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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF US\$75.1005 MILLION

TO THE

REPUBLIC OF COSTA RICA

FOR A

SUSTAINABLE FISHERIES DEVELOPMENT PROJECT

February 6, 2020

Environment & Natural Resources Global Practice
Latin America And Caribbean Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective February 4, 2020)

Currency Unit = CRC

CRC\$1 = US\$0.00177

US\$1 = CRC\$566.5

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

COMEX	Ministry of Foreign Trade (<i>Ministerio de Comercio Exterior</i>)
CPF	Country Partnership Framework
EEZ	Exclusive Economic Zone
ESMF	Environmental and Social Management Framework
FAO	Food and Agriculture Organization
FM	Financial Management
FUNBAM	Environmental Bank Foundation (<i>Fundación Banco Ambiental</i>)
GEF	Global Environmental Facility
IATTC	Inter-American Tropical Tuna Commission
IMAS	Costa Rican Mixed Institute for Social Support (<i>Instituto Costarricense Mixto de Apoyo Social</i>)
INA	National Learning Institute (<i>Instituto Nacional de Aprendizaje</i>)
INCOPESCA	Costa Rican Institute for Fisheries and Aquaculture (<i>Instituto Costarricense de Pesca y Acuicultura</i>)
IPPF	Indigenous Peoples Planning Framework
IRR	Internal Rate of Return
IUU	Illegal Unregulated Unreported
LAC	Latin America and the Caribbean
MAG	Ministry of Agriculture and Livestock (<i>Ministerio de Agricultura y Ganadería</i>)
MCS	Monitoring, Control and Surveillance
MINAE	Ministry of Environment and Energy (<i>Ministerio del Ambiente y Energía</i>)
MOF	Ministry of Finance
MOPT	Ministry of Public Works and Transport (<i>Ministerio de Obras Públicas y Transporte</i>)
MTSS	Ministry of Labor and Social Security (<i>Ministerio de Trabajo y Seguro Social</i>)
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
PCT	Project Coordination Team
PES	Payments for Ecosystem Services
PM	Procedures Manual
POM	Project Operational Manual
PPP	Purchasing Power Parity
PPSD	Project Procurement Strategy for Development
PSMA	Port State Measures Agreement
QCBS	Quality and Cost Based Selection
RFA	Responsible Fishing Area
RFB	Request For Bid
RPF	Resettlement Policy Framework
SENASA	National Animal Health Service
SEP	Stakeholder Engagement Plan
SNG	National Coast Guard Service (<i>Servicio Nacional de Guardacostas</i>)
STEP	Systematic Tracking and Exchanges in Procurement
ToR	Terms of Reference
UNDP	United Nations Development Program
VMS	Vessel Monitoring System
WBG	World Bank Group

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Costa Rica	Costa Rica Sustainable Fisheries Development Project	
Project ID	Financing Instrument	Environmental Assessment Category
P168475	Investment Project Financing	B-Partial Assessment

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"/> Disbursement-linked Indicators (DLIs)	<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)	

Expected Approval Date	Expected Closing Date
24-Mar-2020	19-May-2027

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The Project Development Objective (PDO) is to improve management of priority fisheries and enhance economic opportunities from those fisheries for Costa Rica.

Components

Component Name	Cost (US\$, millions)
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Strengthening the governance and management of fisheries resources	20.67
Investing in sustainable fisheries value chains	26.54
Strengthening mechanisms for social and environmental sustainability	21.85
Project Management, Monitoring, and Communications	6.04

Organizations

Borrower:	Republic of Costa Rica
Implementing Agency:	Instituto Costarricense de Pesca y Acuicultura (INCOPESCA)

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	82.10
Total Financing	82.10
of which IBRD/IDA	75.10
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	75.10
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Non-World Bank Group Financing

Counterpart Funding	7.00
Borrower/Recipient	7.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025	2026	2027
Annual	0.00	0.10	7.54	14.62	17.75	17.05	12.23	5.80
Cumulative	0.00	0.10	7.64	22.26	40.02	57.07	69.30	75.10

**INSTITUTIONAL DATA****Practice Area (Lead)**

Environment, Natural Resources & the Blue Economy

Contributing Practice Areas

Finance, Competitiveness and Innovation, Social Protection & Jobs, Transport

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	High
3. Sector Strategies and Policies	Low
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	Substantial
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



Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

Section I.A.1 of Schedule 2 to the Loan Agreement. For purposes of carrying out the Project, the Borrower, through Ministry of Finance (MoF), shall make the proceeds of the Loan available to the Project Implementing Entity under a subsidiary agreement ("Subsidiary Agreement") between the Borrower, through MoF, and the Project Implementing Entity, under terms and conditions approved by the Bank.

Sections and Description

Section I. A.1. (b) (iv) of the Schedule 2 of the Loan Agreement. The "Subsidiary Agreement" shall include the obligation of the Project Implementing Entity to have at all times during project implementation, adequate professional staff (with expertise in, inter alia, procurement and financial management matters) and administrative staff, assigned to the implementation of the Project, all in numbers and with qualifications and experience acceptable to the Bank and as set forth in the Operational Manual.

Sections and Description

Section I.A.4 of Schedule 2 to the Loan Agreement. The Borrower shall cause the Project Implementing Entity to not later than ten (10) months after the Effective Date, select and hire a technical services firm acceptable to the Bank, under terms of reference acceptable to the Bank and in accordance with Section 5.13 (Procurement) of the General Conditions, to assist the Project Implementing Entity in the selection, recruitment and processing of payments to individual consultants for, inter alia: (a) establishing a project coordination team under Component 4 of the Project with a structure, functions, responsibilities, staff and adequate resources, all satisfactory to the Bank (the "Project Coordination Team"); (b) providing implementation support to the Project Implementing Entity; and (c) strengthening the institutional capacity of the Marine Ecosystem Services Support Entity to execute sub-component 3.3 of the Project.

**Sections and Description**

Section I.A.5 of Schedule 2 to the Loan Agreement. The Borrower shall cause the Project Implementing Entity to no later than thirty (30) days after the Effective Date, assign a procurement specialist with terms of reference and qualifications acceptable to the Bank to, inter alia, carry out the selection of the technical services firm referred to under Section I.A.4 of Schedule 2 to the Loan Agreement, all in accordance with the Operational Manual.

Sections and Description

Section I.C.1 of Schedule 2 to the Loan Agreement. 1. For the purpose of carrying out sub-component 3.3 of the Project, the Borrower shall cause the Project Implementing Entity to make available a portion of the proceeds of the Loan allocated to Categories 2(a) and (2)(b) to the Marine Ecosystem Services Support Entity under an agreement between the Project Implementing Entity and the Marine Ecosystem Services Support Entity, under terms and conditions approved by the Bank (“the Marine Ecosystem Services Support Entity Agreement”).

Sections and Description

Section I.B.1 of Schedule 2 to the Loan Agreement. For the purpose of carrying out sub-components 1.3 (b) and 1.3(c) of the Project, the Borrower shall cause the Project Implementing Entity to enter into an agreement with the National Coast Guard Service, under terms and conditions approved by the Bank (“National Coast Guard Service Agreement”).

Sections and Description

Section I.E.7 (a) of Schedule 2 of the Loan Agreement. The Borrower shall cause the Project Implementing Entity to maintain and publicize, throughout project implementation, the availability of a grievance mechanism, in form and substance satisfactory to the Bank, to hear and determine fairly and in good faith all complaints raised in relation to the Project, and take all measures necessary to implement the determinations made by such mechanism in a manner satisfactory to the Bank.

Sections and Description

Section I.E.1 of Schedule 2 of the Loan Agreement. The Borrower shall cause the Project Implementing Entity to ensure that the Project is carried out with due regard to appropriate health, safety, social, and environmental standards and practices, and in accordance with the Safeguards Instruments.

Sections and Description

Section I.E.3 of Schedule 2 of the Loan Agreement. The Borrower shall cause the Project Implementing Entity to ensure that the Project does not include any activities and expenditures on the negative list set forth in the Environmental and Social Management Framework (ESMF).

Sections and Description

Section I.E.5 (a) of Schedule 2 of the Loan Agreement. The Borrower shall cause the Project Implementing Entity to ensure that all consultancies related to technical assistance, design and capacity building under the Project, the application of whose results could have environmental, social and health and safety implications, shall only be undertaken pursuant to terms of reference reviewed and found satisfactory by the Bank.



Conditions	
Type Effectiveness	Description Article 4.01 (a) of the Loan Agreement. The Operational Manual has been prepared and adopted by the Project Implementing Entity in a manner acceptable to the Bank.
Type Effectiveness	Description Article 4.01 (b) of the Loan Agreement. The Subsidiary Agreement has been duly signed on behalf of the Borrower, through MoF, and the Project implementing Entity and all conditions precedent to its effectiveness (other than the effectiveness of the Loan Agreement) have been fulfilled.
Type Effectiveness	Description Article 4.01 (c) of the Loan Agreement. The Project Implementing Entity has assigned a Project coordinator acceptable to the Bank for purposes of initiating the execution of the Project as provided in the Section A.1(b) of Schedule 2 to the Loan Agreement
Type Disbursement	Description Section III.B.1 (a) of Schedule 2 to the Loan Agreement: no withdrawal shall be made for payments made prior to the Signature Date, except that withdrawals up to an aggregate amount not to exceed USD 15,020,100 may be made for payments made prior to this date but on or after January 28, 2020 (but in no case more than one year prior to the Signature Date), for Eligible Expenditures.
Type Disbursement	Description Section III.B.1 (b) of Schedule 2 to the Loan Agreement: no withdrawal shall be made under Category (2)(a) until the Marine Ecosystem Services Support Entity Agreement has been signed by the respective parties thereto.
Type Disbursement	Description Section III.B.1 (c) of Schedule 2 to the Loan Agreement: no withdrawal shall be made under Category (2)(b) until: (i) the Marine Ecosystem Services Support Entity Agreement has been signed by the respective parties thereto; and (ii) the Project Implementing Entity has caused the Marine Ecosystem Services Support Entity to furnish evidence acceptable to the Bank that the Marine Ecosystem Services Support Entity has issued the Procedures Manual in a manner acceptable to the Bank.



