 46 percent of formal and informal women-owned enterprises in the Philippines are unserved or underserved in terms of access to financial services.⁴³ Women entrepreneurs in the Philippines often face limitations to access financial intermediaries due to factors such as informal status of the business, lack of financial products' information, limited control of assets (land, financial, and so on), lack of knowledge of business strategy/plans and management, and limited access to a business or social network.

66. The project will provide access to finance through grants intended to increase women's capacity to grow their enterprise and offer technical training and knowledge-building activities on relevant topics of coastal management, ecosystem rehabilitation, aquaculture/mariculture, entrepreneurial ventures, and alternative livelihoods along with business and leadership training and support to formalize female fishers' groups. Priority would be accorded to proposals of subprojects that are led by women and indigenous peoples by giving additional scores in the appraisal and approval process. The project will also provide grants to women-owned/-led organizations to upgrade machinery and equipment required to expand their businesses and facilitate links for credit access and market opportunities.

67. **Citizen engagement.** The project will support mechanisms for citizen engagement that will help ensure a meaningful two-way interaction between project beneficiaries and the DA-BFAR as the implementing agency. This project will support the establishment and implementation of citizen engagement through existing platforms, such as integrity circles,⁴⁴ the Fisheries and Aquatic Resources Management Councils (FARMCs),⁴⁵ and Agriculture Dialogue and Information Network Groups (ADINGs),⁴⁶ considering river basin-wide coverage (for example, inter-provincial and regional institutional links) to promote transparency, accountability, anticorruption, and trust among LGUs, business groups, and civil society organization. Specifically, integrity circles or similar platforms will be used as a consultation mechanism, to seek feedback on project implementation from project beneficiaries on a regular basis (for example, quarterly) and identify areas for improvement. In each annual consultation, the project will also be able to report back to beneficiaries on how it has acted on the issues/concerns raised during the previous consultation. The project will support the use of digital technology where possible to enhance the efficiency and effectiveness of the integrity circle, FARMCs, and/or ADING mechanism for delivering on citizen engagement outcomes.

⁴² Castro, Lazarte, Bilecki 2020.

⁴³ Women's World Banking. 2015. *Access to Finance of Women-Owned SMEs in Southeast Asia*.

⁴⁴ Integrity circles will include key stakeholders such as agriculture and farmer/fisher organizations, youth and civil society, LGUs, the private sector in agribusiness, and the DA-BFAR regional offices.

⁴⁵ Article II of the Fisheries Code (Republic Act 10654) mandated the creation of FARMCs to institutionalize the participation of fisherfolk and their organizations, along with other resource users, in community-based planning and implementation of policies and programs for the management, conservation, development and protection of fisheries and aquatic resources of the municipal waters. FARMCs are established at the national (NFARMC) and municipal/city (M/CFARMC) level as well as in bays, gulfs, lakes and rivers, and dams bounded by two or more municipalities/cities (Integrated FARMC or IFARMC).

⁴⁶ DA Administrative Order No. 14, series of 2020. "Institutionalizing the Agriculture Dialogue and Information Network Groups".



68. **COVID-19.** The pandemic's direct impact on the fisheries sectors further highlighted the importance of investing in the sector. The Philippines implemented a series of lockdowns and control measures that severely affected movement and commerce. Steps were taken to ensure the continued functioning of food supply chains, but nevertheless, there were significant impacts on fisheries production, particularly in the earliest and more stringent lockdown. During the initial enhanced community quarantine, only small fishing boats carrying a single fisher were allowed, which dramatically reduce fishing activity over two months. Aquaculture production was negatively affected primarily through disrupted availability of fry, fingerlings, and other inputs. Fisheries have been prioritized for investment in the wake of COVID-19 due to both the severe direct impact on those employed in the sector and the importance of a robust and self-sufficient sector to support food security. The project will directly support COVID-19 recovery and preparation for future emergencies through its support to vulnerable populations by (a) increasing the volume and resilience of both capture and aquaculture fisheries production, (b) introducing e-marketing systems, and (c) handling improvements that reduce the amount of direct contact and risk of disease spread in the supply chains.

69. **Disruptive technology.** The project will integrate several new technologies⁴⁷ that will bring about increased efficiency in the fisheries sector and will enhance management. Electronic reporting for and through a vessel monitoring system (VMS) would contribute to improving traceability, reducing costs, providing timely information, and fostering compliance. Electronic catch documentation will improve transparency and access to data. Remote sensing unmanned aerial vehicle and automatic identification system (AIS) will also contribute to reduced costs for monitoring activities in the project area, monitoring the health and extent of coastal ecosystems, and provide real-time information for adaptive management of the FMAs. Technologies for e-commerce will help overcome trade barriers that resulted from COVID-19 and will develop new potential for trade.

70. **Maximizing financing for development.** The explicit focus of Component 2 is on catalytic investment that is, providing a minimum set of public investments to overcome (knowledge and coordination) barriers to self-sustaining private sector investment. In addition, the project will facilitate access to finance for micro and small enterprises in the fisheries sector through TA to address both demand- and supply-side barriers and provide extensive investments in technology transfer and cross-fertilization, including establishing technology incubators and facilitating partnerships between experienced and grassroots enterprises.

71. **Marine plastic pollution.** The project is helping to mainstream marine plastic pollution reduction across multiple areas. Examples include (a) national policy development, which will address the issue of ghost fishing for fisheries as a source of marine plastic pollution and support RDE services for alternative fishing gear and supplies as well as package development and use; (b) beach cleanup activities to reduce the impact of marine plastic pollution on the ecosystem; (c) recycling of fishing nets as an alternative livelihood; (d) integrated waste management within the marine habitat protection plans to be developed by the LGUs; and (e) education materials in communication campaigns. Additionally, the project will ensure these activities to be consistent with the National Plan of Action for the Prevention, Reduction, and Management of Marine Litter (NPOA-ML) adopted by DENR in 2021 through DENR Memorandum Circular No. 2021-10.

⁴⁷ The application of project-supported technologies will be limited to the project area only.



Economic and Financial

72. **The project is expected to derive substantial economic benefits through support for improved fishery management and seafood value-chain strengthening.**⁴⁸ Based on the project activities, economic models were developed to quantify the incremental economic benefits and costs accruing from the project investments in (a) improved fishery management (particularly the stock recovery benefits from small pelagic species); (b) alternative livelihoods (mangrove crab production or aqua-silviculture and seaweed culture, processing, and marketing); (c) aquaculture enterprises development (tilapia hatchery, tilapia nursery with hatchery, tilapia grow-out, milkfish hatchery, milkfish nursery, milkfish grow-out, and milkfish processing and marketing); and (d) postharvest processing and market facilities (fish landings, ice plant and storage facilities, common postharvest facilities and warehouse/storage facilities, processing facilities, and market facilities). The proposed individual investments are viable and expected to yield robust results. Economic internal rates of return (EIRRs) ranged from 16 percent (Common Post-Harvest Facility) to 170 percent (Improved Management of Fish Stocks). The EIRR for the overall project was estimated at 40 percent with an economic net present value of US\$324.5 million at a 10 percent discount rate over 20 years.

B. Fiduciary

(i) Financial Management

73. Under the World Bank's Policy and Directive on Investment Project Financing, the borrower and the project implementing agency are required to maintain adequate FM systems—including accounting, financial reporting, and auditing systems—to ensure that they can provide the World Bank with assurance that funds are used for the intended purposes. The conclusion of the FM assessment is that (a) the DA-BFAR's FM systems would meet World Bank requirements, provided that recommended mitigating measures are implemented, and (b) there is sufficient basis to rely on country systems for all FM aspects of the FISHCORE. The overall FM responsibility will be at the NPMO.

74. **The major FM risk identified is the broad geographic coverage of the project and difficulty in monitoring FM implementation.** The mitigating measures to be implemented to reduce risks include (a) finalizing and adopting an FM Manual to formalize control processes specific to the project, (b) identifying and assigning FM staff to provide FM support to the Project Management Office (PMO), (c) the DA and the participating LGUs entering into written agreements that will enumerate FM obligations of the respective LGUs before subproject implementation, and (d) providing training and orientation on World Bank FM and disbursement guidelines to all FM staff involved in the project upon effectiveness. A capacity-building plan for FM, to address the needs of NPMO and RPIUs, will also be collaboratively developed.

(ii) Procurement

75. **Applicable Procurement Framework.** All procurement of goods, works, and non-consulting and consulting services under the project financed by the loan will be carried out in accordance with the World Bank's Procurement Regulations for IPF Borrowers (November 2020), the provisions of the Loan Agreement, and the Procurement Plan (PP). The project will be subject to the World Bank's Anti-

⁴⁸ The full economic and financial analysis can be found at <https://bit.ly/3DEmcbV>.



Corruption Guidelines, dated October 15, 2006, revised in January 2011 and July 1, 2016. The project will use the Systematic Tracking of Exchanges in Procurement (STEP) tool to plan, record, and track procurement transactions.

76. **Project Procurement Strategy for Development (PPSD) and PP.** The PPCSD has been prepared by the DA-BFAR with TA from its feasibility study consultant. It identifies the appropriate procurement approaches under the project and outlines a PP for the first 18 months of project implementation. 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. The updated PP, based on the revised PPCSD, will be subject to the World Bank's prior review and approval. The PPCSD includes detailed assessments of the markets for goods, works, and services required for project implementation, procurement approaches, and procurement risks analysis along with corresponding proposed risk-mitigation measures.

77. **Use of National Procurement Procedures (NPP).** All contracts for goods, works, and services to be procured in line with the national market approach will follow the Philippines' NPP set out in the Philippines' Government Procurement Reform Act (Republic Act 9184), which were assessed and found to be broadly consistent with the requirement of the World Bank Procurement Regulations, Section V - Para 5.4, National Procurement Procedures.

78. **The main procurement entities under the project will be the PMO/BFAR Central Office, NFRDI, and the PIUs/lead RFO under the two FMAs of the DA-BFAR and the various grant-beneficiary organizations.** The procurement capacity assessment by the World Bank and the PPCSD preparation by the DA-BFAR have been completed, identifying the key risks that may have an impact on procurement under the project along with recommended mitigation measures listed under the Fiduciary Risk section. Further details of the procurement arrangements are provided in annex 1.

C. Legal Operational Policies

79. **Physical project interventions will be limited to municipal waters and onshore coastal areas in both FMAs and will not be in international waterways, as defined by Operational Policy 7.50.** Within FMA 6, all project activities will be further limited to coastal and municipal waters, typically to around 20 to 30 nm and in all cases not extending beyond 48 nm from the shoreline. Therefore, both policies are not triggered for the project.

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

80. FISHCORE is designed for environmentally friendly investments, with the aim of sustainably managing fishery resources through an EAFM approach. Positive outcomes of the project include reduced illegal and destructive fishing practices, improved catch through fishing/harvesting regulatory efforts, and



restored critical habitats. Potential risks and impacts associated with the project activities indicate that all Environmental and Social Standards (ESS) except ESS9 (Financial Intermediary) are deemed relevant. The **overall risk rating for the project is Substantial** because the associated potential adverse risks and impacts are short to medium term and reversible and could be mitigated through appropriate design and implementation of relevant management practices.