I. STRATEGIC CONTEXT

A. Country Context

1. Considered one of the most politically stable, progressive, and prosperous nations in Latin America and the Caribbean (LAC), Costa Rica is a development success story in many respects. An upper middle-income country, it is under consideration for membership to the Organization for Economic Co-operation and Development (OECD). Notwithstanding almost a decade of relatively robust macroeconomic performance, economic growth has been decelerating since 2016 due to external shocks and weakening domestic demand. The economy grew by an average of 4 percent per year between 2010 and 2016, significantly higher than the OECD (1.9 percent) and LCR averages (2.5 percent), supported by robust foreign direct investment (FDI), increased government spending following counter-cyclical fiscal measures taken during the crisis, and vigorous private consumption fueled by rising real wages. However, GDP growth slowed to 3.4 percent in 2017, 2.6 percent in 2018 and further declined to 1.4 percent in the first half of 2019 due to external and internal factors. On the external side, the Nicaragua crisis affected exports to Central America, while the fall in international prices of agricultural goods and climatic shocks (El Niño) depressed agricultural activities. On the internal side, a worsening fiscal situation has also increased financial costs to the economy and eroded investors and consumers' confidence, decelerating investments and consumption.
2. Although growth is expected to recover gradually, Costa Rica needs to boost productivity over the medium term to sustain it. GDP growth for 2019 was 2.1 percent and is projected to recover to 2.5 and 3 percent in 2020 and 2021, respectively. The drivers of the recovery include easier credit conditions, a more accommodative monetary policy, and an acceleration in the pace of public investment. Productivity growth has gained some momentum over the past decade, but many institutional obstacles are hampering stronger growth and the spreading of its gains more widely. Obstacles include labor market marginalization, restrictions on competition, low outcomes and inequities in education, and weak institutions, including key macroeconomic management institutions and SOE management. Introducing evidence-based policymaking is also an essential element of the institutional agenda.
3. The combination of political stability, a strong social compact, and steady growth has resulted in one of the lowest poverty rates in LAC. In 2016, 10.7 percent of the population was living below the internationally comparable upper middle-income poverty line (US\$5.5 per person per day, 2011 Purchasing Power Parity (PPP)). Although growth contributed to poverty reduction in the mid-2000s, these gains were reversed during the 2008-09 global financial crisis. The share of the population living below the lower middle-income poverty line (US\$3.2 per person per day, 2011 PPP) remained stagnant at about four percent between 2010 and 2016, while the share of the population below the upper middle-income line decreased only slightly from 12.9 to the current 10.7 percent. The country's success over the past decades is also reflected in its strong human development indicators, which continue to rank higher than those of other countries in the region, and the size of the middle class, which has been the largest group in society since 2010.
4. Given that Costa Rica is a global leader for its environmental policies, the country is well positioned to pioneer the development of environmental economic instruments in the marine sector. The pioneering Payments for Environmental Services (PES) program has been successful in promoting forest and biodiversity conservation and Costa Rica is one of the few tropical countries in the world that has reversed deforestation. It has also been active in seeking to mitigate climate change through several innovative initiatives, such as its goal to reach carbon neutrality by 2021; and a pioneer in promoting increased resilience to natural disasters with the first of its kind Development Policy Financing with Catastrophe Deferred Draw Down Option Project (P111926). Building on the country's extensive



experience with the PES in the land sector, the country is well positioned to pilot innovative design with the development of similar economic instruments in the marine sector.

5. The country is addressing symptoms of deeper structural problems that could threaten the sustainability of its development model through a fiscal reform and its environmental and social policies. First, the persistence of large fiscal deficits and continued increases in the public debt-to-GDP ratio make Costa Rica vulnerable to adverse changes in financial markets sentiment. In an effort to reduce the fiscal deficit, Congress approved on December 3, 2018 a fiscal reform (including measures on both the revenues and expenditure side) that is expected to stabilize debt in the medium-term. Second, despite reasonable growth and a strong commitment to the Social Compact, poverty reduction has stagnated, and inequality is rising. Third, Costa Rica is also highly vulnerable to extreme climate events and natural hazards which are exacerbating the country's other development challenges¹. These problems cut across the fabric of Costa Rica's development model undermining the sustainability of the country's Social Compact and Green Trademark. The Government has strived to address these problems and is committed to an inclusive society that guarantees the welfare of its people, supported by transparent and accountable public institutions.

B. Sectoral and Institutional Context

6. With a maritime jurisdiction over ten times its land area², Costa Rica is endowed with substantial marine resources with significant potential to contribute to the country's economic growth and shared prosperity. Representing a small -and declining- share of Costa Rica's economy, fisheries and aquaculture generated US\$145.4 million in 2015, down 14 percent from 2011, accounting for about 0.28 percent of GDP. Trade in fisheries products generated US\$139 million of exports and US\$150 million of imports in 2015, accounting for just under 1 percent of the country's total exports and 1.6 percent of total imports. The sector is estimated to have employed 8,397 people in 2015, including indirect jobs in processing and other sector-related activities, representing 0.37 percent of the total labor force that year and a decrease by about 50 percent compared to 2013. A large share of those jobs was likely to be held by women in processing and sales, where they are mostly employed. Growth constraints also exist in Costa Rica's small-scale aquaculture sector which is made up of about another 2,500 families residing mainly in the central mountains and Caribbean region. There are about 2,000 small-scale vessels licensed to fish, although unofficial estimates indicate that the number of small-scale commercial vessels are closer to 5,000, with the difference being made up by unregulated boats.

7. Despite their relatively small contribution to the economy, fisheries are critically important for coastal communities as a source of livelihood. Along both coasts, fishing dependent families have limited alternative income-generating opportunities, due to the skills gap between fishers and the requirements of other sectors such as tourism. The province of Puntarenas, where the great majority (78 to 88 percent) of coastal fishing activity is concentrated, has experienced economic decline in recent years and currently has the highest unemployment rate in the country. The 24 coastal cantons where fishing takes place are among the poorest in Costa Rica, and nearly all rank among the lowest in the national social progress index.

¹ Historically, temperatures in Costa Rica have increased between 0.2°C and 0.3°C per decade with a prolonged and hotter dry season since 1960. Temperatures are estimated to increase by 1°C to 2°C by 2050, and between 2°C and 4°C higher in 2080. Temperature variance under future climate trends will be more pronounced at higher elevations than in the lowlands. Extreme precipitation has increased significantly since 1960, with more intense rain occurring during shorter periods of time that produce greater average precipitation per episode. This trend is expected to continue in the future due to climate change, possibly resulting in a greater frequency or intensity of extreme events such as storms, floods and droughts. Source: World Bank's Climate Change Knowledge Portal

<https://climateknowledgeportal.worldbank.org/country/costa-rica>

² Costa Rica's Exclusive Economic Zone stretches over 574,725 km², compared to a land area of 51,100 km².



8. **A main driver of economic decline is the overexploitation of coastal fisheries, which is reflected in a decline of the capture fisheries volume by 45 percent between 2000 and 2015.** The shrimp trawl fishery, for example, has been in decline for over a decade due to overfishing and in 2018, it consisted of only three deep-water trawlers. In 2013 the Constitutional Court banned the renewal of trawling vessel licenses until a science-based and sustainable management plan is established for this fishery. This has had a significant impact on both shrimp vessel crews and hundreds of women working informally as shrimp peelers, whose lack of formal education constrains alternative job opportunities. A similar trend is seen in the decline in catches and lower incomes of artisanal fishers, as they now find themselves capturing smaller, often juvenile specimens, in lower quantities, and of lower market value. Recent research and official reports³ indicate that priority fish species in the Gulf of Nicoya (croakers, drums, snappers, groupers, grunts) face high rates of overexploitation and that maximum sustainable yield was reached between 1964 and 1999, suggesting that overfishing has been a decades-long trend. Furthermore, a weak investment and business climate, coupled with limited or underperforming infrastructure and services, significantly constrain industrial and artisanal private sector development. Unlike its Pacific jurisdiction, Costa Rica's Caribbean maritime zone is much smaller and less productive, accounting for only 1 percent of total catches and dominated by a seasonal small-scale lobster fishery, subsistence fishing and a small but unregulated longline fleet. While data on the status of fisheries in the Caribbean part of the country are scarce, it is likely that a similar situation exists across both coasts. Climate trends are expected to adversely affect the fisheries sector in the future.⁴

9. **Differences in gender roles in artisanal fishing communities have led men and women traditionally engaging in distinct jobs with different wages, health and safety and conditions.** For the most part men control the fishing activity at sea while women work on jobs onshore, associated with the pre-harvest and the post-harvest (processing) segments of the value chain. In particular, many women in the fisheries sector in Costa Rica work as shrimp peelers or mollusk gatherers, often without social protection.

10. **Offshore pelagic fish resources found in Costa Rica's Pacific Exclusive Economic Zone (EEZ) stand in sharp contrast to coastal fisheries, generating the majority of catches and public revenues and representing a vast natural capital with untapped potential for the country.** The benefits of these offshore large pelagic resources to Costa Rica have been minimal to date and restricted to license fees. Priority species in terms of total value include tuna, which is mainly captured by foreign vessels licensed to operate in Costa Rican waters, and sharks, swordfish, sailfish, marlins, and common dolphinfish/dorado caught by a domestic fleet of an estimated 400 longline vessels. Pacific yellowfin tuna represents the most valuable fishery resource in the country with an estimated landed value of US\$50 to US\$70 million per year. Currently, foreign purse sein licenses generate approximately US\$200,000 per year in public revenue. Similarly, the assignment of Costa Rica's national allocation of fishing capacity under the Interamerican Tropical Tuna Commission (IATTC) to foreign purse seiners generate an additional US\$1.31 million per year. This revenue contributes significantly to government sector support, which as a percentage of the value of landings is relatively small in comparison to OECD countries (20 percent vs. 7 percent in Costa Rica). With little capacity to monitor fishing activity it is possible that foreign purse seine vessels are fishing illegally in Costa Rican waters while the Costa Rican longline vessels are generally believed to fish illegally in the waters of neighboring countries. By limiting purse seining in Costa

³ Flores, Diana, Wagner Quiros, Ignacia Revera and Alex Smith. Quantifying the Economic Potential of Small-scale fisheries in the Gulf of Nicoya, Cosa Rica. University of California, Santa Barbara. Spring 2017. <http://nicoyafisheries.weebly.com/>

⁴ According to the 2018 FAO Report, maximum catch potential in Costa Rica's EEZ could be reduced by as much as 50 percent in the Caribbean Sea and 90 percent in the Pacific Ocean by the end of the century under the representative concentration pathway (RCP) 8.5. Source: Barange, M., Bahri, T., Beveridge, M.C.M., Cochrane, K.L., Funge-Smith, S. & Poulain, F., eds. 2018. *Impacts of climate change on fisheries and aquaculture: synthesis of current knowledge, adaptation and mitigation options*. FAO Fisheries and Aquaculture Technical Paper No. 627. Rome, FAO. 628 pp.



Rica's Pacific EEZ and redirecting the longline fleet towards targeting primarily tuna, the Government aims to significantly increase the value of this resource generated for the country.

11. Recreational fishing linked to the national tourism industry has been steadily increasing, surpassing commercial fishing in economic terms. With about 450 registered commercial vessels, it contributes around US\$100 million per year to the economy. Marlin and sailfish, which are caught by the pelagic longline fleet, are highly prized by this sector. With higher catch rates and increased promotion, the recreational fishing sector could attract even more high-end international tourists and grow further, potentially providing employment opportunities including along the Caribbean coast.

12. The Costa Rican Institute for Fisheries and Aquaculture (INCOPESCA) is responsible for managing Costa Rica's fisheries and aquaculture sector. An autonomous agency under the Ministry of Agriculture and Livestock (MAG), it is overseen by a Board of Directors of which industry representatives have historically made up the majority. INCOPESCA led the development of an ambitious National Fisheries Development Plan, approved in 2013, but there has been no structured implementation nor monitoring of it thus far. Historically, INCOPESCA has applied rudimentary measures to control fishing effort including gear restrictions, minimum size limits and seasonal closures. There are no output limitations such as total allowable catches and the institute has limited capacity to carry out data collection and stock assessments as a basis for science-based decision-making. In recent years INCOPESCA has established a number of Responsible Fishing Areas (RFAs) as a key mechanism for improving the management of nearshore small-scale fisheries through a participatory process with local communities.

13. Aligning objectives and strengthening coordination among the different agencies with a mandate over marine resources is a key challenge for effectively managing the fisheries sector. The Ministry of Environment and Energy (MINAE) has a broad mandate to ensure the conservation of coastal and marine biodiversity. While it has no direct oversight of fisheries, it has played an active role in promoting the conservation of marine species and plans to establish 11 Marine Protected Areas by 2020. Enforcement is under the jurisdiction of the National Coast Guard Service (SNG) on the water and the police force on land but there is limited capacity and resources allocated to preventing illegal fishing and trade. Other institutions that have a key role in fisheries include the Mixed Institute for Social Support (IMAS) which provides targeted cash transfers to vulnerable fishers during closed seasons; the National Animal Health Service (SENASA) responsible for food and safety regulations; the National Learning Institute (INA) which provides training and extension services; the Ministry of Labor and Social Security (MTSS); the Ministry of Public Works and Transport (MOPT); and the Ministry of Foreign Trade (COMEX) which oversees and promotes fisheries trade and exports.

14. A combination of gaps in legal and institutional frameworks, limited human and infrastructure capacity, and weak oversight of international industrial fishing limit domestic and foreign investment contributing to poor sector growth, and have impacted coastal habitats and marine biodiversity negatively. A 2012 Presidential Commission on Marine Governance identified ecosystem degradation, overexploitation of marine and coastal resources, and the use of marine space for illicit activities as the key trends of the sector, identifying seven governance challenges that need to be addressed: (i) lack of clear policies and interinstitutional coordination to manage marine space and resources; (ii) overlapping competencies among agencies; (iii) gaps in key areas of marine resource management; (iv) lack of sustainable financing strategies; (v) conflicting interests among stakeholders using marine resources; (vi) limited presence of the State in maritime jurisdictions; and (vii) the lack of marine spatial planning. Lack of growth in fisheries is an important limiting factor in reducing poverty in the country's coastal areas.



15. Declining performance in the fisheries sector is further exacerbated by the impacts of climate change. Scientific modelling on the future impact of climate change and variability on fisheries indicate decreased productivity at low- and mid-latitudes, and vulnerability to impacts such as ocean warming and acidification, reduced rainfall, dry spells, as well as the frequency and intensity of El Niño-Southern Oscillation. A 2018 Food and Agriculture Organization (FAO) report projects that by 2050 the total maximum catch potential in Costa Rica's Pacific EEZ will decrease by 4.05 percent under a "strong mitigation" scenario and 20.92 percent under a "business-as-usual" scenario from present yields, with no discernable difference in the Caribbean. In the Costa Rican Pacific, all fleets are projected to undergo reductions in habitat suitability by 2050 relative to 2000. The largest declines are expected for the small-pelagic fleet, while decreases of around 10 percent are expected for the remaining fleets. Building resilience to climate change in the sector requires healthier fish habitats and fish stocks that can be obtained by strengthening fisheries governance and regulations, to which the Project will contribute.

16. Improved management of Costa Rica's fisheries is critical to ensure their sustainable contribution to the country's economic growth and to climate resilience. If properly managed, a restructuring of the fishery sector can bring substantial benefits, and drive investments and job creation along the coast in the medium-term, along with more public revenues and sustainability. However, this and other value-generating opportunities will not be realized if current trends in weak governance, overexploitation, underinvestment, and subsequent decreasing profitability in fisheries continue. Realizing this opportunity, the Government of Costa Rica has prioritized reforming the fisheries sector and improving fishing-dependent livelihoods by introducing a number of initiatives to improve fisheries management, including as part of its accession process to the OECD. Improving sector governance, institutional capacity, and creating an enabling business environment for private sector participation provides clear entry points for Bank support to reverse the current situation, allowing fisheries to contribute far more than they currently do to Costa Rica's sustainable growth.

C. Relevance to Higher Level Objectives

17. The proposed Project is aligned with the FY16-20 World Bank Group (WBG) *Country Partnership Framework for Costa Rica* (Report No. 94686-CR), discussed by the Board of Executive Directors on May 26, 2015, and updated in the Performance and Learning Review to the CPF (Report No. 143466-CR) discussed on January 13, 2020, in particular the third revised objective to promote sustainable investments in fisheries to support competitiveness and reduce constraints to productive inclusion and bolstering fiscal, social and environmental sustainability. It recognizes the potential for fisheries to further contribute to inclusive economic growth, job creation, and poverty alleviation, particularly in key coastal areas which are among the poorest and most vulnerable in the country. Promoting sustainable management of fisheries, linking small-scale operators to extended value chains and better harnessing fisheries to the national economy will ensure that the sector's economic potential and socio-economic benefits are better captured by Costa Rica, and their distributive feature is optimized. This will contribute to boosting shared prosperity in the country, therefore contributing to the WBG twin goals of ending extreme poverty and promoting shared prosperity in a sustainable fashion. Costa Rica's experience in harnessing the fisheries sector for growth is likely to be a learning case for other countries in the region with similar goals.

18. The Project is aligned with Government priorities as expressed in the Government's National Development and Public Investment Plan 2019-2022 as published on December 11, 2018 and signed as an Executive Decree on December 18, 2018. Project interventions are specifically included under the Plan's Innovation, Competitiveness and Productivity Strategic Area. In addition, the Project will directly support the National Fisheries and Aquaculture Development Plan for the 2012-2022 period. This Plan focuses on three management objectives, namely: (i) oceanic



fisheries; (ii) coastal fisheries; and (iii) inland and marine aquaculture. The Project will also support Costa Rica in meeting the OECD accession requirements for the fisheries sector.

19. The proposed Project aims to crowd-in financing and enable Maximizing Finance for Development by laying the foundation for sustained and equitable fisheries-based growth. Improved governance, management and regulations, coupled with improvements in key fisheries infrastructure and value addition are expected to stimulate private sector investment in fisheries value chains to access national and international markets. The project also aims to provide an enabling environment for private sector participation, ultimately increasing the value-added contribution of the country's vast marine resources to the local economy. The Government of Costa Rica is firmly committed to attracting private sector investment in the sector as well as establishing concession agreements for the operation and maintenance of any infrastructure build through the Project. It is expected that private capital and financing will flow to the fishery sector before the close of the Project with improved value chains and to the artisanal sector within three years of closing.

20. The Project will contribute to the WBG Climate Change Action Plan and climate targets for 2021-2025. Specifically, the Project intends to address climate change vulnerability of the fisheries sector by generating scientific information on the impacts of climate change on priority species and fishing communities; incorporating climate change considerations in fisheries policies and regulations; developing adaptive and climate-informed management plans for selected fisheries; and increasing awareness and knowledge of climate impacts on capture fisheries among fishing communities and institutions through targeted training and information campaigns. The Project thus will directly contribute to Costa Rica's National Adaptation Plan as expressed in its Nationally Determined Contribution to the Paris Agreement under the United Nations Framework Convention on Climate Change.

21. In addition, the Project will make important contributions towards integrating gender aspects and citizen engagement in the fisheries sector. It will generate sex-disaggregated fisheries statistics for the first time in the country, develop a gender action plan for the fisheries sector, and support several activities targeting women including training and reskilling for alternative income-generating opportunities and increasing their voice and participation in community and women's organizations. The Project would specifically support the WBG Gender strategy through (i) more and better jobs for women, and (ii) ownership and control over their assets. The Project will also promote active citizen engagement through annual consultations and satisfaction surveys and strengthening the existing grievance redress mechanism in the fisheries sector.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

22. The Project Development Objective (PDO) is to improve management of priority fisheries and enhance economic opportunities from those fisheries for Costa Rica.

PDO Level Indicators

23. The following indicators will be used to monitor the success of the Project:



- i. Fisheries management plans implemented (Number);
- ii. Priority fisheries that show signs of recovery (Number);
- iii. Public revenue from licensing and allocation of vessel capacity in the tuna fishery (US\$);
- iv. Farmers reached with agricultural assets and services (Number); of which female (percent)

B. Project Components

24. **The Project reflects the first phase of an ambitious and long-term government effort to transform the fishing sector and harness the country's blue natural capital for long-term gains in inclusive economic growth.** The Project will lay the foundations for sustained and equitable fisheries-based growth by strengthening the Government's capacity to manage and govern the fisheries sector, improving infrastructure and providing an enabling environment for value added by the private sector, ultimately increasing the contribution of the country's vast marine resources to national and local economies. It will enable INCOPESCA to promote the sustainable expansion of the domestic tuna sector and the recovery of nearshore fisheries to create more secure employment along the coast. The Project will also allow INCOPESCA to coordinate more closely with other government agencies and local authorities to stimulate growth in the fisheries sector by building entrepreneurial capacity among fishing organizations, identifying and addressing key climate-resilient infrastructure needs to facilitate landing, preservation of product quality, value-added and transport of fish and by identifying and creating higher value markets both domestically and abroad for both wild-caught and farmed seafood products. The Project will also support INCOPESCA in its efforts to coordinate with other institutions to promote access of vulnerable fishing families to existing government programs that provide income support to eligible households, as well as support for alternative livelihood and employment opportunities. Strengthening fisheries management will also contribute to decreased vulnerability of the sector to climate change risks and increase the provision of marine ecosystem goods and services. The Project includes four components summarized below.

25. **Component 1: Strengthening the governance and management of fisheries resources (US\$20.67 million).** This component will primarily support the strengthening of institutional capacities and regulatory frameworks, and other actions by the public sector necessary to improve the climate-informed governance and management of priority offshore and coastal fisheries. This will include analytical work to inform institutional reforms and strengthening of inter-ministerial cooperation on issues such as food safety, enforcement of fishing regulations, registering vessels authorized to fish, natural capital accounts, exporting seafood and overseeing port operations, as well as strengthening scientific capacities and monitoring, control and surveillance. It includes three subcomponents: (1.1) Legal and institutional strengthening for effective fisheries management; (1.2) Scientific and Information Systems strengthening; and (1.3) Monitoring, Control and Surveillance (MCS) to deter Illegal, Unreported and Unregulated (IUU) fishing.

26. **Component 2: Investing in sustainable fisheries value chains (US\$26.54 million).** This component will focus on creating an enabling environment for sustainable growth and greater climate resilience in the fisheries and aquaculture sector by supporting public investments in critical infrastructure and related services to improve the business climate for viable private sector investments. The Project has identified two sites along the Pacific coast and one the Caribbean coast and their related preliminary designs to expand tuna landing capacity. A similar analysis has been done to identify other infrastructure investments to support greater profits for small-scale fishers while incentivizing licensing and compliance with recovery plans, in line with the need to improve fish stock resilience to climate change. A near-shore fishery infrastructure and two targeted aquaculture infrastructures important for local communities will also be financed. Concessions to operate these sites will be offered to well organized small-scale



fishers or farmers organizations. It includes two subcomponents: (2.1) Climate resilient and energy efficient investments in key fishery and aquaculture infrastructure; and (2.2) Value chain and market development.

27. Component 3: Strengthening mechanisms for social and environmental sustainability (US\$21.85 million). This component will focus on supporting efforts to ensure that the transition towards a sustainable fisheries management regime addresses short-term socio-economic costs while increasing the environmental (including climate) benefits associated with that transition. The Project will support INCOPESCA in (i) engaging with stakeholders in the planning and implementation of participatory stock rebuilding plans; (ii) strengthening existing social supports to help fishing dependent families that wish to reduce their dependence on fishing seek other livelihood opportunities; and (iii) piloting innovative financial mechanisms to incentivize and facilitate stock recovery and the generation of marine ecosystem services. This component will also include activities to integrate fisheries into a broader blue economy development framework and to address issues related to the environmental sustainability of the sector, including habitat restoration and marine pollution. It includes three subcomponents: (3.1) Participatory Fisheries Management Arrangements; (3.2) Support for alternative, climate resilient livelihood and employment opportunities; and (3.3) Incentive mechanisms for fish stock recovery and related marine ecosystem services including services to strengthen resilience of fish ecosystems in the face of projected impacts of climate change.

28. Component 4: Project management, monitoring and communications (US\$6.04 million). This component will strengthen INCOPESCA's capacity to manage, implement, monitor, and report on project activities. It includes establishing a Gender Action Plan and an Afro-descendants Strategy for the fisheries sector, extensive stakeholder consultations, communications, and knowledge dissemination, and strengthening of grievance redress mechanisms.