81. In conducting detailed subproject E&S assessments, the DA-BFAR, jointly with NFRDI, will set up a working group with other partners, including DENR-Biodiversity Management Bureau (BMB), NCIP, DA, and LGUs to review options for management of the existing protected areas, marine protected areas, and/or fish sanctuaries under Component 1. The working group will lead the preparation of a report on the scope of overlaps between protected areas and fish sanctuaries, a legal technical review, an institutional review, and a socioeconomic review, as well as recommendations to address risks and impacts, including cooperation between DENR-BMB, DA, NCIP (when required in ancestral domain areas), concerned LGUs, and other relevant agencies.

82. The main potential environmental risks and impacts are related to (a) localized air, noise, and water pollution expected from construction activities and wastewater from fish handling and processing facilities; (b) potential contamination of aquatic systems and their health risks related to the improper use of chemicals, antibiotics, preservatives, and pesticides in aquaculture; (c) continued use of unregulated fish cages and reluctance of LGUs to conduct necessary sector reform; and (d) risks of subprojects not being adequately assessed and impacts effectively managed because they are considered category D subprojects under the Philippine national system.

83. The social risk rating of the project is Substantial. The main risk is associated with the planned support for integrated coastal zone planning and policy development in the Selected FMAs, potentially resulting in negative livelihood impacts from resource management measures on some communities, businesses, and fisherfolks and political and social conflicts around sustainable resource management activities and boundaries. Other social risks include (a) risks of marginalization of indigenous communities and other vulnerable groups resulting in their further impoverishment and exclusion from the project benefits, (b) possible elite capture of the project's support to aquaculture enterprises, (c) loss of land and other assets and risks of physical/economic displacements, (d) risks of further impoverishment of fishers due to possible abrupt loss and/or restrictions of their traditional livelihoods under the new and stricter regulatory regime, and (e) community health and safety risks that may arise from interaction with project staff (direct workers) and consultants (indirect workers) working in villages within and around selected areas. Health risks include, but are not limited to, waterborne, waste borne, and airborne diseases; sexually transmitted diseases (STDs/HIV/AIDS); COVID-19 infections; sexual exploitation and abuse; gender-based violence; and violence against children.

84. **Relevant E&S management tools.** Relevant Environmental and Social Framework (ESF) management tools have been prepared to mitigate the above-discussed potential E&S risks and impacts in accordance with applicable ESS. These management tools include Environmental and Social Assessment (ESA); Environmental and Social Commitment Plan (ESCP); and Environmental and Social Management Framework (ESMF), which contain Labor Management Procedures (LMP), negative lists, screening checklists, codes of practice, gender-based violence/sexual exploitation and abuse, and sexual harassment mitigation procedures; Resettlement Policy Framework (RPF), including resource access



restriction process framework; Indigenous Peoples Planning Framework (IPPF); and Stakeholder Engagement Plan (SEP) with a sufficiently detailed plan for setting up multi-tier grievance redress/feedback mechanism, guidance/template on Environmental and Social Management Plans (ESMPs), social inclusiveness criteria for subprojects, and guidelines on consultations during COVID-19.

85. Capacity in place for ESF implementation and monitoring. The project will ensure that the Project Implementation Units (PIUs) have adequate capacity in ESF implementation, monitoring, and reporting. Due to the limited staffing and resources and frequent staff turnover within the implementing agencies, a team of E&S consultants will be hired to support the Implementation Units and the LGUs to apply the ESF instruments and monitor and report on ESF implementation. An outline of ESF capacity development workplan with an indicative budget is provided in the ESMF.

86. Reporting on E&S performance. The lead RPIUs will summarize the implementation of the E&S performance of the project within the respective regions and submit reports to the NPMO in a format generated in the MIS to facilitate easy tracking. Lead RPIUs will share, on a quarterly basis, the environmental, social, health and safety (ESHS) performance of the Project and Subprojects, including but not limited to the implementation of the ESCP, status of preparation and implementation of E&S instruments required under the ESCP, stakeholder engagement activities, and the functioning of the grievance mechanism(s) and grievances log, and all E&S activities of the regions with NPMO at the DA-BFAR. The DA-BFAR in turn will share these reports (25 percent in the case of low to moderate and 100 percent in the case of substantial subprojects) with the World Bank, and all reports to relevant oversight agencies/bodies such as Regional Development Councils, and Regional Project Monitoring Committees (RPMC). In addition, the BFAR-NPMO will coordinate an annual evaluation of implementation of the ESMF by an independent agency according to terms of reference agreed with the World Bank and prepare and submit reports and corrective actions to the World Bank. Evaluation will be undertaken considering the ESCP and site-specific ESMPs, including occupational health and safety plans.

87. Stakeholder engagement, information disclosure, and consultation. Stakeholders have been consulted on the draft E&S requirements and instruments including the ESA, ESMF, LMP, RPF, IPPF, SEP, and ESCP in August 2021. The feedback has been incorporated into the final draft project documentation. The draft versions of these documents were disclosed locally in August 2021 on the DA-BFAR website (<https://www.bfar.da.gov.ph>), which is accessible in a form and language understandable to project-affected parties and other interested parties as set out in ESS10. The final ESCP and SEP were disclosed by the World Bank on October 13, 2021, while the ESMF was disclosed on October 11, 2021. Consultations on project design and concept were conducted through focus group discussions with several sector groups (LGUs, women-led fisher associations, municipal and commercial fisher associations, postharvest groups, aquaculture operators, small-scale commercial fishers, and indigenous peoples' fisher associations) from January 27 to February 4, 2021, as part of the feasibility study, and in July–August 2021, for the E&S requirements. Brief information on the grievance redress mechanism required under the project will also be provided in the communication materials. The consultation process will continue throughout the project lifetime and the ESF documents will be updated with feedback from stakeholders and lessons learned from project and ESF implementation.



V. GRIEVANCE REDRESS SERVICES

88. **Communities and individuals who believe that they are adversely affected by a WB supported project 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 Inspection Panel, which determines whether harm occurred, or could occur, as a result of WB noncompliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit <https://bit.ly/3DaRKpJ>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS

89. **The overall risk rating for the project is assessed as 'Substantial'.** Below are more detailed descriptions for each and how to mitigate these risks.

90. **Political and governance.** The implementation framework for the project is well grounded in the DA-BFAR FAO-r 263 (2019) and in general LGUs are keen to support the fisheries sector, given its importance for livelihoods. However, as FMAs span several regions and multiple provinces and municipalities,⁴⁹ sustained buy-in and coordinated support will be influenced by whether FMA Board Plans and Programs have the support of key stakeholders and are endorsed by local political leadership such that they are reflected in the LGU Annual Investment Programs. This will require strong leadership from the FMA Board and significant technical support and advocacy by the BFAR-RFOs. To help mitigate the risks, the project design includes an incentive framework to leverage public and private funding through the provision of catalytic funds in support of key enterprise and infrastructure investments, building on the successful approach followed under the PRDP and conditioned in part on LGU participation and local compliance with management measures. Demonstrating and communicating early successes and results of the project will also be critical to building support across the LGUs.

91. **Technical design.** There is an inherent complexity to the technical design given the interdependent nature of investments required to improve resource management along with commercial fishery development. Broad stakeholder involvement in the formulation of FMA Board Plans and Programs will therefore be critical. There is a risk that the priorities of various stakeholders may not always align with project priorities, resulting in implementation delays and bottlenecks. The need to carefully sequence resource management and sector/livelihood development activities to ensure the two objectives are mutually reinforcing, rather than opposing, often impedes the results of start-up fisheries projects. Linking FMA plans and programs with provincial and regional development plans would also facilitate convergence between stakeholders, especially through the institutionalized PCIP of the DA and

⁴⁹ This would be voluntary—that is, the aim would be to encourage boat owners to install the system on the basis of associated benefits, for example, spatial information systems to provide safety, fishing conditions, and market information services. Once a threshold of uptake is reached, other incentives could be applied, such as access to improved landing facilities, credit or other support systems, and/or access to product certification schemes that provide higher prices for catch of verified origin.



LGUs. Early implementation will focus on no-regrets interventions (for example, measures to address IUU and destructive fishing practices), and investments will then be scaled up based on the plans developed under Component 1 and the performance of both LGUs and fishing communities in implementing them. As the project strengthens fisheries management systems such as licensing and vessel tracking, more tools will be available to strengthen the conditionality of Component 2 support on sound resource management. The FMPs will be developed within the first two years of project implementation as working documents to be reviewed and updated under an adaptive management approach.

92. **Institutional capacity.** The DA-BFAR has adequate staff at the provincial level to support the LGUs in implementing the project; however, the project poses a significant challenge for BFAR in that it requires a change from being primarily responsible for managing and regulating fishing grounds to a new collaborative way of doing business through FMA Boards. Some portion of the DA-BFAR's annual budget would be committed to the project and there would be a requirement for considerable staff re-orientation, training, potential overtime, and some realignment of staff functions and responsibilities. This comes on top of the DA-BFAR's already constrained capacity to implement and enforce the comprehensive provisions of the Fisheries Code. Limited technical capacity of some LGUs that constrain their ability to implement FMA Boards' Plans and Programs pose additional risks. To mitigate these risks, the project has budgeted significant resources for formal training and would adopt a 'learning-by-doing' approach with sharing of experiences across FMAs. Through establishment of NPMO reporting to the Director of the DA-BFAR, project implementation would be able to draw upon all the DA-BFAR's resources. This would be mirrored at the FMA and regional levels where PIUs and FMA Coordinating Units would report directly to DA-BFAR Regional Directors. To promote sustainability of the institutional and operational reforms introduced through the project, component leaders would be drawn from the DA-BFAR's current, full-time staff and staff will be seconded on a part-time basis to work on project activities alongside their wider responsibilities. Specialized activities that are not aligned with the DA-BFAR and LGU staff's core functions (for example, enterprise formation and business administration training) would be supported by specialized service providers. To promote collaboration and coordination at the local level, FMA plans will link with existing spatial and coastal management planning processes and it is agreed that, by midterm, the DA-BFAR will submit its plan for institutionalizing the new approach to fishery management through FAO-r 263 and implement the plan by the end of the fourth year of the project.

93. **Fiduciary.** Procurement and FM will largely involve the DA-BFAR and possibly the producer/fisherfolk groups and private sector, among others. While the DA-BFAR has implemented several foreign-assisted projects including World Bank-financed projects, a long period has passed since the DA-BFAR was directly responsible for overall procurement and FM of a complex project. The DA-BFAR must ensure that systems are in place to coordinate, monitor, supervise, and guide implementation at all levels of the project structure. The project will benefit from the established systems and operations manual of the PRDP, another World Bank-assisted project under the DA. However, adopting these systems and manuals to the DA-BFAR environment and the project context are key activities that will need to be prioritized in the early stages of implementation.

94. **Environment and social.** The project will operate within a well-established legal and institutional framework that provides the policies and regulatory instruments for effective E&S management as it pertains to the fisheries sector. Environmental risks are substantial and relate mainly to resource planning and management, while livelihood and enterprise development could pose site-specific risks in



ecologically sensitive areas. Efforts to sustainably manage coastal and marine resources may result in fishing of underfished and unregulated stocks. Aquaculture production, postharvest facilities, and development of fish and fishery products may involve risks and impacts such as threats to biodiversity as well as waste and byproduct contamination of aquatic ecosystems, which may cause repercussions on the environment, communities, and occupational health and safety. The project will mitigate these risks through the implementation of ESF management instruments, namely the ESCP and the ESMF with specific mitigation tools including screening, compliance with the Philippines Environmental Impact Statement System (EISS), conducting Strategic Environmental and Social Assessment (SESA) to inform preparation of FMPs, codes of practice, SEP along with detailed plan for multitier grievance redress/feedback mechanism, and ESMP. In addition, critical risk mitigation measures would include (a) strengthening of fisheries management capacity of LGUs and the DA-BFAR and (b) conditioning higher-risk activities on management progress (for example, higher-impact aquaculture activities would not be supported until adequate zoning and good practice requirements are put in place).