C. Project Beneficiaries

29. The main Project beneficiaries are the coastal populations of Costa Rica who depend on fisheries resources for their livelihoods, including artisanal and semi-industrial fishers and their households, as well as operators in the seafood and tourism value chains, including aquaculture. It will be national in scope, focusing on the maritime jurisdiction and coastal areas of Costa Rica, namely the Provinces of Puntarenas and Guanacaste in the Pacific and Limon in the Caribbean, where fishing and value chain activities are concentrated. The primary target group of direct and indirect Project beneficiaries are approximately 15,000, mostly small-scale, fisheries-dependent households who will benefit from the establishment of fisheries co-management plans and enhanced economic opportunities from increased landings, improved marketing and value-enhancement activities, and greater access to fisheries services.

30. Women, youth, Indigenous Peoples, Afro-descendants and other vulnerable or marginalized groups will be proactively targeted by the Project, to address constraints for expanding economic opportunities in fisheries value chains and other sectors through capacity building and skills development.

31. The Project will also directly benefit Costa Rica's agencies involved in the fisheries sector through more efficient and effective institutions, increased public revenue, improved scientific and monitoring capacities, and ultimately effective management and governance of the fisheries sector. It will further provide climate adaptation co-benefits by increasing the resilience of the fisheries sector to climatic shocks and stresses and by investing in the conservation and provision of marine ecosystem goods and services.

32. Finally, the Project will assist Costa Rica in showcasing how to transform its economic and environmental footprint in fisheries, leading to climate and biodiversity wins. Costa Rica will be well-placed to share with other

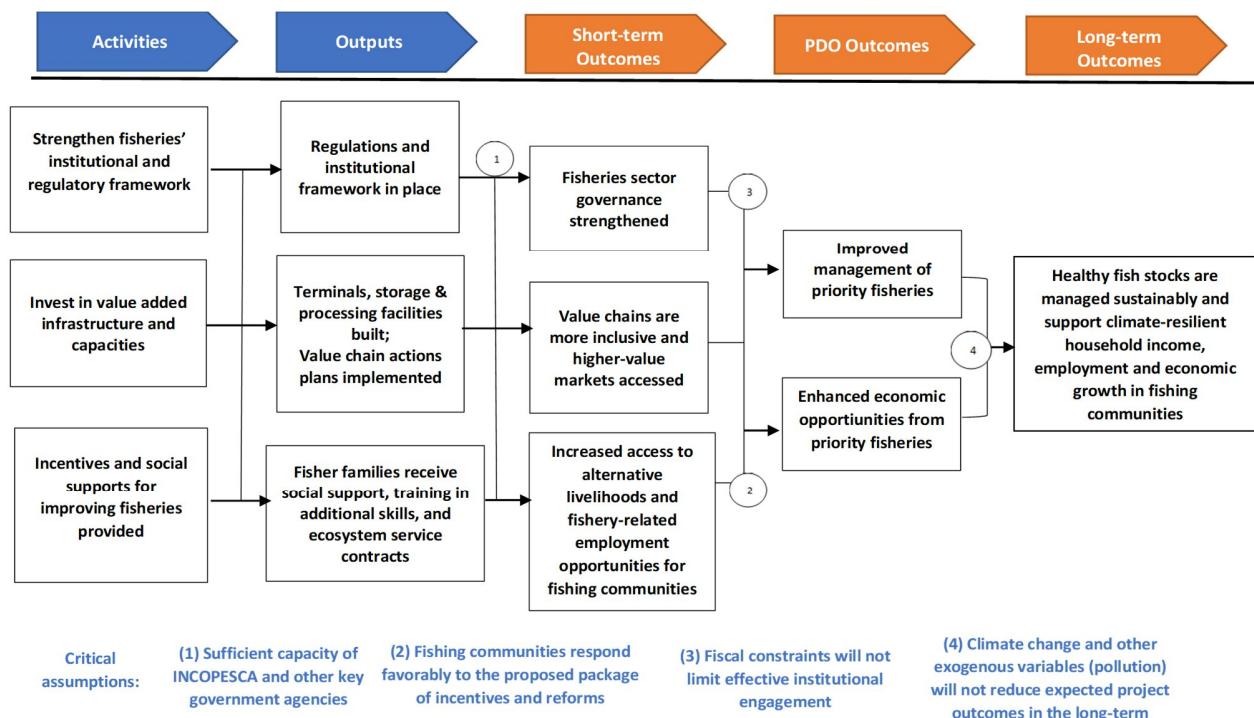


countries results and lessons learned on tackling similar development challenges. Additional benefits will accrue to the longline fishing subsector through a shift from a shark-directed fishery to one targeting tunas for high-value export markets. Environmentally friendly methods for catching high-value shrimp will also be explored to help minimize the economic impact of the recent court-mandated moratorium on shrimp trawling.

D. Results Chain

33. **The central problem statement the Project tries to address is that the benefits from Costa Rica's blue natural capital are not accruing to poor coastal communities.** The Project's Theory of Change is based on the following constraints: (i) weak fisheries governance and regulations affect the sustainable generation of optimal benefits for the overall economy; (ii) lack of investments in key infrastructure and value chains impede market development and private sector investments; and (iii) fishing communities face capacity and financial constraints for sustainable management, which leads to overfishing and marine ecosystem degradation.

Figure 1. Project Results Chain



34. **The Project aims to capture the value of this natural capital and transform fisheries into a sector that spreads development benefits across Costa Rican society,** particularly excluded fishing communities that are among the least economically well-off citizens due to their volatile incomes and depleting fishery stocks. To do so the project design proposes a series of interventions to address identified constraints. Support for governance reforms and strengthening institutional capacity will be the drivers of improved fisheries management. This will be complemented by improvements in key infrastructure and value chain development to ensure fish caught under the improved management regime reach high-value markets with benefits for local economies. While many of these activities will be sector-wide in scope, the Project will target fisheries with the highest potential for economic gains and job creation,



near-shore fisheries crucial for the livelihoods of coastal communities as well as freshwater fish farming important for jobs and nutrition in rural areas. Managing and rebuilding overexploited fishery resources will require a reduction in catches in the short-run to allow for expanded higher value landings in the mid and long-term and ensure the continuity of fishing activities by coastal communities in a sustainable way. The Project will therefore apply various mechanisms to support small-scale fishing communities in the transition to a sustainable management regime, including incentives for maintaining and improving the provision of marine ecosystem services.

E. Rationale for Bank Involvement and Role of Partners

35. **The World Bank has a strong comparative advantage in financing the proposed Project.** Despite its income level and access to external capital markets on reasonable terms, Costa Rica continues to require assistance to build and strengthen institutional capacity to ensure strong economic and social development. Over the last decade, the Bank has established itself as a leading development institution in generating knowledge around oceans and fisheries,⁵ and in supporting governments through its convening power combined with investment lending towards transforming and strengthening fisheries sectors, especially by linking technology, innovation, improved economic performance, and livelihoods to sustainable fisheries management reforms. The Bank is managing PROBLUE, a Multi Donor Trust Fund, to support the Blue Economy and is working with governments in leading and implementing multi-country fisheries programs along East Africa, West Africa and in the Pacific. In the LAC region the Bank is supporting the National Program for Innovation in Fisheries and Aquaculture in Peru (P155902), and just completed analyzing business cases for sustainable tuna fisheries in Grenada and Ecuador through the Global Environment Facility (GEF) Ocean Partnership Program. As such Costa Rica will benefit from the Bank's global knowledge, experience and investment aimed at significantly strengthening INCOPESCA's capacity and transforming it into a modern institute for fisheries and aquaculture bolstering the contribution of the fisheries sector to the country's economic growth, poverty reduction and climate resilience. The proposed Project will also have positive global externalities by bolstering the Bank's role as an innovation promoter and a partner for knowledge exchanges with other countries seeking support in the sector.

36. **Partnership and coordination with other development partners has been embodied in project design to ensure a harmonized approach in addressing the sector's challenges and avoid duplication of efforts.** The Project will complement ongoing and planned programs and initiatives, including but not limited to those supported by the FAO (Port State Measures Agreement (PSMA)); the United Nations Development Program (UNDP) (Pelagic Fisheries Platform); the United Nations Conference on Trade and Development (Oceans Economy and Trade Strategies); the United States Embassy (Community and Government Agency Coordination for Economic Development); the accession process to the OECD; in addition to Non-Governmental Organizations actively engaged in the sector. As the Project moves into the implementation phase, these and other partners will continue having an active role and contribute toward the Project's objectives.

F. Lessons Learned and Reflected in the Project Design

37. **The Project draws on lessons learned from several World Bank projects in the fisheries sector⁶.** Key lessons

⁵ Recent WB publications include: *The Sunken Billions Revisited: Progress and Challenges in Global Marine Fisheries* (2017) (a follow-up report to *The Sunken Billions: The Economic Justification for Fisheries Reform - 2009*); *The Potential of the Blue Economy* (2017); *Trade in Fishing Services Report* (2014); and *Fish to 2030: Prospects for Fisheries and Aquaculture* (2013).

⁶ These include the West Africa Regional Fisheries Project (P126773), the South West Indian Ocean Fisheries Project (P132123), the Pacific Islands



include the following: (i) Transforming fisheries and harnessing their potential for growth is a long-term process. Social change and reforms in the fisheries sector and the subsequent recovery of overfished stocks require an extended time horizon. Such process benefits from continuous dialogue and capacity building among stakeholders to maximize impact, learning, and sustainability. The Project has been designed to account for these time horizons. It also includes a strong focus on broad-based stakeholder dialogue, a recognition of traditional knowledge, and progressive capacity building to build consensus and inclusion among all concerned actors. In turn, this creates flexibility and gradually builds the necessary ownership to ensure Project success and sustainability of the various management reforms. (ii) Revitalizing the fisheries sector must be paired with effective management measures to be sustainable. Without proper management, productive investments run the risk of creating price signals that will increase the pressure on fisheries resources. Growing pressure reinforces a vicious cycle of declining stocks, productivity, and yields for these investments. Effective fisheries governance and management measures are critical to lower the risks of any investment in the sector and send a positive signal to potential investors. This complementarity between fisheries management and value chains is reflected in both the pelagic fishery (tuna) and small-scale/coastal fishery strategies built-in the Project. (iii) Investments in the business enabling environment and alternative opportunities are essential to gather stakeholders' adherence to reforms and the required social change. These investments help make the opportunities created by improved fisheries management a reality and build momentum around the longer-term benefits of sustainability. They also compensate for potential short-term loss of access to the resource and economic displacement resulting from participatory co-management plans. This Project builds on lessons learned from the *graduation approach*⁷ to support the design of an integrated package for individual families that can support the development of alternative livelihoods. Given the existing capacity in Costa Rica, and particularly the successful experience with the implementation of the *Puente al Desarrollo* strategy, the Project would build on existing capacity. The project would also seek to use existing platforms as much as possible to link beneficiaries to the different social and productive services needed. At the same time, investments in fisheries infrastructure will adhere to strict norms of financial and environmental viability to ensure their long-term sustainability.

38. **The Project also draws from the operational experience of the World Bank with previous investment projects in the country⁸.** Key lessons include: (i) **Project design and implementation arrangements must be kept simple to ensure agile implementation and flexibility for carrying out eventual changes.** Although the Project requires coordination with a number of institutions involved in the fisheries sector, implementation arrangements have been kept simple. (ii) **Projects should ensure that preparation is sufficiently advanced to allow the borrower to start a substantial part of the Project immediately after loan approval.** The Project has taken measures to prioritize and sequence project activities to allow for implementation to commence soon after Project effectiveness with a focus on goods, training and operating costs. Similarly, the Project considers retroactive financing to allow for feasibility designs for civil works to start following Board approval through counterpart funding and advance their readiness by effectiveness. Drafting Terms of Reference for key consulting services will also begin at Board approval.

⁷ The *graduation approach* consists of a sequenced set of interventions aimed at tackling the multifaceted constraints faced by the most vulnerable households. Pioneered in Bangladesh in the early 2000s and further tested through a series of pilots conducted by the Consultative Group to Assist the Poor (CGAP) and the Ford Foundation, the graduation approach has increasingly been adapted and implemented in low-income and middle-income countries. *Partnership for Economic Inclusion (2018) State of the Sector*.

⁸ Key projects include the Port-City of Limon Integrated Infrastructure (P085539), Mainstreaming Market-Based Instruments for Environmental Management (P093384), Ecomarkets (P052009), Strengthening Universal Health Insurance in Costa Rica (P148435), and Costa Rica Higher Education (P123146).



III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

39. **The Project will be implemented by INCOPESCA as the agency responsible for managing the fisheries and aquaculture sector in Costa Rica**, under the political direction of the MAG as the lead government agency responsible for defining fisheries policy objectives and the National Fisheries and Aquaculture Development Plan, in coordination with INCOPESCA. Subcomponent 3.3 on the development of economic instruments for marine ecosystem services will be implemented with the support of a Marine Ecosystem Services Support Entity, namely the Environmental Bank Foundation (FUNBAM, for its Spanish acronym), given its mandate and experience with operating similar schemes in the broader environment sector, or any other entity acceptable to the Bank to assist INCOPESCA in the execution of subcomponent 3.3 of the Project.

40. **A Project Coordination Team (PCT) will be embedded within INCOPESCA to strengthen its capacity for day-to-day Project coordination and monitoring.** The PCT will be led by a Project Coordinator who will respond directly to the Executive President of INCOPESCA, and will include specialists on monitoring and evaluation, social and environmental safeguards, communications, and administrative support. In addition, the Project will strengthen the implementation capacity of each of INCOPESCA's Departments, including procurement and financial management specialists for the Financial Administration Department, technical specialists (i.e. marine biologists and fisheries experts) for the Technical Department, social and community experts for the Fisheries Organizations Department, legal expertise for the Legal Advisor, and an Information and Communications Technology specialist for the Technology and Information Unit. INCOPESCA will hire a human resources firm to assist in the selection, recruitment and processing of payments to PCT staff; in the meantime, INCOPESCA will operate based on its existing capacity which is considered sufficient to start project implementation until the PCT is in place.

41. **The Board of Directors of INCOPESCA as well as other relevant inter-institutional collaboration mechanisms set forth in the Project Operational Manual (POM) will ensure effective collaboration among government agencies participating in project activities.** The Executive Board will meet regularly and provide overall implementation oversight and facilitate coordination and resolution of any administrative bottlenecks. Key institutions with which coordination will be required include: the MAG, the MINAE, the SNG, the SENASA, the MOPT, the INA, the COMEX, the IMAS, the MTSS, and the National Tourism Institute among others. INCOPESCA will also sign specific Agreements with selected institutions participating in the Project to specify the terms of their participation under the Project.

B. Results Monitoring and Evaluation Arrangements

42. **Overall responsibility for Monitoring and Evaluation (M&E) will lie within INCOPESCA and will inform project management based on regular assessment of progress towards expected outcomes.** Progress Reports will be submitted to the World Bank semi-annually and validated during implementation support missions. Project progress will be measured using the Results Framework and M&E arrangements. The fisheries sector monitoring system within INCOPESCA currently lacks the capacity and resources to adequately report on project progress; thus, the Project will directly support the incremental costs of data collection and analysis. A dedicated M&E specialist will be hired as part of the PCT organize data collection and processing, keep track of project indicators, prepare regular results reports, and provide training and other support to INCOPESCA on M&E. Also, a rigorous data quality assurance mechanism will be established.



43. **Project M&E will be instrumental in generating scientific information for evidence-based decision making and strengthening the fisheries sector statistics in the country.** During the first year of implementation, a socio-economic fisheries baseline survey will be conducted to identify the number of unregistered fishermen and their socioeconomic status. This will be used to improve targeting of beneficiaries. Furthermore, biennial field surveys will be carried out to assess the socioeconomic benefits accruing to target beneficiaries as a result of the Project as well as to assess satisfaction with project interventions. Satisfaction is assessed using a perception approach and will focus on fisheries management, job creation, livelihoods, and value addition. In addition, the Project will apply established methods to measure the status of stock and catch level effort for selected fisheries, while building the necessary technical capacity in INCOPESCA for the broader application of scientific methodologies in the country's fisheries management. Stock assessments for priority species will also be carried out twice during project implementation. The Project will also support the establishment of an electronic fisheries information system for the sector ("INCOPESCA Digital") with emphasis on biological, social and economic data to support management and decision-making related to the sustainable development of the fisheries sector. The data and information provided in the system will be publicly accessible, contributing to the knowledge base, transparency, and governance of the sector.

C. Sustainability

44. **The core element of sustainability is the Borrower's commitment to and ownership of the Project at the highest levels as it supports key Government priorities.** The Project is central to the Government's efforts to link the country's fisheries resources with growth and increased economic opportunities for its citizens. It was designed with full engagement of institutional and local stakeholders and supports key themes in sectoral policies and legislation. Over the long term, project outcomes will remain central to Costa Rica's economic and social agendas, as well as to its international visibility and commitments for environmental sustainability and climate change, helping the country build a Blue Trademark on top of its renown Green one.

45. **The Project will underwrite public sector financial sustainability by improving the effectiveness of public institutions and increasing private sector rents.** The Project will invest in enhancing the institutional capacity of INCOPESCA to manage increased public revenues from license fees with tools and approaches that are considered international best practices. Key areas of recurrent resource needs after project closure include continued implementation of fisheries surveillance systems and the operation and maintenance of strategic infrastructure. The Project will adopt low-cost methods and technologies that minimize recurrent costs and will support the Government to develop sustainable financing mechanisms through cost-sharing options. In terms of infrastructure, the Project aims to increase the overall sustainability of fisheries value chains by strengthening market linkages and supporting technically and financially viable proposals, which should in turn enable to increase private rents and ensure clear benefits are seen by fishing organizations, who will themselves continue the coastal fisheries management activities long after project implementation is completed. Blue PES pilots are expected to sunset at project closure, but the Project will support exploring financial and legal mechanisms to mainstream them under the national PES Program. Finally, all investments will be screened for climate and disaster risks and will build-in measures to address them.

46. **The Project will enhance the capacity of relevant government institutions, targeted beneficiaries, and human resources to be able to take full ownership of the Project's interventions and results.** The Project will invest significantly in building the capacity of INCOPESCA to sustainably govern and manage the country's fisheries resources. The PCT will be fully embedded within INCOPESCA, which will favor ownership of the project achievements beyond its closure. The Project will also invest in strengthening the capacity of fishing communities for co-management and monitoring of local fisheries resources. Building local governance and anchoring capacity-building processes in fishing



communities whose livelihoods are most immediately impacted by changes in fish stocks is key to the long-term sustainability of project outcomes. The built-in feedback mechanism will allow for an adaptive management approach to tailor project interventions communities' long-term vision of sustainability.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis (if applicable)

47. **The approach and design of the Project is technically sound and sustainable.** The three key principles of fisheries reform embedded in this Project are: (i) strengthening fisheries governance and institutions; (ii) improving value chains to increase benefits to the fishing sector as stocks improve and to the aquaculture sector; and (iii) explicitly accounting for the short-term socio-economic costs that are particular to fisheries and associated with a transition to sustainability. Project design maintains a flexible approach along these lines and the activities are linked and sequenced to reinforce the transition to sustainability. Furthermore, the Project has been designed to be consistent with and contribute to the ongoing work of other development partners in the sector, including the OECD, FAO and UNDP. With this in mind, the Project includes strategies to enhance economic opportunities for fishing communities along the coast - a priority for the Government.

48. **The Project will bring important social, economic and environmental benefits to the local communities and marine fisheries sector of Costa Rica.** Ex-ante economic analysis was carried out to provide reassurance that investments made under the Project will generate attractive rates of return compared to alternative investment opportunities that may be available in Costa Rica. Activities financed through the Project are expected to (i) improve the sustainability of fisheries management and governance; (ii) increase the added value captured by local stakeholders in fishery supply chains; and (iii) support the recovery and improvement of marine ecosystem services. Without the Project, production and profitability from capture fisheries and aquaculture will likely continue to decline due to overfishing, weak management arrangements, and climate-related stressors. Given little opportunity for alternatives, fishers and fish farmers will continue to lose livelihoods and the level of poverty among them will continue to increase.

49. **Overall, the Net Present Value (NPV) of the Project is estimated to reach US\$28 million over 10 years.** The ex-ante economic analysis suggests that Project-supported investments would generate substantial benefits for beneficiaries in areas served by the Project, as well as substantial benefits for Costa Rica's society as a whole. Overall, the US\$ 82.1 million investment, is projected to reach a Net Present Value (NPV) of US\$ 28 million (using a 6 percent discount rate). The investments evaluated for the economic analysis will generate an Internal Rate of Return (IRR) of 19 percent and the Benefit/Cost (B/C) ratio is 1.4.

B. Fiduciary

(i) Financial Management

50. The World Bank carried out an assessment to evaluate the adequacy of Financial Management (FM) arrangements of INCOPESCA as the Project's Implementing Entity⁹ of the Project, and FUNBAM, as the pre-identified

⁹ Also referred to as the implementing agency.



Marine Ecosystem Services Support Entity in charge of implementing the incentive mechanisms for marine ecosystem services under subcomponent 3.3. Overall INCOPESCA has in place adequate administrative structures, controls and systems; and FUNBAM has limited arrangements. Neither of these entities has prior experience implementing Bank-financed projects and the prospective increase in transactions requires additional staff capacity, which will be financed by the Project.

51. A series of mitigation measures will be implemented to ensure the satisfactory performance of FM functions within INCOPESCA and the Marine Ecosystem Services Support Entity. These include: (i) hiring qualified FM staff to strengthen the capacity of INCOPESCA and the Marine Ecosystem Services Support Entity, as needed; (ii) the FM section of the POM will include internal controls and procedures to ensure adequate contract management and monitoring mechanisms over the funds executed by the Marine Ecosystem Services Support Entity; (iii) training in FM and disbursement procedures which will be performed once the FM staff is onboard; (iv) establishment of a subsidiary agreement between INCOPESCA and the Marine Ecosystem Services Support Entity with clear definition of roles and responsibilities; and (v) the obligation of the Marine Ecosystem Services Support Entity to establish and maintain fiduciary arrangements acceptable to the Bank prior to carrying out of any activities under subcomponent 3.3 of the Project.

(ii) Procurement

52. Procurement will be carried out in accordance with "World Bank Procurement Regulations for IPF Borrowers" (July 2016, revised November 2017 and August 2018) ("Procurement Regulations"). A Procurement Plan covering the first 18 months of project implementation was prepared by the Borrower based on the results of the Project Procurement Strategy for Development (PPSD) and was agreed with the Bank as part of the negotiations.

53. INCOPESCA does not have previous experience in procurement under Bank Procurement Regulations; however, it has qualified procurement staff with significant experience in national procurement procedure. In addition, procurement record systems, internal controls and roles/responsibilities were found acceptable. FUNBAM has no prior experience in procurement under Bank Procurement Regulations and if selected, its capacity will be strengthened through the Project.