95. **Social risks are substantial** due to potential livelihood impacts on some communities, businesses, and fishers; conflicts around sustainable resource management activities and boundaries; and potential elite capture and lack of inclusion of vulnerable populations, particularly indigenous peoples. These will be mitigated through participatory management planning embedded in the project design, development of a detailed Environmental and Social Impact Assessment that will seek to minimize livelihoods impacts, as well multiple forms of livelihood-related support (extension and grant funding for improved fisheries-based livelihoods, vocational training, TA to support access to rural credit, and other social welfare schemes and, where possible, the use of labor-intensive public works approaches). The project will likely include areas with indigenous peoples and vulnerable communities that may be disproportionately affected by project activities, if not they are not well managed. To mitigate this risk, the DA-BFAR has prepared an RPF and an IPPF to manage any potential negative impacts on land; access to natural resources; activities in ancestral domains; and processes to obtain free, prior, and informed consent in case the latter is needed. Commensurate staffing and capacity-building measures for effective management of E&S risks and impacts have been contemplated together with robust implementation and M&E arrangements to ensure that the risks and impacts are mitigated effectively.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Philippines

Philippine Fisheries and Coastal Resiliency Project

Project Development Objectives(s)

To improve management of targeted fisheries resources and enhance the value of fisheries production to coastal communities in selected Fisheries Management Areas (FMAs).

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
Improved management of targeted fisheries resources									
Fisheries management plans formulated, implemented, and evaluated (Number)		0.00	0.00	0.00	0.00	1.00	2.00	2.00	2.00
Share of major fish stocks covered in Fishery Management Plans moving toward target reference points (Percentage)		0.00				20.00			50.00
Enhanced value of fisheries production to coastal communities									
Increase in household incomes (in real terms) derived from fishery-		0.00				3.00			9.00



Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
related sources in targeted areas (Percentage)									
Reduction in post-harvest losses from the targeted species in the selected LGUs (Percentage)		0.00							5.00
Increase in value addition in targeted value chains (Percentage)		0.00				3.00			9.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
Fisheries and Coastal Resilient Resource Planning and Management (FishCRRM)									
FMA Framework Plans (FPs) formulated and adopted by respective Management Boards (MBs) (Number)		0.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
Aquaculture Management & Development Plans (ADMPs) integrated into local planning and updated (Number)		0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00



Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
IUU fishing index improvement among the targeted LGUs (Percentage)		0.00				5.00			10.00
Number of LGUs with coastal resource management (CRM) plan enacted and effectively implemented (Number)		0.00	0.00	0.00	10.00	20.00	30.00	30.00	40.00
Aggregate fisheries and aquaculture performance indices across target FMAs (Percentage)		0.00				5.00			10.00
Modern and Resilient Livelihood Investments (MARLIN)									
New and upgraded critical capture fisheries and aquaculture infrastructure with climate-smart measures mainstreamed (Number)		0.00	0.00	5.00	10.00	30.00	45.00	50.00	50.00
Enterprise / livelihood subprojects performing successfully in accordance with Business Plan (Percentage)		0.00	0.00	0.00	10.00	20.00	35.00	50.00	60.00
Share of women-led or owned organizations receiving financing through livelihood and enterprise grants (Percentage)		0.00	0.00	5.00	8.00	10.00	15.00	20.00	25.00
Aquabusiness corridors		0.00	0.00	0.00	2.00	3.00	4.00	5.00	6.00



Indicator Name	PBC	Baseline	Intermediate Targets						End Target
			1	2	3	4	5	6	
operational with essential infrastructure and services provided (Number)									
Beneficiaries of job-focused interventions (CRI, Number)		0.00				5,000.00			16,000.00
Beneficiaries of job-focused interventions - Female (CRI, Number)		0.00				1,500.00			4,800.00
Support to Project Implementation and Management (SuPrIM)									
Operational manuals mainstreamed for EAFM, including FMA management planning & implementation and development of resilient Aquabusiness Corridors (Yes/No)		No	No	Yes	Yes	Yes	Yes	Yes	Yes
Routine results reports generated from multi-level Management Information System (MIS) (Number)		0.00	0.00	2.00	4.00	6.00	8.00	10.00	12.00
Proportion of project beneficiaries expressing satisfaction with project interventions and engagement in planning processes (Percentage)		0.00			40.00	60.00			80.00



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Fisheries management plans formulated, implemented, and evaluated	This indicator measures the number of fisheries management plans that have been formulated, implemented, and evaluated through operations supported by the World Bank. This indicator relates to the actual application and enforcement of measures to control fishing in a determined geographic area. Fishing units accessing the fisheries are identifiable (registered, marked, possibly licensed), and management measures (such as gear and spatial or period restrictions) are applied and enforced (as demonstrated by a minimum rate of control of the target fleet each year,	Quarterly reporting and annual assessment	Project M&E reports; FMA reports; official records of BFAR, NFRDI, LGU planning office; sample survey-study per FMA	At least one FMP will be formulated, implemented, and evaluated for each FMA. Therefore, the end target is 2 for the project. "Formulated, implemented, and evaluated" means: (i) reference point and harvest control rules (HCR) are established; (ii) management measures are developed and implemented based on the reference point and HCR, including but not limited to vessel registration and licensing, gear restrictions, closed season, closed areas,	National Project Management Office M&E Unit; FMA Management Board.



	and prosecution of identified delinquents).			fishing days reduction, fishing boats reduction, and so on; (iii) FMP implementation is evaluated and certain measures adjusted based on scientific information; SAG assessment confirming effective implementation of FMPs.	
Share of major fish stocks covered in Fishery Management Plans moving toward target reference points	- Major fish stocks refer to the most abundant and economically important species that are dominant (>70%) in total catch volumes, monitored by the National Stock Assessment Program (NSAP) and classified into species groups (such as small pelagic, large pelagic, demersal, and so on). For FMA 6 and 9, small pelagic species account for the vast majority of the catch. Therefore, "major fish stocks covered in Fishery Management Plans" will be the small pelagic subject to	While stock assessments will be conducted annually, the levels of achievement toward this PDO indicator will be measured three times: baseline, mid-term and project end.	Stock assessment reports by BFAR - National Fisheries Research and Development Institute (NFRDI)	Stock assessments by BFAR-NFRDI.	National Project Management Office; FMA Management Board



	<p>the FMPs developed by the project.</p> <ul style="list-style-type: none"> - Target reference points will be established under FMPs and include metrics such as stock biomass, fishing mortality rate and catch per unit of effort (CPUE). Stocks moving toward target reference points are those that show statistically significant improvements in stock status as expressed by such metrics. 				
<p>Increase in household incomes (in real terms) derived from fishery-related sources in targeted areas</p>	<p>Fishery-related sources include both capture fisheries and aquaculture production as well as income derived from related value chains and activities</p>	<p>3 times: baseline, midterm, and project-end</p>	<p>Baseline, midterm, and project-end sampling surveys</p>	<p>Indicator will be assessed through a survey of a randomized sample of fishing households (as identified from the Fish-R database). The survey will estimate HH income from all sources, but the indicator is only based on the incomes from fisheries-related sources (including aquaculture and</p>	<p>National Project Management Office; FMA Management Board</p>



				fisheries value chain activities) within those households that are still involved in the sector at the time of the end survey	
Reduction in post-harvest losses from the targeted species in the selected LGUs	<ul style="list-style-type: none"> - Post-harvest loss includes loss of potential value of capture fishery production through discarding of fish, as well as selling at lower prices due to reduction in quality. - For the purpose of FISHCORE, postharvest losses include only those losses that occur from primary production (harvest) to postharvest (icing and freezing) stages of the seafood commodity value chains. - Primary production refers to the production, rearing or growing of primary products including harvesting (fishing), rearing and growing of fish and other seafood in aquaculture ponds (RA 10611). - Postharvest stages refer to 	Baseline and project-end surveys	Baseline and project-end sampling surveys	Systematic surveys of fishing vessels, landing sites and postharvest facilities will be conducted to assess post-harvest loss along the value chain within the project area. Loss will be calculated as a percentage of potential value, such that if the baseline level of loss is X% and the target is t%, the end-of-project loss should be no more than (X-t) %. To control for external impacts on fish prices, values will be benchmarked against a fish price index and against non-project FMAs. A location-specific methodology to measure and assess	National Project Management Office; FMA Management Board



	the stages in the value chain involving the minimal transformation of fish/seafood following primary production (RA 10611).			post-harvest losses will be agreed upon with BFAR for the conduct of the baseline survey.	
Increase in value addition in targeted value chains	<ul style="list-style-type: none"> - Value-addition should cover products having subjected to processing technologies and or advance preservation and packaging technologies for both wild caught (fishery) and farmed (aquaculture) commodities. - Value-added products for this project mean products with enhanced value after changing their physical state or form through processing technologies (smoking, drying, canning, etc.) and/ or through employing advance preservation (i.e., IQF, accelerated freeze-dried products) and packaging technologies. - Commodity-specific surveys will be conducted under the project, producing data disaggregated by commodity as well as 	3 times: baseline, midterm and project-end surveys	Project M&E reports, FMA reports, official records of BFAR and LGU planning office and surveys	Project surveys and existing data sources for the targeted areas. To control for external impacts on fish prices, values will be benchmarked against a fish price index and against non-project FMAs.	National Project Management Office; FMA Management Board



	quantify versus value. Assessments will be conducted in real terms against the consumer price index, unless there is a marked change in the prices of commodities relative to the background level of inflation, in which case a specific inflation rate will be calculated based on a basket of target commodities.				
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Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
FMA Framework Plans (FPs) formulated and adopted by respective Management Boards (MBs)	Framework Plans lay down in broad strokes the policies and strategic actions of the FMA. Initiated by the Lead BFAR Regional Office or the FMA's Technical Working Group, each FMA prepares and implements a Management Framework or an EAFM Plan, where stakeholders agree on a common vision, goals, objectives and management	Annually	Project M&E reports; FMA reports	Reporting by FMA Management Board	National Project Management Office M&E unit; FMA MB



	actions, and commit to perform their respective roles in implementing the EAFM Plan. To develop the EAFM Plan for the FMA or sub-FMA, the BFAR Mainstreaming EAFM Quick Reference Guide, Program Overview, and Planning Modules provide detailed guidance. The modules describe the details of the planning process including objectives, participants, expected outputs, agenda of workshops, and contains a sample plan outline, planning presentations and exercises.				
Aquaculture Management & Development Plans (ADMPs) integrated into local planning and updated	The expected content of ADMP includes the following: Assessment of sustainable carrying capacity and climate risks, designation, zoning and design of culture zones (ABCs), technologies measures to be adopted, and market analysis. The plans to be integrated into LGU-level coastal resources management (CRM) and	Quarterly	Project M&E reports, FMA reports, official records of BFAR and LGU planning office	Reporting by LGUs	National Project Management Office M&E unit; FMA Management Board



	climate change action plans starting from 2023 to be completed by 2025.				
IUU fishing index improvement among the targeted LGUs	<p>The IUU Fishing Index is one of the three components of the Philippine IUU Fishing Index and Threat Assessment Tool. It assesses the risk of an area to IUU fishing occurrence and persistence - in the case of fisheries and IUU fishing, this risk is in terms of the possibility of IUU fishing harming the fisheries (people and fish) and destabilizing efforts to sustain the fisheries in the area of interest. The IUU Fishing Index provides a standardized scoring system for comparing the prevalence, vulnerability, and responses to IUU fishing across different areas in the Philippines. More details are presented in https://drive.google.com/file/d/1O-oixh1Q-QYBICNcsDvUyATJ5prAVFzn/view.</p>	3 times: baseline, midterm and project-end	Dedicated surveys with supplementary information, including project M&E reports, FMA reports, official records of BFAR and LGU planning office	Reporting by LGUs; independent surveys and assessment	National Project Management Office; FMA Management Board