54. The key issues concerning procurement for project implementation include: (i) lack of experience in projects financed by the Bank; (ii) incremental work-flow due to new available resources; (iii) required coordination between technical areas, procurement unit, and PCT; (iv) potential delays in: (a) hiring the human resources firm to assist INCOPESCA in the selection, recruitment and processing of payments to individual consultants for establishing the PCT and strengthening the institutional capacity of FUNBAM as the pre-identified Marine Ecosystem Services Support Entity; and (b) start feasibility studies and designs/supervision of civil works; and (v) lack of experience in technical areas to define specifications in Terms of Reference (ToR) for the digital information system and some consulting services as well as for the supervision of these contracts.

55. The corrective measures agreed are: (i) hiring, no later than 30 days after effectiveness, one procurement specialist with at least 8 years of experience in the use Procurement Regulations, to carry out key initial procurement activities such those related to the human resources firm and design/supervision of the civil works, and to advise INCOPESCA on carrying out other non-complex procurement activities; (ii) during implementation, strength the procurement unit with one senior procurement specialist with at least five years of experience in the use of the Procurement Regulations and two assistants; (iii) detail in the procurement section of the POM appropriate roles and responsibilities for the technical areas, procurement unit, and PCT; (iv) start feasibility studies and designs/supervision of civil works as soon as possible; and (v) strengthen the procurement capacity of FUNBAM as the pre-identified



Marine Ecosystem Services Support Entity with one procurement specialist with experience in the use of the Procurement Regulations and further strengthening of its capacity in proportion to procurement needs for the operation of subcomponent 3.3.

C. Safeguards

(i) Environmental Safeguards

56. **The World Bank environmental safeguard policies triggered by the Project include Environmental Assessment (OP/BP 4.01), Natural Habitats (OP/BP 4.04), Forests (OP/BP 4.36), and Physical Cultural Resources (OP/BP 4.11).** The overall impact of the Project is expected to be positive and none of the foreseen activities are expected to generate significant risk or irreversible adverse impacts in the coastal or oceans fisheries targeted by the Project or produce major social impacts. It is not anticipated that project activities will involve significant loss or degradation of forests, natural habitats, or physical cultural resources. However, OP/BPs 4.04, 4.36 and 4.11 are triggered as a precautionary measure since the location of specific activities were not identified at appraisal stage.

57. **The Project has been classified as Category B.** The fisheries sector reforms included under Component 1 are expected to create restrictions on fishing activities, and may involve the risk of intensifying social tensions among stakeholders with competing interests on fish resources. Investments under Component 2 which may generate moderate adverse impacts include small-scale infrastructure works such as the rehabilitation or expansion of fisheries infrastructure (landing sites, warehouses, office buildings, mobile communication towers, etc.). Typical impacts of these works may include waste management, construction noise, community and occupational health and safety, and potential impacts related to labor influx. The Project's pre-feasibility study provides an early environmental and social screening of each of the site identified that confirms that these impacts are of small scale, site-specific, time-bound, and can be readily mitigated through the environmental and social management plans and their mitigation measures to be prepared for each of the subprojects. The Project measures included under Component 3 are expected to both mitigate these impacts and risks, as well as to strengthen the sustainability of the fisheries sector as a whole.

58. **The Borrower has prepared appropriate safeguard instruments to manage the impacts and risks of the Project.** Given that final construction designs will be developed during project implementation and the precise impacts of the envisaged civil works cannot be fully defined during project preparation, the Borrower prepared an integrated Environmental and Social Assessment along with an Environmental and Social Management Framework (ESMF), which includes the identification and analysis of environmental and social impacts and risks, as well as guidelines for the preparation of environmental and social impact assessments, social assessments and environmental and social management plans for the subprojects that will be defined during project implementation. The ESMF includes a screening framework to assess the environmental and social impacts of subprojects, including in relation to forests (OP/BP 4.36), natural habitats (OP/BP 4.04), and physical cultural resources (OP/BP 4.11); an exclusion list for subprojects likely to cause irreversible or significant environmental or social impacts (Category A); a table of mitigation activities; implementation arrangements; capacity building plan; M&E framework; and budget estimate. The ESMF also provides guidance for the inclusion of a Grievance Redress Mechanism; gender considerations; labor influx; strategies for vulnerable groups such Afro-descendant communities; measures to prevent forced and child labor; as well as livelihood restoration measures to be carried out during project implementation under Component 3.

59. **The ESMF was first disclosed in-country and on the Bank's website on the 12th and 13th of March 2019, respectively. An updated version of the ESMF was disclosed on January 22, 2020 after the finalisation of the Project's pre-feasibility study. Extensive stakeholder consultations took place through several workshops during**



project preparation, held in December 2018 and January, February, November and December 2019 in San José, Puntarenas, Limón, Liberia, Guanacaste, Nicoya and Golfito. Stakeholders represented government agencies, Non-Governmental Organizations (NGOs), academia, Afro-descendants organizations, indigenous leaders and the National Indigenous Roundtable, women and youth groups and several sectors of the fisheries industry. Overall there is support for the Project among these stakeholders, who also showed keen interest in participating. The disclosure arrangements for the safeguards instruments include physical copies of the instruments in locations easily accessible to potentially affected people.

(ii) Social Safeguards

60. **The social risk rating of the Project is substantial**, which is mostly driven by the contextual risk posed by the potential intensification of social tensions among diverse stakeholders utilizing marine resources, particularly in the longline fishing sector. The Project will potentially promote new restrictions on the fishing activities of local communities as a result of the creation of participatory fisheries management plans, which will be mitigated through economic and social support measures under Component 3, including training and reskilling in alternative livelihoods and employment opportunities, aquaculture, and payments for blue ecosystem services. Socioeconomic surveys will be carried out regularly during project implementation to complement the social assessment included in the ESMF, monitor the impacts of project activities and adjust them as needed, as well as to guide the update of the Government's National Development Plan for the Fisheries and Aquaculture sector. Other social aspects under OP 4.01 Environmental Assessment such as community health and safety, potential increase of child and forced labour, and labour influx related impacts are included in the Project's ESMF.

61. **The Involuntary Resettlement Policy (OP/BP 4.12) is triggered** and a Resettlement Policy Framework (RPF) was prepared. The policy is triggered as a proactive measure to mitigate any potential negative economic or livelihood impacts related to restriction of access to assets or resources generated by the Project. The identified infrastructure to be financed by the Project under Component 2 will not generate any resettlement. The Project is not generating any land acquisition expenditures. Fisheries infrastructure under the Project will be built on land received through concession or donation agreements with local municipalities and other public institutions as per established practices with INCOPESCA. The Project proposes to strengthen the management of key fisheries resources in off-shore and near-shore waters. Potential access restrictions to key fisheries resources, be it seasonal, temporary or permanent, could negatively impact livelihoods in the short-term for those coastal communities that depend on such resources. These impacts are managed as part of project design, mainly through Component 3. As the Project will not work in legally designated parks or protected areas, a Process Framework was not developed. Abbreviated resettlement action plans or resettlement action plans will be developed following the guidelines set out in the RPF once site specific subprojects have been identified. The RPF was disclosed in-country and on the Bank's website on the 12th and 13th of March 2019, respectively, and was consulted as part of the ESMF consultations. No specific issues were raised. An updated version of the RPF was disclosed on January 23, 2020 after the finalization of the Project's pre-feasibility study and additional consultation held in November and December 2019.

62. **The Indigenous Peoples Policy (OP/BP 4.10) is triggered**. The Project has the potential to benefit indigenous peoples, particularly in terms of the inclusion of cultural factors in fisheries management plans and regulatory frameworks. An Indigenous Peoples Planning Framework (IPPF) was prepared and disclosed in-country and on the Bank's website on the 12th and 13th of March 2019, respectively. An updated version of the IPPF was disclosed on January 23, 2020 after the finalization of the Project's pre-feasibility study. Initial dialogues were held with the National Indigenous Roundtable and Indigenous Peoples representatives on November 23 and December 7, 2018, respectively, which helped inform the IPPF and provided the guidelines for the consultation process during project



preparation and implementation. A broader two-day consultation workshop was held on February 8-9, 2019, with indigenous representatives and the National Commission of Indigenous Affairs. The Project's pre-feasibility study confirms that none of the infrastructure will have any adverse impact on Indigenous Peoples and as a result no Indigenous Peoples Plan was deemed necessary for Component 2. The IPPF will guide the development of site-specific Indigenous Peoples Plans as needed during project implementation dependent upon selection of locations for activities under Component 3.

63. **Citizen engagement.** INCOPESCA prepared a Stakeholder Engagement Plan (SEP), which seeks to support the engagement of key social actors associated with the Project. The SEP is based on a stakeholder map that identifies target beneficiaries, potentially affected parties, and influential social actors, allowing for a personalized approach and enabling the conditions for transparency and accountability. In addition to the consultations conducted during project preparation, the Project will engage stakeholders in the sustainable management of fisheries through consultative processes, participatory planning, co-management schemes, and feedback mechanisms throughout its implementation. A key feedback mechanism will be a field survey to measure the satisfaction of local communities with project interventions, and to measure the benefits derived from the Project as per the indicators included in the Results Framework. The Project will also strengthen INCOPESCA's existing grievance redress mechanism, enabling appropriate channels to promote transparency, accountability, and learning based on a continuous dialogue with target beneficiaries and other stakeholders. Other aspects of citizen engagement include the following measures: (i) participation of targeted coastal communities as part of the planning process for the establishment of RFAs; (ii) community engagement included in the validation process of the local investment proposals; (iii) capacity building of local and national institutions for engagement with target beneficiaries to (a) address concerns and issues raised, (b) reflect these in the fisheries management plans and relevant regulatory reforms, and (c) inform fishery policies and INCOPESCA's approach to co-management; and (iv) monitoring arrangements of project activities with participation of project stakeholders. Key documents associated to the citizen engagement approach are the SEP and the POM. The final SEP was disclosed in-country and on the Bank's website on March 2019 and consulted as part of the ESMF consultation process.

64. **Women, youth and Afro-descendants have been identified as vulnerable groups with limited voice and participation in the fisheries sector that will be specifically targeted by the Project.** The ESMF and project design include strategies to strengthen their voice in decision-making processes, increase their participation in fishing organizations, and activities targeted at ensuring these groups benefit from the Project. The SEP specifically identifies relevant organizations of these groups as important stakeholders to be consulted during preparation and implementation.

(iii) Other Safeguards

65. No other safeguard policies are triggered for the Project.

(iv) Grievance Redress Mechanisms

66. Communities and individuals who believe that they are adversely affected by a World Bank (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 non-compliance 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 Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

V. KEY RISKS

67. **The overall risk rating of the proposed Project is Substantial**, due to several risks that might affect the achievement of the Project's objective, as outlined below.

68. **Political and governance (Substantial).** The historical lack of attention to marine fisheries in Costa Rica has resulted in governance and institutional challenges for the sector. Transitioning to sustainable fisheries will require reforms to revise the current regulatory framework. Evidence from fisheries sector reforms globally indicates that resistance to these reforms can be strong from stakeholder groups that may be benefiting from the status quo and may affect decision-making processes at different levels. This is particularly relevant given that INCOPESCA's Board of Directors has historically had a majority of private sector actors. In addition, the Government currently lacks majority in Congress which may hinder the passing of new legislation if the required level of support is not reached. The commitment of Costa Rica to adhere to the OECD principles to ensure its accession is in itself a risk mitigation measure. In this vein, INCOPESCA will support Costa Rica accession to the OECD with expert technical assistance provided by the Project. INCOPESCA will also operationalize the new implementation framework with comprehensive institutional capacity to implement and sustain these reforms, including through proactive and continuous dialogue with potentially concerned stakeholders (including those represented at its Board) to ensure strong buy-in throughout the implementation period.

69. **Macroeconomic (High).** The country's continued vulnerable fiscal situation may hinder the achievement of the Project objectives by reducing the operating budgets of fisheries-related programs and institutions, while also crowding out potential private sector investments from the sector. The large deficits have lifted the central government debt to GDP ratio, threatening fiscal sustainability. The deficit averaged more than 5 percent of GDP between 2010 and 2018, increasing the public debt-to-GDP ratio from less than 25 to 53 percent. Congress has approved a fiscal reform that will help reduce the fiscal deficit and put the debt on a sustainable path. However, this could be severely affected by potential negative shocks to interest rates and/or GDP growth. To mitigate this risk, the Project has reduced counterpart funding to the operating budget of INCOPESCA, which is also funded through sources other than the central Government. At the same time, it is expected that the Government will continue its efforts towards fiscal consolidation and will monitor continuously the macroeconomic situation.

70. **Technical (Substantial).** Several factors related to the technical design of the Project could affect the expected project outcomes. The Project represents the first step in an ambitious effort on behalf of the Government to transform the fisheries sector, which is inherently a complex and long-term endeavour. At the same time certain project activities, such as infrastructure works, may require some time to conclude due to lengthy procedures. An additional risk factor stems from the fact that natural systems are highly variable and fish populations may not recover as quickly as expected or be as readily available to be caught due to unforeseeable biophysical factors, especially considering likely increased climate-induced variability. To mitigate these risks project design has kept an agile



approach, covering the basic “no-regret” strategies of fisheries reforms¹⁰ while sequencing and prioritizing project activities and planning for additional expertise and analytical work (including on climate risks) to further fine-tuning the design of project interventions.

71. Institutional capacity for implementation and sustainability (Substantial). INCOPESCA, as the institution with the mandate and jurisdiction to manage the fisheries sector in Costa Rica, will be the Project’s Implementing Entity. Despite this large mandate, its effectiveness in managing the country’s vast marine resources has been limited thus far. In addition, INCOPESCA has no prior experience in implementing World Bank-financed investment projects. The primary risk thus is slow implementation due to human and capacity constraints at INCOPESCA which could hinder its ability to manage a project of the proposed scale. An associated risk stems from the degree of interinstitutional coordination the Project will require, given the number of participating institutions collaborating in a number of project activities. Mitigation measures include the establishment of a PCT within INCOPESCA through project funds to provide additional human and technical resources dedicated to all aspects of project implementation and monitoring, including fiduciary and safeguards. The World Bank will also conduct frequent support missions especially early in the implementation phase to ensure that INCOPESCA is implementing the Project in full compliance with the policies of the World Bank. In addition, implementation arrangements have been kept simple by keeping implementing agencies to a minimum and opting for existing mechanisms to ensure effective coordination among participating institutions through INCOPESCA’s Board of Directors.

72. Environment and Social (Substantial). The environmental risks of the Project are considered moderate due to the small scale of civil works supported by the proposed investments and the Project overall is expected to yield significant positive environmental and social benefits. However, the risk is rated substantial due to potential social impacts that could affect the livelihoods of fishing communities whose fishing effort may need to be reduced temporarily to promote the sustainable management of fisheries resources, and the limited capacity and lack of prior experience of INCOPESCA with World Bank safeguard policies. To mitigate these risks, Component 3 of the Project has been designed to ensure the social and environmental sustainability of the transition to an effective fisheries management regime through a variety of incentive and compensation mechanisms, such as training and reskilling in alternative livelihoods and employment opportunities, including aquaculture and recreational tourism, and blue PES schemes. In addition, investments in value chain development under Component 2 are expected to generate new jobs in the fisheries sector, particularly in tuna processing. INCOPESCA will give particular attention to women, youth, and vulnerable groups such as Afro-descendant communities, while INCOPESCA will also operate a project-specific Grievance Redress Mechanism based on existing structures. In addition, the Bank team will ensure close monitoring of social impacts and provide training to INCOPESCA and the PCT on the safeguards instruments developed under the Project.

73. Stakeholders (Substantial). The risk is driven by the social context of longstanding tensions in the marine space between stakeholder groups with competing agendas. Environmental NGOs active in the sector could raise concerns related to environmental and social aspects of the Project, while other groups with entrenched economic interests may encourage fishing organizations to oppose project interventions if perceived to be a threat to the status-quo. To mitigate these risks, INCOPESCA will (i) implement a communication strategy to convey the intended benefits of the Project to all stakeholders, particularly fishing communities; (ii) seek and incorporate citizen feedback and grievance redress in project design; and (iii) complement fisheries management interventions with technical assistance, capacity building, awareness raising campaigns and most importantly social supports throughout project implementation. To

¹⁰ The basic “no-regret” strategies include the fundamentals of fisheries management that would be necessary and beneficial under any circumstances and contribute to minimizing over-exploitation. Measures usually include registration and monitoring of the fleet, fishing authorization and surveillance.



strengthen stakeholder buy-in, INCOPESCA will embrace the principle of co-management and the importance of traditional knowledge in fishery management.

74. **Fiduciary (Substantial).** Key fiduciary risks include: (i) INCOPESCA and FUNBAM have no previous experience applying the Bank's fiduciary policies and procedures; (ii) project design includes in Component 3 compensation mechanisms and the piloting of "blue" PES, therefore internal processes and procedures mainly to maintain accurate and reliable financial records need to be strengthened; (iii) FUNBAM's recording transactions in EXCEL increase error risk, thus there is need for periodic reconciliation; and (iv) carrying out financial management tasks will require strong coordination between both entities, consolidation of financial information, and timely transfer of funds and documentation. The Project will finance the hiring of human resources dedicated to fiduciary management in order to strengthen capacities of both agencies. During implementation, fiduciary risk will be re-assessed and revised accordingly if needed.

**VI. RESULTS FRAMEWORK AND MONITORING****Results Framework****COUNTRY:** Costa Rica**Costa Rica Sustainable Fisheries Development Project****Project Development Objectives(s)**

The Project Development Objective (PDO) is to improve management of priority fisheries and enhance economic opportunities from those fisheries for Costa Rica.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	End Target
To improve management of priority fisheries			
Fisheries management plans implemented (CRI, Number)		0.00	6.00
Priority fisheries show signs of recovery (Number)		0.00	5.00
To enhance economic opportunities from those fisheries for Costa Rica			
Public revenue from licensing and allocation of vessel capacity in the tuna fishery (Amount(USD))		1,319,000.00	3,500,000.00
Farmers reached with agricultural assets or services (CRI, Number)		0.00	5,000.00
Farmers reached with agricultural assets or services - Female (CRI, Number)		0.00	1,000.00

**Intermediate Results Indicators by Components**

Indicator Name	DLI	Baseline	End Target
Strengthening the governance and management of fisheries resources			
Stage of INCOPESCA reform process and strengthening (Number)		0.00	4.00
National Fisheries Information System established at INCOPESCA and publicly accessible (Number)		0.00	4.00
Share of registered fleet monitored through national Vessel Monitoring System (Percentage)		5.00	85.00
Investing in sustainable fisheries value chains			
Landing sites and processing facilities supported by the project (Number)		0.00	6.00
Fishing organizations trained in business and seafood handling skills (Number)		0.00	10.00
Value chain Action Plans and Traceability System developed for priority species (Number)		0.00	4.00
Strengthening mechanisms for social and environmental sustainability			
Fishing areas under participatory management plans (Hectare(Ha))		125,300.00	250,000.00
Payment for Marine Ecosystem Services schemes piloted (Number)		0.00	3.00
Women-led alternative livelihood initiatives supported by the project (Number)		0.00	5.00
Share of target beneficiaries with rating 'Satisfied' or above on project interventions and participation (Percentage)		0.00	60.00
Grievances registered related to the project addressed (%) (Percentage)		0.00	95.00



Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Fisheries management plans implemented	This indicator measures the number of fisheries management plans that have been implemented 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, and prosecution of identified delinquents).	Annual	At national level: Fishing Register and Vessel Monitoring System At local level: Responsible Fisheries Areas supported by the project	Review of Fisheries Management Plans, VMS data, Fisheries Registry. For the project, national level FMPs are deemed implemented if pelagic (including tuna, swordfish, sailfish, marlins, and common dolphin/dorado) and demersal (including queen corvina, silk snapper, caribbean sea bass, Caribbean spiny lobster and white shrimp) fisheries each have their catch and landings monitored, illegal fishing is controlled through monitoring during closed seasons and in closed areas (# 2) Local level	INCOPESCA



				management plans adopted by Responsible Fishing Areas (supported by the project) are deemed implemented if fish stocks show sign of recovery (# 5).	
Priority fisheries show signs of recovery	This indicator measures progress in the recovery of priority coastal fisheries as a result of the implementation of fisheries management plans following the OECD guidelines on rebuilding fisheries. The priority fisheries considered include: queen corvina, silk snapper, caribbean sea bass, Caribbean spiny lobster and white shrimp within Responsible Fishing Areas. These species were selected given their current levels of exploitation and the fact that due to their biology may show signs of recovery within the timeframe of the project as a result of	Biennial	Stock assessments through data-limited methods	Measurement and analysis of average length of targeted species captured at landing sites. Fisheries Performance Assessments (FAO) or similar methodology in year 1, 3 and 5	INCOPESCA



	<p>management measures. Highly-migratory pelagic species are not included given that their populations can neither be managed nor monitored at national level. Given the lack of data for the application of advanced scientific methods, progress in the recovery of these fisheries will be assessed through established data-limited methods using the average length of the target species as a proxy indicator. These methods will be complemented by rapid assessments including economic and social variables, such as the FAO Fisheries Performance Assessment (FPA) methodology (currently under development) or a similar one.</p> <p>This indicator will count the number of Responsible Fishing Areas supported by the project where the majority of species monitored show an increase in average size.</p>			
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	Cumulative targets.				
Public revenue from licensing and allocation of vessel capacity in the tuna fishery	This indicator measures the increase in public revenue generated for the country from the tuna fishery as a result of the legal and institutional reforms introduced with project support. Public revenue includes fees paid by foreign purse seine vessels for the allocation of the national fishing quota and fees licensing access to the EEZ. The baseline value for this indicator is the public revenue in 2017 as the best projection of future revenue in the absence of interventions. The target value is estimated as the sum of the expected revenue resulting from the reforms introduced by the project in the tuna fishery, as follows: Assignment of annual capacity quota in international waters: US\$2,181 million per year ($9,364 \text{ m}^3 \text{ capacity} \times 233 \text{ US\$/m}^3$); tuna licenses	Annual	INCOPESCA records	Review of INCOPESCA records (data request)	INCOPESCA



	fees: US\$450,000 per year (9 licenses x US\$50,000 per annual license). Annual targets.				
Farmers reached with agricultural assets or services	This indicator measures the number of farmers who were provided with agricultural assets or services as a result of World Bank project support. "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products. Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops). Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor), production-related services (e.g., soil testing, animal	Annual	Sample-based field survey	Evaluation of survey data and project records	INCOPESCA



	health/veterinary services), phyto-sanitary and food safety services, agricultural marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance. Farmers are people engaged in agricultural activities or members of an agriculture-related business (disaggregated by men and women) targeted by the project.				
Farmers reached with agricultural assets or services - Female		Annual	Sample-based field survey	Evaluation of survey data and project records	INCOPESCA