Number of LGUs with coastal resource management (CRM) plan enacted and effectively implemented	<ul style="list-style-type: none"> - CRM plan comprises an investment plan; enactment of CRM plan is done through a local ordinance. - Effective implementation means achievement of CRM plan objectives. 	Annually	Project M&E reports, FMA reports, official records of BFAR and LGU planning office.	Surveys, data from the LGUs	National Project Management Office; FMA Management Board
Aggregate fisheries and aquaculture performance indices across target FMAs	<p>Performance is measured according to the FPIs and APIs (https://www.fpilab.org/fpi-home/).</p> <p>The average score of key capture fishery commodities assessed with FPIs was 2.85 at the baseline situations of key capture fishery and aquaculture commodities in FMAs 6 and 9 were assessed using the Fishery Performance Indicators (FPIs) and the Aquaculture Performance Indicators (APIs). The baselines scores obtained are the following: 1) FPIs for FMA6: 2.8; 2) FPIs for FMA9: 2.9; 3) APIs for FMA6: 3.2; and 4) APIs for FMA9: 3.1, of which the average is 3.0.</p>	3 times: baseline, midterm and project-end	Project M&E reports, FMA reports	Consultant surveys	National Project Management Office; FMA Management Board



	This indicator measures anticipated increases in the average score at mid-term and project end.				
New and upgraded critical capture fisheries and aquaculture infrastructure with climate-smart measures mainstreamed	This indicator comprises all infrastructure subprojects under Subcomponent 2.3, which will all be subject to climate-informed screening and design measures.	Annually	Project M&E reports, FMA reports, official records of BFAR and LGU planning office	Reporting by FMAs/LGUs; independent assessment	National Project Management Office; FMA Management Board
Enterprise / livelihood subprojects performing successfully in accordance with Business Plan	This indicator comprises all subprojects to be supported under Subcomponents 2.1 and 2.2.	Annually	Project M&E reports, FMA reports, official records of BFAR and LGU planning office	Reporting by FMAs and LGUs; independent assessment at end of subproject	National Project Management Office; FMA Management Board
Share of women-led or owned organizations receiving financing through livelihood and enterprise grants	This indicator is measured out of all subprojects supported under Subcomponents 2.1 and 2.2	Annually	Project M&E reports, FMA reports, official records of BFAR and LGU planning office	Reporting by FMAs and LGUs; independent assessment at end of subproject	National Project Management Office; FMA Management Board



Aquabusiness corridors operational with essential infrastructure and services provided	The specific essential infrastructure and services required for each of the ABCs will be established through the Aquaculture Development and Management Plans for each FMA, but will include landing, processing and logistical facilities, labs, breeding centers, hatcheries, demonstration facilities, and the provision of extension and training services, including through aqua business technology incubators.	Annually	Project M&E reports, FMA reports	Reporting by FMAs	National Project Management Office; FMA Management Board
Beneficiaries of job-focused interventions		3 times: baseline, midterm and project-end	Project M&E reports, FMA reports, official records of BFAR and LGU planning office	Reporting by LGUs. Job-focused interventions include direct beneficiaries of livelihood and enterprise grants, project-enhanced fisheries & aquaculture extension services, vocational training and technical assistance on access to credit and other livelihood support programs, as well as employees of	National Project Management Office; FMA Management Board



				labor intensive works (i.e. infrastructure and habitat restoration) financed by the project.	
Beneficiaries of job-focused interventions - Female		3 times: Baseline, midterm and project-end	Project M&E reports, FMA reports, official records of BFAR and LGU planning office	Reporting by LGUs	National Project Management Office; FMA Management Board
Operational manuals mainstreamed for EAFM, including FMA management planning & implementation and development of resilient Aquabusiness Corridors	EAFM stands for "ecosystems approach to fisheries management." This indicator will be self-assessed by BFAR and verified by the WB team through an implementation support mission.	Quarterly	Operation manuals, Project M&E reports, FMA reports	Operations manuals	National Project Management Office; FMA Management Board
Routine results reports generated from multi-level Management Information System (MIS)	Routine results reporting to be fully conducted using the project MIS by 2022	Quarterly	Project M&E reports, FMA reports	Reported by FMAs	National Project Management Office; FMA Management Board
Proportion of project beneficiaries expressing satisfaction with project interventions and engagement in planning processes	Beneficiary satisfaction (disaggregated by gender) will be measured through beneficiary surveys at the mid-term and completion of the project.	Mid-term and completion	Beneficiary survey reports	Project-supported beneficiary surveys. At inception, a survey of perceptions / attitudes will be taken. In between the structured	National Project Management Office M&E Unit



				surveys, citizen feedback will also be garnered through the web-based platforms.	
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ANNEX 1: Implementation Arrangements and Support Plan

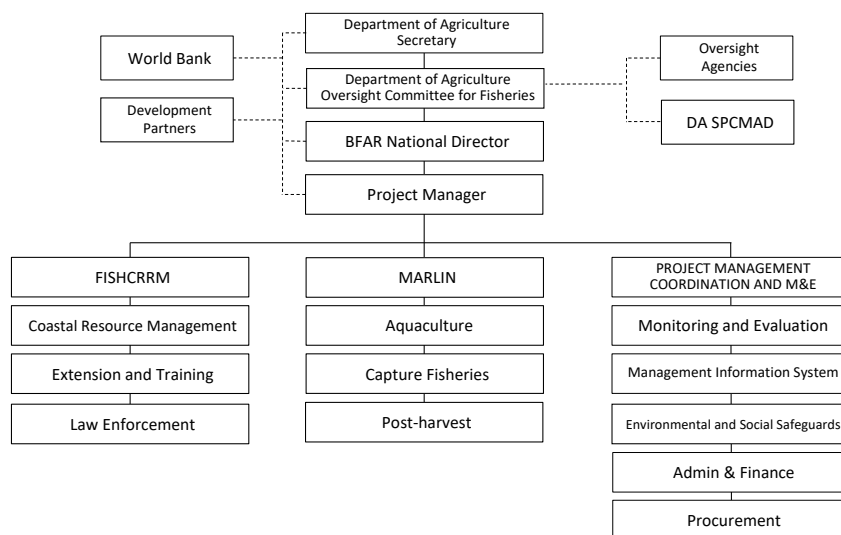
COUNTRY: Philippines Fisheries and Coastal Resiliency Project

Implementation Arrangements

1. **The project will be implemented by the BFAR, which is a line bureau of the DA.** It operates through a network of 15 regional field offices covering all administrative regions of the Philippines (figure 1.1) except the BARMM. DA-attached agencies, namely the NFRDI and the PFDA, will implement select activities according to their respective mandates in research and development and postharvest infrastructure and facilities and act as procuring entities for the same. The DA-BFAR will collaborate with other NGAs for capacity building, market development and services, improving of access to finance, and support for business development and networking under Component 2.

2. **Project oversight.** An NSC comprising representatives from all concerned NGAs, fishery associations, industry, academia, research, and NGOs will oversee the implementation and functioning of FMAs and provide a forum for citizen engagement. The NSC is chaired by the Secretary of Agriculture with the Undersecretary for Fisheries and Aquatic Resources as alternate chair. The NSC will provide oversight and policy guidance on the fisheries management and governance reforms implemented under the project. The NSC will expand upon the existing Fishery Oversight Committee, through inclusion of other relevant sector representatives.⁵²

Figure 1.1. National Project Management Office (NPMO)

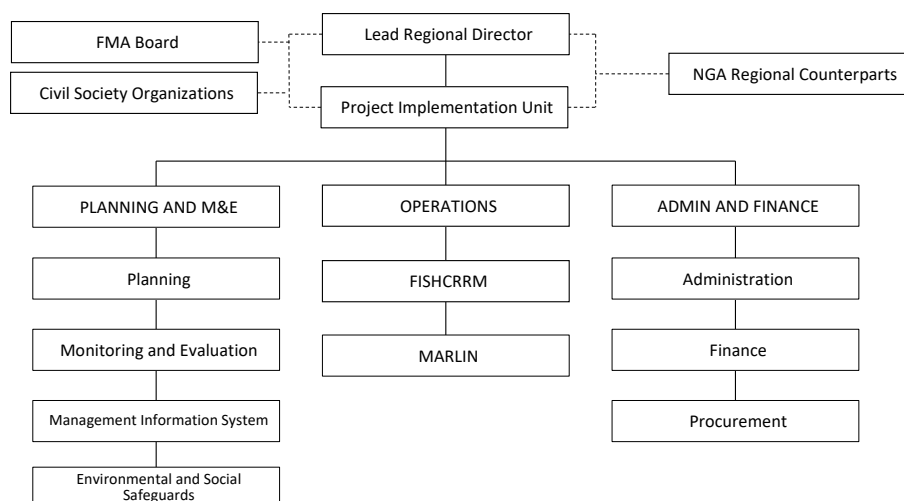


3. **DA-BFAR at the national level.** An NPMO will be established at the DA-BFAR Central Office. It will be headed by a national project coordinator, assisted by a project manager, who will report to the DA-BFAR Director. Component heads, drawn from the DA-BFAR's organic staff to ensure sustainability of the institutional and operational reforms, will each be responsible for managing a small team of specialists



providing the oversight, coordination, and funding support for each of the project's three components (figure 1.2). The establishment of an NPMO will enable the DA-BFAR to gradually re-prioritize and re-orient its functions to sustain the reforms being introduced through FAO-r 263. By midterm of the project, the DA-BFAR will submit to the World Bank its plan for institutionalizing the new approach to fishery management and implement the plan by the end of the fourth year of the project.

Figure 1.2. Project Implementation Unit (PIU)

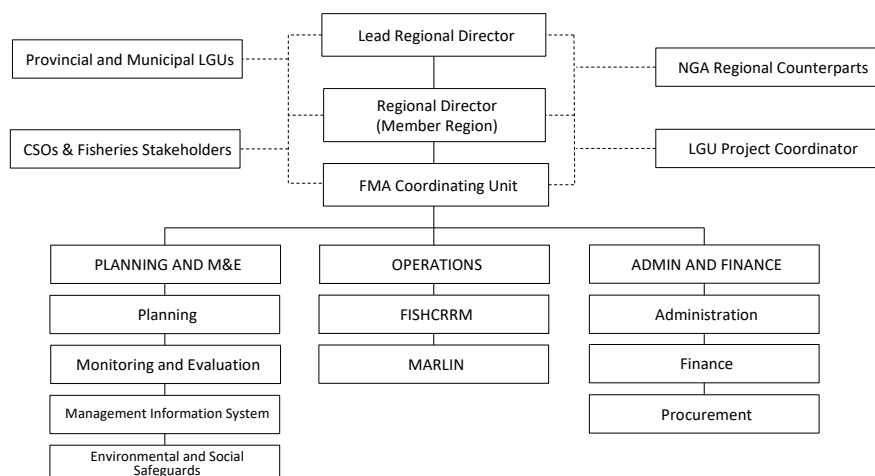


4. **FMA level.** For each FMA, and at the RFO of the DA-BFAR's Lead Regional Director (co-chair of the FMA Board), an RPIU will be established reporting to the Lead Regional Director. The RPIU will be staffed with regional component heads drawn from the staff of all RFOs within the FMA. Three units comprising (a) Planning and M&E, (b) Operations, and (c) Administration and Finance will be staffed from within the DA-BFAR to serve the RPIU. The RPIU will serve as secretariat to the FMA Board and be responsible for overseeing and facilitating the field implementation of the project activities within the FMA and for coordinating with other NGAs (figure 1.2).

5. **Regional level.** RPIUs will be established at the DA-BFAR regional field offices in Region 3, the lead region for FMA 6, and in Region 10, the lead region for FMA 9. Each RPIU will be headed by the DA-BFAR Regional Director for the lead FMA region. RFCUs will be established in the DA-BFAR regional offices within the FMA to serve as a link with LGUs responsible for implementing the plans, ordinances, and programs determined by the FMA Board. The functions of the RFCU will be combined with those of the RPIU in the case of the lead DA-BFAR-RFO. The organizational structure of the RFCU will mirror that of the RPIU, but the functions will focus on those LGUs, NGAs, and private sector partners within that region. A key role for the RFCU will be to ensure that the LGUs are provided with the necessary TA and advice and proactively support the integration of FMA plans into the development and investment plans of the LGUs. Within the DA-BFAR, implementation responsibilities will follow the principle of subsidiarity, for example, procurement, technical support, and monitoring responsibilities devolved to the lowest qualified and appropriate level. Further details will be elaborated in the Operations Manuals and Procurement Plan.



Figure 1.3. FMA Coordination Units



Subprojects

6. **The planning, implementation, and management of the subprojects will be governed by Operations Manuals that will build on existing DA processes,** such as the ones already established under the PRDP, and adapt them to fit the FMA approach. The accountability to deliver will depend on the types of subprojects and will follow the implementing partner's institutional mandates. While the roles and responsibilities of the LGUs will be amplified given the strengthened devolution governance ushered in by the Supreme Court Rule on the Mandanas-Garcia appeal, formal agreements will be drawn, between the DA-BFAR and the LGUs, to specify any obligations for financing, implementation, and operations and maintenance by the latter. The cost-sharing arrangement between the DA-BFAR and the LGUs will be subject to the approval of the Devolution Transition Plan of the Department.

7. **Subproject identification and prioritization.** A tentative list of investments under Component 2 has already been identified based on consultations at the regional and provincial levels, from which a subset of no-regrets subprojects will be drawn for earlier implementation from the start of the project, largely based on their demonstration potential. The main body of subproject investments will be further informed by further analytical and planning work to be completed in the first and second years of the project, including the development of ADMPs and further identification of the minimum needs for functional ABCs, additional value-chain analyses and marketing studies, social impact assessment linked to the fisheries management planning process, and engagement with beneficiary groups such as support for clustering, consolidation, and enterprise formation. Eligibility and prioritization criteria for subprojects will include the following:

- Strength of rationale for public investment, that is, following the criteria for 'catalytic' investments according to the different classes of subproject (livelihood, enterprise, and infrastructure).
- For livelihood and enterprise grants, fisher groups, enterprises (including non-fishing enterprises with proven track records), nonprofit organizations (for example, chamber of commerce) with legal personality and duly registered (for example, with the Cooperative Development Authority [CDA], Securities and Exchange Commission [SEC], or Department of



Labor and Employment [DOLE]) will be eligible and preference will be given to activities that foster partnerships with experienced firms in line with the recent policy reorientation of the DA to actively promote clustering and consolidation to achieve economies of scale, professionalization, and industrialization across the fishery and agriculture sectors, under the 'One Agenda' (AO 25).

- LGU and beneficiary participation in and compliance with strengthened resource management frameworks introduced under Component 1.
- Biodiversity-Friendly Enterprises (BDFEs) that promote the sustainable use of biological resources in the fisheries enterprise development.
- Gender and vulnerable group representation.
- Satisfactory completion of E&S screening and assessment processes.
- Satisfactory preparation of the business plan, indicating robust financial viability and clear and monitorable metrics of success (with the levels of detail adjusted according to the scale and complexity of the proposed enterprise).

8. **Planning and investment support.** Integration of planning for infrastructure, enterprise, and livelihood subprojects with local planning and provision of technical services will follow procedures detailed in the DA's I-Plan Manual. This provides the mechanism for DA-LGU joint planning, connectivity, and leveraging of resources (convergence) among programs of different government agencies, LGUs, and the private sector. Once established and operating, FMA planning processes will provide a more integrated spatial lens to inform the Regional Commodity Investment Plans (ReCIP) and PCIP. This is specifically provided for in the recently revised I-Plan Manual. Those procedures require that, before preparing or updating the PCIP, there will be a review of higher level and other sectoral and spatial plans such as FMA plans to ensure the PCIP is closely linked and supportive of such plans. The PCIP process is also the means through which key infrastructure investments can be supported to catalyze further development of the sector, for example, through farm-to-market roads, postharvest facilities, fish landings, or private sector investment in ABCs. PCIPs are updated on a three-year rolling basis and are the basis for planning and budgeting of programs of all DA bureaus and units. Under recently enhanced PCIP planning processes, ReCIPs will also be formulated to provide for connectivity between PCIPs. These, in turn, will be used to inform the National Agriculture and Fisheries Modernization and Industrialization Planning process (NAFMIP).

9. **Subproject implementation and management procedures.** Infrastructure investment procedures for co-financed subprojects of both the DA-BFAR and BFAR-LGU will largely follow a model adapted from the PRDP's DA-I-Build Operation Manual and the Infrastructure Manual Procurement Guidelines. Review thresholds will be as defined in the I-Build Manual, including World Bank review and issuance of the No Objection Letter (NOL) for subprojects exceeding PHP 15 million. To facilitate project start-up and capacity building within the DA-BFAR in reviewing such projects, the first three infrastructure subprojects exceeding PHP 5 million from each FMA will be reviewed by the World Bank for issuance of NOL.

10. **Enterprise and livelihood subproject support procedures will largely follow those now mainstreamed through use of the DA I-Reap and Enterprise-Procurement Manuals as revised under the second additional financing for the PRDP.** Support will be provided for micro (<PHP 3 million), small



(between PHP 3 and 15 million), or medium (>PHP 15–50 million) enterprises. All investment decisions will be based on business plans. Recipients will be required to meet minimum standards of business organization including having opened an account to manage grant funds. They will also be required to sign a Grant Agreement with the DA-BFAR. Levels-of-threshold review are defined in the I-Reap Manual, including World Bank review and issuance of the NOL for subprojects exceeding PHP 15 million. To facilitate project start-up and capacity building within the DA-BFAR in reviewing such projects, the first five enterprise subprojects exceeding PHP 3 million from each FMA will be reviewed by the World Bank for issuance of NOL. Enterprise support will follow the model approved by the NEDA-ICC, set percentagewise at 75:5:20 (loan proceeds: government counterpart: proponent group, respectively). Funding for proponent group and government counterpart could be in cash or in kind with eligible equity requirements (labor, land, and so on) defined in the I-Reap Manual.

Implementation Modalities

11. **The project will be implemented over a seven-year period in FMAs 6 and 9 with a view to developing and implementing the more comprehensive approach to municipal fishery management envisaged in FAO-r 263 for subsequent wider application across all 12 FMAs.** Implementation will follow a pragmatic approach with investments in the earlier years of the project focusing on no-regrets and demonstration activities based on existing plans and investment priorities, largely already established at the provincial and regional levels. As the project proceeds, scaling up of investment plans and activities under both Components 1 and 2 will be increasingly informed by the spatial analysis and planning for both FMAs developed under Component 1 and endorsed by the management boards. Implementation will also involve scaling out engagement across the LGUs beginning with those in the most critical locations (key municipal fishing grounds and ports, aquaculture production zones, and critical coastal habitats areas). The LGUs must demonstrate proactivity and then expand engagement and investment based on early results. Their participation and compliance will be rewarded with improved resource management systems.

12. **The project will support substantive changes in the operations of the DA-BFAR to realize the EAFM based on FMAs and, in many instances, a more active and collaborative engagement by LGUs.** New ways of doing business will be supported by considerable formal and on-the-job training of DA-BFAR and LGU staff. Specialized and newer functions (including formation of clusters and enterprises and business planning) will be augmented by specialized service providers. To both promote learning by doing under the project and provide time for institutional arrangements to evolve, the project implementation will initially be supported by a significant complement of technical and administrative contract staff in the PIUs and FCUs, working alongside part-time, seconded DA-BFAR staff and under the leadership of project-component leaders drawn from regular DA-BFAR staff. As experience with FMA implementation evolves, functions will become more mainstreamed within routine DA-BFAR responsibilities. This is similar to the trajectory that has been followed with the mainstreaming of PRDP functions by the DA over time. Through the nationwide implementation of the PRDP, many LGUs are already familiar with the DA-World Bank subproject design, procurement, and safeguard and operation and management requirements and procedures. Where inputs of specialist agencies are required (for example, provision of vocational training programs by Technical Education and Skills Development Authority [TESDA]), these will be coordinated and supported by the project through the establishment of MOAs or similar instruments. By midterm of the project, the DA-BFAR will submit its organizational and staffing plan for institutionalizing the new



approach to fishery management through FAO-r 263 and implement such a plan by the end of the fourth year of the project.

13. **The Framework FISHCORE POM sets out the core procedures for the project and the roles of subsidiary Operations Manuals detailing specific aspects, such as procurement and fiduciary, as well as those already institutionalized both within the DA and across LGUs, I-PLAN, I-REAP, and I-BUILD Manuals.** The manuals are considered ‘living’ documents to be amended from time to time as needed in response to project implementation needs. Those elements covering the technical approach to planning and resource management under Component 1 will be institutionalized as manuals for implementation of all FMAs once the approaches are suitably tested.

14. **The project will also draw upon the world-class M&E system established under PRDP and the associated operation manual.** That manual provides specific guidance for development of an ICT-enabled, web-based MIS-M&E system that will make extensive use of such digital tools as geo-tagging and geo-mapping. This will incorporate features for citizen feedback, submission of grievances, and ‘good example’ case studies and stories to share experiences and best practices. Under the project, it is envisaged that the DA-BFAR will establish the in-house skills and capacity to develop and sustain the M&E-MIS system. The DA-BFAR will draw upon the lessons from the PRDP through which significant innovations became possible by having on-staff capacity rather than relying on external consultants. Under the project, baseline, midterm, and end-of-project surveys will be conducted. The Rapid Appraisal of Emerging Benefits (RAEB) tool will be adopted—it is widely used under the PRDP to obtain real-time feedback on subproject implementation effectiveness, emerging results, and impacts. The MIS-M&E system will also incorporate the requirement of FAO-r 263 that each FMA Management Board will establish a peer review mechanism and submit a consolidated Management Board-FMA report to the DA-BFAR by February 15 of each year.

Financial Management

15. An assessment of the FM systems at the DA-BFAR and implementing partners has been conducted and they have been assessed as ‘High’ risk’. However, the FM risk of the project could be reduced to ‘Substantial’ after the proposed mitigating measures and agreed-upon FM arrangements described below are implemented and have shown effective impact.

16. The mitigating measures to be implemented to reduce risks associated with the current FM system are the following: (a) finalize and adopt an operations manual that includes an FM Section to formalize the control processes specific to the project; (b) identify and assign FM staff to provide FM support to the NPMO and the RPIUs; (c) the DA and the respective LGUs to enter into an agreement that will enumerate the obligations of the parties and will include the FM obligations of the DA-BFAR as well as the LGUs; and (d) provide training and orientation on World Bank FM and disbursement guidelines to all FM staff involved in the project, including those assigned at the NPMO and the RPIUs. A capacity-building plan for FM to address the needs of the NPMO and RPIUs will be developed and agreed upon.

17. As part of the FM arrangement, the DA-BFAR will address the major findings of the Commission on Audit (COA) on the annual audited project financial statements, within 12 months from the issuance of the audit report for the project.



18. **FM implementation arrangements.** The DA-BFAR's current FM system will be used for project implementation. It includes acceptable budgeting, accounting, reporting, internal controls, and staffing. At all levels (DA-BFAR Central Office, NPMO, and RPIUs), the DA-BFAR should have a robust information system that will regularly report the progress of FISHCORE implementation. NFRDI and LGUs will potentially implement project activities. Results of the FM assessments conducted for NFRDI and the sample LGUs revealed varying capacity with NFRDI—showing strength as it has unqualified audit opinion on its financial statements from calendar years 2020 and 2021. The LGUs have shown varied results. The DA-BFAR will enter into implementation agreements with NFRDI and these LGUs, which will include FM roles and responsibilities. Detailed FM arrangements and procedures will be included in the FM Section of the Operations Manual.

19. **Budgeting arrangements.** Budget proposals are prepared annually by the DA-BFAR and submitted to the Department of Budget and Management (DBM) for review before being incorporated into the National Expenditure Program, which is then subject to the evaluation of Congress before its consideration in the General Appropriations Act. Accordingly, an Annual Work and Financial Plan together with disbursement projections for the project will be submitted to the World Bank before the start of each fiscal year.

20. **Accounting arrangements.** The accounting records of the project will be maintained by the NPMO and RPIUs using the National Government Accounting System chart of account. At the DA-BFAR Central Office, the accounting records will be maintained using the electronic National Government Accounting System FM system. The DA-BFAR Accounting Division, under the FM service at the DA-BFAR's Central Office and the respective Finance Unit of each RPIU, will maintain the accounting records in accordance with the country's accounting procedures and policies. Accounting of the project transactions will be mainstreamed at the DA-BFAR Central Office and the RPIUs. At the NPMO, adequate staff resources of the Finance Unit will be made available to ensure timely completion of the financial reports, monitoring of the Designated Accounts, and preparation of withdrawal applications. Due to the qualified audit opinion by the COA on the DA-BFAR's 2018–2021 financial statements, separate books of account will be maintained for the project at the DA-BFAR Central Office and at the RPIU level.

21. **Internal control and internal auditing.** The project will follow the internal controls and policies found in National Government Accounting System, Government Audit and Accounting Manual, COA, and DBM memoranda and circulars and other laws and regulations. The respective DA-BFAR FM staff at all levels will review supporting documents for project disbursements. Specifically, the following requirements will be implemented for the project:

- (a) Subsidiary records will be maintained for the Designated Accounts and the related project peso accounts
- (b) Quarterly bank-reconciliation statements will be required to be prepared one month after end of each quarter together with the trial balance
- (c) An annual physical inventory count of fixed assets will be conducted and results reconciled with the accounting and property records.

22. **Financial reporting arrangements:** The DA-BFAR will prepare and submit unaudited interim financial reports (IFRs) within 45 days after the end of each calendar quarter consisting of the following:



(a) Statement of Sources and Uses of Funds, (b) Variance Analysis of Expenditures, (c) Designated Account Activity Statement, and (d) Bank Reconciliation Statement.

23. **External audit arrangement.** The audit of the project financial statements will be conducted by the Philippines COA, which is the auditor for all government agencies in the country. The COA has extensive experience in auditing government agencies and World Bank-funded projects and is an auditor acceptable to the World Bank. The audit will be conducted, and the report will be submitted to the World Bank within six months after the end of the financial year. Based on experience and the constraints due to the ongoing pandemic, there is a risk that the audits may not be received within the period prescribed in the Loan Agreement. Early engagement of the respective COA auditors and agreement on the audit timelines and strategies should be obtained to prevent substantial delays in the submission of the audit reports.

24. **FM action plan.** The actions to be taken to strengthen DA's FM system and reduce the fiduciary risks are in table 1.1.

Table 1.1. Action Plan

	Action	Date Due By	Responsible
1	Finalize and adopt an Operations Manual that includes an FM section to formalize control processes specific to the project.	Three months after effectiveness	DA-BFAR
2.	Identify and assign FM staff from regional offices to provide FM support to the NPMO and RPIUs.	Upon effectiveness	DA-BFAR
3	Provide training and orientation on World Bank FM and disbursement guidelines to all FM staff involved in the project including those assigned at the NPMO and the RPIUs.	Upon effectiveness	World Bank

Disbursements and Funds Flow

25. The loan will be disbursed over six years in accordance with the financial plan of the project and on the following categories of expenditures:

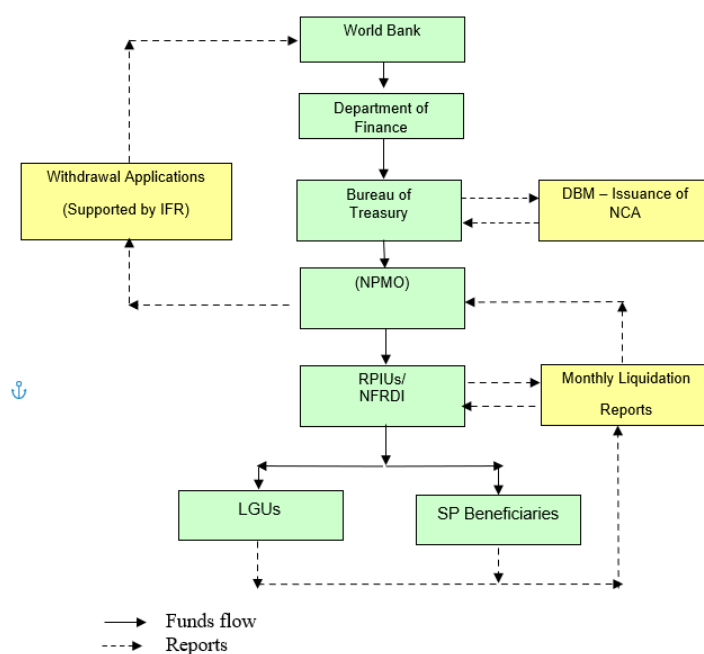
Table 1.2. Expenditure Categories

Category	Amount of the Loan Allocated (expressed in US\$)	Percentage of Expenditures to Be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, and consulting services, Operating Costs and Training for the Project	138,567,000	100%
(2) Livelihood Grants	13,623,000	100% of the disbursed amount
(3) Enterprise Grants	23,830,000	100% of the disbursed amount
TOTAL AMOUNT	176,020,000	



26. The project will be financed by an IBRD loan. GOP counterpart requirements will be provided by the GOP and the participating LGUs, as applicable. The funds from the loan will flow from the World Bank to the Bureau of Treasury account at the Central Bank of the Philippines. After the issuance of the Notice of Cash Allocation by the DBM, the DA-BFAR will have the authority to issue checks to pay its suppliers from its Modified Disbursement Scheme account at Land Bank of the Philippines. Separate project bank accounts in pesos will be maintained at the RPIUs for the loan at an authorized government depository bank (figure 1.4).

Figure 1.4. FISHCORE Funds Flow for Loan Proceeds



27. The disbursement methods allowed under the project are (a) advance, (b) direct payments, (c) reimbursements, and (d) special commitments. The proposed minimum value of application for direct payments, reimbursements, and special commitments is US\$100,000.

28. The DA-BFAR will withdraw funds from the World Bank through the submission of duly signed withdrawal applications and quarterly IFRs. Disbursements under the project will comply with the World Bank policies and procedures on disbursements and FM as reflected in the World Bank's Disbursements Handbook and Financial Monitoring Report Guidelines. All replenishments to the Designated Account will only be for eligible expenditures based on the agreed eligibility/financing percentage in the Loan Agreement and will have adequate supporting documents. Attachments of supporting documents for withdrawal applications will be based on threshold limits specified in the Disbursement and Financial Information Letter.

29. Grant funds released to beneficiaries of enterprise and livelihood subprojects will be considered disbursed for the purposes of reporting to the World Bank. The FM section of the POM will include the mechanisms on accounting the utilization of funds and reporting of actual expenditures by the beneficiaries to the DA-BFAR.



30. The Designated Account will be opened and maintained at the Bangko Sentral ng Pilipinas in US dollars and have a variable ceiling. The amount to be requested will be based on two reporting period disbursement forecasts. The frequency for reporting eligible expenditures paid from the Designated Account will be quarterly through the IFR. Advance ceiling to the RPIUs and sub-implementing partners such as NFRDI will be based on six-month disbursement projections. Funds downloaded to the LGUs will be based on progress billings of contractors. To allow the submission of withdrawal applications and supporting documentation for expenditures incurred on or before the closing date, the project will be granted a four-month grace period to report these eligible expenditures.

Procurement

31. The NPMO in the DA-BFAR Central Office will be responsible for overseeing the project procurement activities under the project. Existing DA-BFAR procurement structure in the Central Office and RFOs, including the Bids and Awards Committee and Technical Secretariat/Working Group, will directly implement the procurement at their respective levels. Various grant beneficiary organizations will implement procurement through either commercial practices or community-driven development arrangement. The project procurement process will be defined in the Procurement Manual. Appropriate training to the various levels of procurement implementation will be scheduled by the World Bank in advance of loan effectiveness.

32. All procurement of goods, works, and non-consulting and consulting services under the project will be carried out in accordance with and governed by the World Bank Procurement Regulations for IPF Borrowers (November 2020) and the provisions stipulated on the Loan Agreement and in the Procurement Plan. The project will be subject to the World Bank's Anti-Corruption Guidelines, dated October 15, 2006, revised in January 2011, and July 1, 2016. The project will use the STEP tool to plan, record, and track procurement transactions. The general description of various items under different expenditure categories, as assessed in the PPSD and to be financed by the World Bank, are described below:

- (a) **Works.** Fish landing, ice plant and storage, common service/fish processing, and laboratory testing facilities, trading posts/markets.
- (b) **Goods.** IT and office equipment, MCS monitoring equipment/land-based radar systems, and vehicles including land and sea transport.
- (c) **Consulting services.** TA for capacity-building and implementation activities; conduct of feasibility studies, detailed engineering designs, construction supervision and quality oversight; M&E support; and other technical assessments and studies. Individual consultants will also be hired as technical experts to support the NPMO, PIUs, and FCUs.
- (d) **Non-consulting services.** Activities such as, but not limited to, beach clean-up, mangrove/coral rehabilitation, and/or restocking may be needed to support project implementation.

33. The applicable method of procurement for each specific contract and the World Bank's review requirements (prior or post) will depend on the nature, value, and risk of each contract and are specified in the Procurement Plan approved by the World Bank. For open national competitive procurement, the Philippines' NPP were assessed and found to be broadly consistent with the requirement of World Bank



Procurement Regulations Section V–Para 5.4 National Procurement Procedures (subject to a few conditions specified in the PPSD and in the project text section of the Procurement Plan).

34. **Procurement Manual.** The procurement arrangements and procedures will be detailed and fully documented in the Procurement Module of the POM, based on the provisions of the Loan Agreement, and as agreed between the DA-BFAR and the World Bank. The manual will also detail the processing timelines and the hierarchy of approval within the different procurement entities.

35. **Procurement Plan.** Contracts eligible for financing will be procured in accordance with the Procurement Plan, which defines the applicable procurement methods, estimated costs, prior review requirements, and time frame. A draft Procurement Plan for the project’s first 18 months has been prepared by the BFAR for the World Bank’s approval and uploading and publishing through the STEP system. The Procurement Plan will be updated annually, or as may be required, to reflect project implementation needs and improvements in institutional capacity and procurement risk.

Implementation Support Plan

36. **The project will support the introduction and operationalization of a new way of doing business for the DA-BFAR by adopting an EAFM that requires the support and collaboration of provincial, municipal, and multiple barangay LGUs rather than being primarily focused on the management of the country’s fishing grounds.** The challenge of sector modernization through technological enhancements and increased focus on aquaculture development is significant, as is the reforming of decision-making processes to better balance environmental, human, and social well-being along with improved governance. The implementation challenges this present for the DA-BFAR is significant and will need to be backed up by a strong support plan on the part of the World Bank.

37. **For the project to respond to the FAO-r 263 (January 2019) requirement for fisheries to be holistically managed, a new lever of collaboration is needed among national and regional agencies, LGUs (provincial and municipal), civil society organizations, research institutions, private sector entities, local fishers/producer groups, and other local stakeholders.** The implementation support, especially in the early years of the project, will need to provide both oversight and support for this collaborative process, especially given the many vested interests and competing demands that must be expected. Of particular importance will be the World Bank’s support at an institutional level to help the DA-BFAR forge the ‘buy-in’ of provincial governors and mayors to the cross-regional planning, investment, regulatory, and enforcement collaborative processes that will be needed for the project’s success. To the extent the FMA approach is not unlike other collaborative planning initiatives, for example, for watershed protection, ‘ridge to reef’ convergence, protected area conservation, and so on, efforts will be needed to integrate the FMA planning process with the existing mechanisms and instruments that underpin the formulation of provincial, municipal, and local planning and investment processes.

38. **The implementation support will also provide for technical input in specialized areas relating to aquaculture production, disease prevention, and enhanced monitoring of municipal fish stocks.** The project provides for substantial modernization of the fisheries sector, for example, through introduction of an integrated MCS system, wider use of the AIS, and remote sensing. However, given the entrenched way of doing business, especially given the many small-scale fishers involved with fisheries in municipal waters—and a domestic industry wherein middlemen play a key role—the level of both human capacity



building and facility enhancement will be substantial to bring about the envisaged modernization of the sector.

39. **Support to critical implementation support milestones.** To meet expected implementation challenges, the project will require regular follow-up and support from the World Bank task team members in the Philippine Country Office, coupled with specialized technical support. Support from the World Bank task team will be particularly important during the first 12 months of implementation as FMA boards begin to formulate their plans and strategies and at the time when ‘buy-in’ and support from LGUs and private sector stakeholders will need to be carefully forged and nurtured. Four short field visits to the two project FMAs will be planned in the first year of the project

40. **Six-monthly joint Implementation Support Missions (ISMs).** The DA-BFAR and the World Bank task team will jointly conduct implementation reviews every six months following project effectiveness. Specific elements of the Implementation Support Strategy, particularly in the early years of the project, will involve the following:

- (a) **Institutional implementation arrangements.** Institutional issues, especially the integration of FMA plans with the Regional Development Council, Provincial, Municipal Plans, and investment programs will be a key focus for the first 2–3 years. Of central importance to the success of the project will be that FMA plans are formulated with full participation and support of provincial governors and municipal and barangay mayors, as well as with the wide-ranging private sector stakeholders, research agencies, and other NGAs. Because of COVID-19 travel restrictions during project preparation, much of the initial collaborative work in the formulation of FMA Boards was done without close scrutiny by the World Bank. Therefore, the extent to which the required level of ‘buy-in’ and ownership of the FMA Board Planning process exists for the two FMAs covered by the project will need particular attention during the project’s first few years.
- (b) **Capacity building.** Given the infancy of the FMA approach and the institutional issues outlined above, DA-BFAR staff at the RFO level will be on the front line in shouldering the burden of work. This will involve organizing and facilitating stakeholder consultations and inputs; providing technical guidance, advocacy, and coordination; and following up to promote the transformation of plans and strategies into the coordinated uptake of investments and actions by NGAs, LGUs, and the private sector. This poses a significant challenge for the DA-BFAR and will require close attention by the World Bank task team, especially in the early years of project implementation and in the formulation/revisions of the Operations Manual.
- (c) **Technical support.** Specialized technical support will be needed throughout project implementation. The nature of technical support should be tailored to the needs of each FMA and may change over time. Such support should be operationally focused to complement the envisaged technological strengthening needed for modernizing the sector.
- (d) **Logistical requirements.** FMA 6 spans four regions and encompasses 11 provinces as well as the National Capital Region along the western side of Luzon. FMA 9, on the other hand, is mostly on the north-western side of Mindanao spanning five regions and 11 provinces. Given the relatively large areas involved and the complexity associated with quite different political



and jurisdictional boundaries, particularly for FMA 6, support missions will need to prioritize field visits and meetings. For FMA 9 in Mindanao, World Bank staff and consultants will need to have the necessary security training and clearances.

- (e) **Reporting requirements.** Because of the logistical issues outlined above, an important input to the six-monthly ISMs will be a requirement for each FMA Secretariat to prepare semiannual reports in advance of the scheduled mission. The format, timing, and review processes for these reports should be developed in conjunction with the DA-BFAR PMO as part of the initial ISM. FAO-r 263 requires that each FMA Management Board is to establish a peer review mechanism and that a consolidated FMA Management Board report is to be submitted to the DA-BFAR by February 15 each year. The timing of World Bank-support missions should take account of when these FMA reports will be available.
- (f) **MIS-M&E.** Close attention will be needed to ensure the M&E-MIS requirements for the project are implemented from the outset of the project. This will involve strengthening of the existing DA-BFAR MIS and development of specific M&E systems for the two FMAs along with other features such as the grievance redress mechanism. Timely procurement and consistency of approach for the baseline, midterm, and project-end studies will be needed. ISMs should ensure that development of the DA-BFAR's M&E-MIS system builds upon the considerable experience that already exists within the DA through its operation of the world-class system developed under the PRDP.
- (g) **Fiduciary support.** The World Bank's Implementation Support Team, including FM and procurement specialists, will provide hands-on support related to FM, review, and audit reporting procedures.
- (h) **Environmental and Social Safeguards.** Considerable input will be needed from the World Bank's Implementation Support Team, given the challenges and difficulties that must be anticipated in working with multiple LGUs with quite diverse socioeconomic, marine, coastal, estuarine, and aquaculture situations. The World Bank will provide hands-on support to the DA-BFAR in preparing and implementing the ESMF to manage the E&S risks following the provisions of relevant ESS of the World Bank's ESF. The project's SEP and the ESCP will be revisited during project implementation to further tailor them to the needs and requirements of the project based on the detailed assessment of E&S risks conducted for the preparation of the ESMF. A grievance redress system will be integrated with the MIS, which will build on the mechanism established under the PRDP.

41. **Implementation support plan and skills mix.** Intensive implementation support will be required during the first year of the project with an overall World Bank staff/short-term consultant input requirement of 60 staff weeks. This level of support will be needed to follow up and facilitate the orientation of staff in fiduciary, social, and environmental requirements; development of FMA Operational Guidelines, Plans, and Programs; and operationalization of the MIS-M&E system.

42. From Year 1 onward, intensive levels of support will still be required, given the considerable element of 'learning through doing' inherent in the project design and because of the significant institutional and operational reforms being introduced through the project. Ambitious technical innovations will be required to modernize the sector. Overall annual staff/STC inputs from Year 2 through to the end of the project are estimated to require 50 staff weeks. This will be largely utilized in two six-



monthly ISMs. As FAO-r 263 requires each FMA to present a consolidated report on their plans and programs to the DA-BFAR each year by February 15, the ISMs should normally be planned for March and September.

43. A summary of the identified implementation support needs is provided in table 1.3. A detailed matrix with time-bound actions will be included in the draft POM.

Table 1.3. World Bank Task Team's Estimated Implementation Support Budget/Staff Effort Requirements

Time	Focus of Borrower's Actions	Skills Needed	Resource Estimate	Source
First 12 months	<ul style="list-style-type: none"> • Providing technical and operational support • Ensuring project effectiveness • Launching the project and mobilizing implementing arrangements • Operationalizing Project Management Unit systems • Staffing; hiring project management consultant • Identifying technical and capacity issues • Developing terms of reference • Opening accounts developing technical packages • Executing initial payments for consulting services • Launching capacity and training activities 	<ul style="list-style-type: none"> • Task team leader (TTL) and co-TTLs • M&E specialist • Coastal aquaculture specialist • Value chain specialist • Marine fisheries management expert • Fisheries co-management expert • Institutional development and change management specialist • Port engineer • Fisheries finance specialist • Capacity development and education specialist • Food safety specialist • Legal specialist • Communications specialist • Administrative support 	<ul style="list-style-type: none"> • US\$290,000 • 12 SWs 	<ul style="list-style-type: none"> • Bank Budget • FAO
	<ul style="list-style-type: none"> • Conducting fiduciary training and supervision • Launching procurement • Carrying out procurement evaluations • Signing contracts for services and construction 	<ul style="list-style-type: none"> • FM specialist • Procurement specialist 	<ul style="list-style-type: none"> • 6 SWs • 10 SWs 	
	<ul style="list-style-type: none"> • Implementing and monitoring safeguards activities 	<ul style="list-style-type: none"> • Social development specialist • Environmental specialist 	<ul style="list-style-type: none"> • 6 SWs • 4 SWs 	



Time	Focus of Borrower's Actions	Skills Needed	Resource Estimate	Source
Annually thereafter (Years 2–7)	<ul style="list-style-type: none"> • Providing technical and operational support • Developing technical packages • Launching capacity building and M&E • Conducting midterm review • Executing technical packages and contracts • Conducting technical supervision of construction/small works • Conducting capacity-building activities • Implementing and monitoring safeguards activities • Executing payments • Carrying out annual audits, M&E, and reports • Conducting beneficiary survey; project completion workshop • Implementing citizen engagement and communication plans 	<ul style="list-style-type: none"> • TTL and co-TTL • M&E specialist • Costal aquaculture specialist • Value chain specialist • Marine fisheries management expert • Institutional development and change management specialist • Port engineer • Fisheries finance specialist • Capacity development and education specialist • Food safety specialist • Legal specialist • Communications specialist • Administrative support 	<ul style="list-style-type: none"> • US\$230,000 per year • 8 SWs per year 	<ul style="list-style-type: none"> • Bank Budget • FAO
	<ul style="list-style-type: none"> • Fiduciary monitoring and reporting • Carrying out procurement evaluations • Signing contracts for services and construction • Executing payments 	<ul style="list-style-type: none"> • FM specialist • Procurement specialist 	<ul style="list-style-type: none"> • 4 SWs per year • 10 SWs per year 	
	<ul style="list-style-type: none"> • Implementing and monitoring safeguards activities 	<ul style="list-style-type: none"> • Social development specialist • Environmental specialist 	<ul style="list-style-type: none"> • 5 SWs per year • 6 SWs per year 	

Note: SW = Staff week.



ANNEX 2: Monitoring, Control, and Surveillance (MCS)

I. MCS Issues to Be Addressed by FISHCORE

1. Existing MCS capacity in the coastal and municipal waters of FMAs 6 and 9 is inadequate to implement the EAFM under FMA framework plans and to realize opportunities to add value to landings. Access to municipal fisheries is de facto unregulated, fishing effort within FMA waters is unconstrained, and destructive fishing practices are prevalent. Overfishing is occurring and many stocks are biologically and economically overexploited in the selected FMAs. FMA-level EAFM plans do not exist. Existing BFAR fisheries surveys (monitoring programs) have poor coverage of municipal fisheries, and LGUs do not formally monitor their fisheries. The control of fishing operations in municipal waters by LGUs is hindered by the absence of management plans, weak or absent municipal fisheries legislation, and limited enforcement capacity.
2. Postharvest losses are significant due to poor postharvest practices often associated with destructive fishing methods, inadequate infrastructure for ice supply, safe handling and cold storage, and transport of seafood. Opportunities to add value to landings have not been realized owing to the overexploited nature of the fisheries, the absence of sustainable and responsible management practices, inadequate monitoring systems, and underinvestment in marketing and related information systems, as well as postharvest services and infrastructure.
3. The objective of the FISHCORE in terms of its MCS element is to help IUU fishing practices, encourage compliance with management measures, and increase value addition potential within the project areas.

II. Planned MCS Activities Supported under the Project

4. Enforcing the management measures set out in the FMPs, fishery laws, regulations, and policies is fundamental to ensure compliance and effectiveness of the plans and policies. This involves regulating access to the fishery through licensing and controlling fishing operations in accordance with the agreed management measures and HCRs by monitoring fishing operations and landings and sanctioning noncompliance.
5. Institutionally, the DA through its BFAR is responsible for the development, improvement, management, and conservation of the Philippine fisheries and aquatic resources. For municipal waters that extend 15 km seaward from the shoreline, responsibility for the management and conservation of coastal resources lies with LGUs with the DA-BFAR playing a supporting role and providing TA. The project's investments and activities under Component 1 are therefore primarily intended to strengthen the DA-BFAR's supporting roles to LGUs in the project area and LGUs' capacity to monitor and control fishing operations.
6. The project will support the preparation of FMPs to be formulated with representation and approval from LGUs. These plans will describe how fishing operations are to be controlled using management measures and adjusted according to the HCRs to achieve the objectives set out in the plans. All plans formulated by the project will seek to regulate access to the fisheries by means of vessel and fishing gear licensing in accordance with the existing Fisheries Code and its amendments. The selected



management measures will be implemented throughout the FMA by the DA-BFAR and by each LGU in accordance with FMA Management Board Resolutions. Management actions and activities to implement the plan, including MCS, will be covered in the DA-BFAR operational plans and in LGU actions plans. The project will support the DA-BFAR to prepare an MCS strategy to accompany each FMP targeting stocks of pelagic and demersal species in coordination with LGUs, FARMCs, and other stakeholders.

7. Legislation will be enacted to enforce new management measures. In the case of the DA-BFAR, this will take the form of FAO-rs for areas beyond municipal waters up to the Exclusive Economic Zone (EEZ) (except for FMA 6, where the project will only support activities within 48 nm), while for LGUs they would be enacted through a Municipal Fisheries Ordinance in accordance with Department of Interior of Local Government Memorandum Circular 209-59. The project will support LGUs to prepare the necessary legislation including new by-laws so noncompliance with the management measures contained in the plan can be sanctioned.

8. The project will supply LGUs with MCS plan development, surveillance equipment such as coastal and near-shore patrol boats, and initial operating budgets and organize MCS teams to monitor fishing operations and enforce the agreed management measures in accordance with the legislation by reporting and sanctioning noncompliance. Additionally, the project will support the MCS enforcement data collection; record keeping; conversion to electronic format; upload to Integrated Marine Environment Monitoring System (IMEMS); and reporting, writing, and analysis by using VMS, AIS, and infraction data to improve transparency and MCS efficiency and effectiveness.

9. The project will also invest in the development, piloting, and evaluation of VMS or AIS for municipal vessels enabling LGUs to remotely monitor fishing operations in their municipal waters in real time and identify and sanction contraventions with fishing area restrictions.

10. The project will provide funds to prepare and implement a communication and education strategy aimed at LGU fisher communities to raise awareness of the fisheries management plans, existing and new legislations, and the sanctions for noncompliance. This will serve to foster support for the plan and compliance with the rules and regulations. The strategy will also raise awareness among communities of the means of accessing livelihood support, the grievance redress mechanism, and project results.

11. Not all LGUs will require project support for these MCS-related activities. The project's baseline surveys will evaluate the LGUs' capacity and needs with respect to these activities using objective and transparent criteria. The findings of these surveys will be used to prioritize project support. The LGUs with high levels of IUU fishing, vulnerable resources, and limited capacity will be prioritized for MCS support.

12. If required, adjustments to the management measures contained in the management plans will be made by the Management Boards of the FMAs with the advice of the SAG following annual reviews of the performance of each management plan. With project support, plans will be revised if required at 3–5 yearly intervals after the effects of management measures manifest in the monitoring data.

III. Assessment of Philippine Legal Framework on Fisheries on the Consistency with UNCLOS

13. The Republic of the Philippines signed the United Nations Convention on the Law of the Sea (UNCLOS) on December 10, 1982, and the Convention entered into force for the Philippines on November



16, 1994. In the country, the primary fishery law is the Philippine Fisheries Code, Republic Act 8550, which was amended, in 2014, by Republic Act 10654 to address IUU fishing. This is referred to as the amended Fisheries Code and is compliant with UNCLOS provision on enforcement of laws in Article 73 (2–4). Poaching within the EEZ is not penalized with imprisonment nor any form of corporal punishment. Possible penalties only include payment of fines and confiscation of catch, vessel, and fishing equipment.⁵⁰ Only poaching within internal waters is penalized with imprisonment.⁵¹

14. In case of arrest or detention of foreign vessels, FAO-r 200-1, requires the DA-BFAR Director or Central Office to promptly notify the flag state of the action taken.⁵² FAO-r 200-1, however, does not specify the period within which the DA-BFAR must notify the flag state nor enumerates the information that must be included in the notification. It merely states that the flag state must be notified of the action taken by the law enforcement agencies. Also under FAO-r 200-1, arrested crews and seized vessels may be released upon posting of bail bond or security.⁵³

IV. Risks and Mitigation Measures

15. Improving the management and sustainability of the fisheries targeted by the project requires that most, if not all, LGUs represented by the Management Board of the FMA collectively and effectively implement the FMPs through their MCS activities.

16. Collective implementation is necessary because the fisheries that are the subject of the plans share the same fish stocks. The same management measures must therefore be applied by all LGUs over the range of the stock—in the project’s case, the LGUs in the Selected FMAs. Failure by some LGUs to adopt these measures might be seen by the LGUs that do adopt the measures as ‘free riding’ their management efforts. In the same manner, LGUs adopting measures of their own choice instead of those specified in the plan might be regarded as exploitative, disruptive, or noncooperative by compliant LGUs. Both situations could threaten the sustainability of the plan.

17. Collective implementation will therefore require that most, if not all, LGUs support the management plan including the objectives sought and the management measures to be adopted, but there is a risk that this collective support might not be realized although it is the principle that LGUs will be represented in the Management Board and once the measured/policies/regulations are approved and adopted by the Management Board, all the LGUs involved need to take consistent actions.

18. Measures employed in the project design to mitigate this risk focus upon ensuring that LGUs are effectively represented on the Management Board and promoting transparency, awareness and understanding across all management decision-making activities. Risk assessments will be performed during the management planning stage to raise awareness and understanding among LGUs of the likely socioeconomic implications of the proposed management measures for their fisheries and dependent communities so they can make rational and informed decisions. Adjustments to management measures

⁵⁰ Amended Philippine Fisheries Code, Sec. 91.

⁵¹ Ibid.

⁵² FAO 200-1, series of 2001, Sec. 11(A) 3.

⁵³ Ibid, Sec. 12.



can be made until the strategy becomes acceptable to the majority of LGUs before the plan is approved and implemented.

19. Effective implementation will require that most, if not all, the LGUs have the capacity to monitor and control their municipal fisheries in accordance with the agreed measures. It is unlikely that this requirement will be met. Therefore, as described above, the project will evaluate LGU capacity and then allocate project resources to priority LGUs to help them prepare the necessary legislation to enact the management measures and sanction noncompliance; provide municipal and near-shore patrol boats, surveillance equipment, and operational budgets; and help organize and implement community-based MCS activities.

20. **Transparency and prioritization criteria.** Without objective and transparent eligibility and prioritization criteria to select LGUs to receive project support and allocate resources for their MCS activities, there is a risk that those LGUs that do not receive project support or that receive less support than others might regard the process as ad hoc or inequitable. This could lead to dwindling support for the management plan and a lack of sustained investment by LGUs for MCS activities. To minimize these risks, the project will ensure that objective and transparent eligibility, prioritization and allocation criteria, and even potentially competition and awarding mechanism are developed and applied to select priority LGUs and to allocate available resources. The project will also ensure that all LGUs are aware of and understand the process adopted by the project to assimilate the available support for MCS.

21. In addition to the mitigation measures integrated in the project activities, the Legal Agreement for the project includes legal covenants to ensure that fisheries surveillance protocol will be developed as part of the POM acceptable to the World Bank and the protocol shall state, among others, that

- (a) The surveillance mission supported under the project is a fisheries-priority-only mission and the mission task is duly recorded and documented before and subsequent to the mission;
- (b) Memoranda of understanding, in form and substance satisfactory to the World Bank, are concluded between the DA-BFAR and the agencies involved in the surveillance missions, including government agencies, fishing communities, and any civilian contractors involved;
- (c) The accounts of the entities receiving or benefiting from the loan are maintained in a manner satisfactory to the World Bank;
- (d) The mission is conducted by personnel who have been properly trained in the operation of any equipment used in the surveillance mission; and
- (e) The mission is under the control of an authorized fisheries officer but subject to the overarching authority of the master of the vessel, particularly with respect to safety and emergency response.