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Stage of INCOPESCA reform process and strengthening	Stages: 0: no reform; 1: Regulatory instruments for tuna fisheries management drafted or revised (allocation of fishing	Annual	Various documents	Facilitated self-assessment	INCOPESCA



	capacity quotas and licenses to foreign tuna vessels); 2: National Fisheries Development Plan updated with inter-institutional responsibilities assigned; 3: Public Expenditure and Institutional Review of the fisheries sector undertaken; 4: Proposal for institutional reform of INCOPESCA submitted; 5: Implementation of reform including strengthening of research capacity. Cumulative targets.				
National Fisheries Information System established at INCOPESCA and publicly accessible	This indicator measures the establishment and operation of a National Fisheries Information System ("INCOPESCA Digital") containing the following components: 1. Fisheries Registry: including all fisheries segments (purse seine, long line, small scale, shrimp trawl) with clear regulations for entry, exit and substitution protocols, based on sustainable fishing capacity management criteria; 2. Online user	Annual	INCOPESCA Digital public website	Review	INCOPESCA



	services: (i) licenses; (ii) authorizations; (iii) fisher ID cards (carnets); (iv) inspections; (v) research permissions and reports; (vi) fuel subsidy applications; 3. Monitoring and Control: (i) satellite signal shared with Coast Guard Service; (ii) certificates of vessel compliance; 4. Statistical information: (i) fishing activity reports (catch and landings); (ii) aquaculture area and production; 5. Marine and Fisheries Natural Capital Accounts linked to the Central Bank. Public access is defined as access to the data through the INCOPESCA website. Baseline value (zero) reflects current status of limited and scattered information on INCOPESCA's website. Cumulative targets.				
Share of registered fleet monitored through national Vessel Monitoring System	This indicator measures the coverage of the registered fleet by the Vessel Monitoring System. The baseline value (vessels monitored/registered) is set	Annual	INCOPESCA Records	Periodic system audit	INCOPESCA



	as follows: (i) Licensed foreign tuna purse seiners and national long-liners: 280/520; (ii) Small-scale vessels: 0/2528; (iii) Shrimp trawlers: 3/3. Annual targets.				
Landing sites and processing facilities supported by the project	This indicator measures the number of key fisheries infrastructure (landing terminals and storage and processing facilities) built under the project. Cumulative targets.	Annual	Technical assessment reports (upon completion of works)	Review of construction reports	INCOPESCA
Fishing organizations trained in business and seafood handling skills	This indicator measures the number of fishing and fish farming organizations who receive capacity-building in business management, organizational development, seafood handling, marketing and trade with the intention of qualifying for receiving concessions for the operation of fisheries storage and processing facilities. The target of FO that will benefit from the upgrade of processing facilities are included in the target value. This indicator also includes FOs that will	Annual	Concession contracts	Review of concession contracts	INCOPESCA



	benefit from training in value addition and business skill development. Cumulative targets.				
Value chain Action Plans and Traceability System developed for priority species	This indicator measures the number of (at least four) Value Chain Action Plans developed for priority species through the Competitive Reinforcement Initiative methodology (or similar). This includes the carrying out of multi-stakeholder workshops to train key actors in value chain analysis, identify value chain opportunities and develop coordinated action plans. It also measures the establishment of a National Fisheries and Aquaculture Traceability System to trace information on the origin and legality of fisheries and aquaculture products, integrated with food safety information. The Traceability System will be considered established and operational following certification by a third party (e.g. ISO 22000 through an	Annual	Value Chain Action Plans reports	Review of Action Plans	INCOPESCA



	external audit). Priority species may include: tuna, swordfish, snapper, dorado/dolphin fish. Cumulative targets.				
Fishing areas under participatory management plans	This indicator measures the marine area under co-management schemes developed in a participatory manner with local fishermen communities, such as Responsible Fishing Area formally adopted by the INCOPESCA Board of Directors and/or other co-management schemes. Cumulative targets.	Annual	Co-Management Plans	Review of Co-Management Plans	INCOPESCA
Payment for Marine Ecosystem Services schemes piloted	This indicator measures the establishment of payments for Marine Ecosystem Services pilot schemes or similar mechanisms with the aim of incentivizing the transition to sustainable fisheries management and to maintain or improve the provision of marine ecosystem goods and services. The schemes will be formalized through Marine Ecosystem Services contracts with target	Annual	Marine Ecosystem Services contracts	Review of Marine Ecosystem Services contracts	Marine Ecosystem Services Support Entity and INCOPESCA



	beneficiaries based on a detailed Procedures Manual. Cumulative targets.				
Women-led alternative livelihood initiatives supported by the project	This indicator measures the number of new alternative livelihood and income generation initiatives supported by the Project that specifically target women-led associations or businesses (i.e. organizations with a majority of women in the Board or leadership positions) in the fisheries sector. Types of supported activities include specialized skills training (accompanied by provision of child care during training session) and business development, selected in consultation with women-led organizations. Cumulative targets.	Annual	Project Reports	Review of Project Reports	INCOPESCA, in coordination with IMAS, MTSS, and INA
Share of target beneficiaries with rating 'Satisfied' or above on project interventions and participation	The indicator is a citizen engagement indicator and captures the degree of satisfaction of the target population with the project, related to the following: fisheries management, job	Annual	Sample-based survey	Evaluation of survey data	INCOPESCA



	creation, livelihoods, value capture, and participation in decision making processes. It will be administered through a semi-structured survey with project beneficiaries and include sex-disaggregated information. Annual targets.				
Grievances registered related to the project addressed (%)	This indicator measures the transparency and accountability mechanisms established by the project so that potential grievances related to the project are addressed promptly. Annual targets.	Annual	Project Grievance Redress Mechanism	Review	INCOPESCA

**ANNEX 1: Implementation Arrangements and Support Plan**

Republic of Costa Rica
Costa Rica Sustainable Fisheries Development Project
(Programa Desarrollo Sostenible de la Pesca y Acuicultura en Costa Rica¹¹)

Project Institutional and Implementation Arrangements

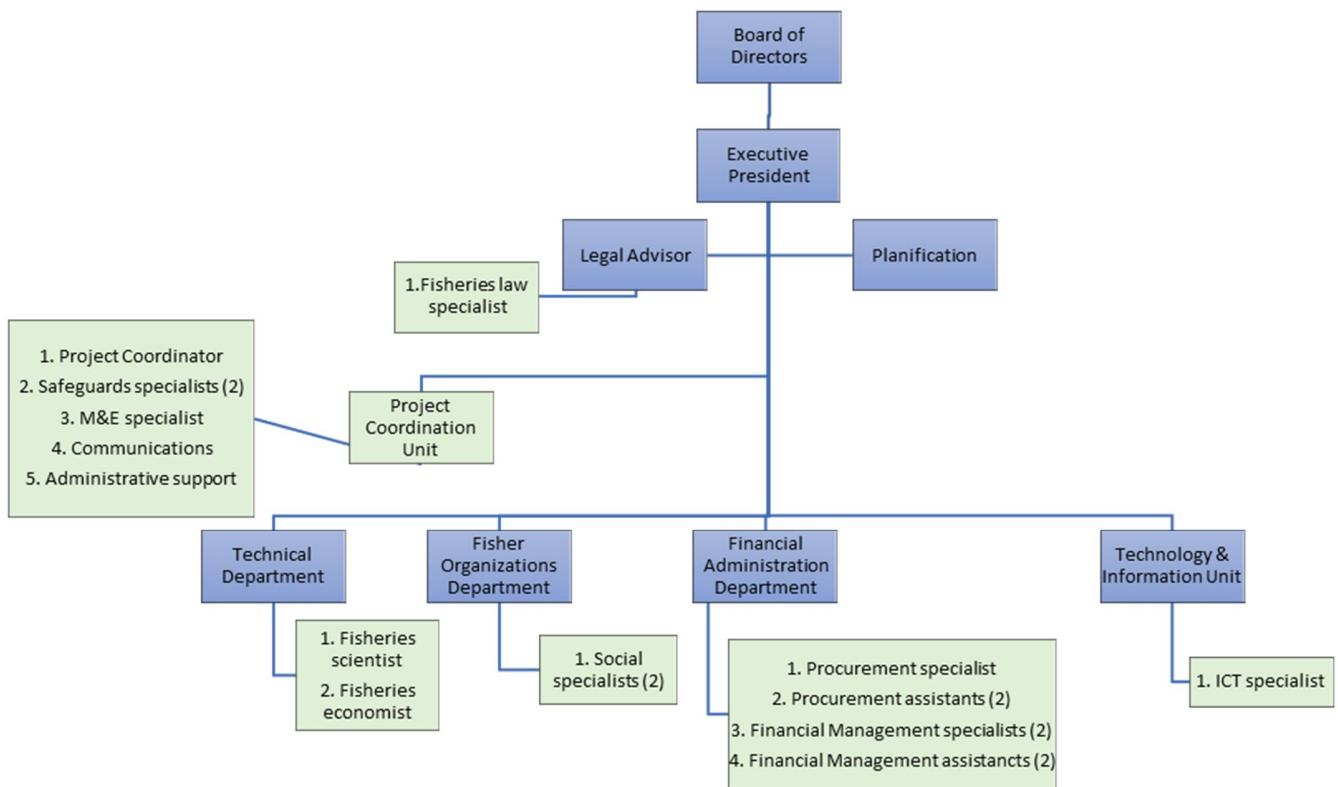
1. **The Project will be implemented by INCOPESCA, as the agency with the mandate and jurisdiction to manage the fisheries sector in Costa Rica**, through a subsidiary agreement with the Ministry of Finance as the Borrower on behalf of the Republic of Costa Rica. INCOPESCA is an autonomous institution created in 1994 through Law No 7384, with 138 staff stretched across 9 regional offices and 2 aquaculture stations and an annual budget of about US\$8 million. It is directed by an Executive Board made up of government agencies, private sector representatives and small-scale fisher organizations. To adhere to OECD requirement, the composition of the Executive Board was updated in October 2019 to improve the balance between public and private representations. Although independent, it operates under the political direction of the MAG as the lead government agency responsible for defining fisheries policy objectives and the National Fisheries and Aquaculture Development Plan, in coordination with INCOPESCA.
2. **A PCT will be embedded within INCOPESCA in charge of day-to-day coordination and monitoring of project implementation.** The PCT will include at least: (i) one Project Coordinator; (ii) two safeguards specialists; (iii) one monitoring and evaluation specialist; (iv) one communications specialist; and (v) administrative support. The PCT will coordinate project implementation with INCOPESCA's departments based on Annual Operational Plans and will respond directly to the Executive President. In addition, the Project will strengthen the implementation capacity of each of INCOPESCA's departments, including procurement and financial management specialists for the Financial Administration Department, technical specialists (i.e. marine biologists and fisheries management experts) for the Technical Department, social and community experts for the Fisheries Organizations Department, legal expertise for the Legal Advisor, and an Information and Communications Technology specialist for the Technology and Information Unit. INCOPESCA will hire a human resources firm to assist in the selection, recruitment and processing of payments to project staff as needed (Figure 1.1).
3. **INCOPESCA will implement the Project based on a Project Operational Manual (POM) approved by the Bank.** The POM will include details on institutional and implementation responsibilities, technical aspects of all components and activities, guidance related to monitoring and evaluation of the results framework, environmental and social safeguards, disbursements and financial management aspects, applicable procurement rules and plans, and supervision and reporting provisions related to the Project between the PCT and INCOPESCA staff. Project Components will be implemented directly by INCOPESCA with the support of the PCT, using the agreed implementation provisions of the POM.
4. **For the implementation of subcomponent 3.3, INCOPESCA will draw on the country's vast experience with PES schemes by partnering with a Marine Ecosystem Services Support Entity.** FUNBAM has been pre-identified as the Marine Ecosystem Services Support Entity, as it currently operates a number of PES-type schemes in the broader environment sector (i.e. beyond forestry). A separate agreement between INCOPESCA and FUNBAM (or any other entity acceptable to the Bank to assist INCOPESCA in the execution of subcomponent 3.3 of the Project) will be

¹¹ This is the project title used in Spanish by the Republic of Costa Rica



established, specifying implementation and fiduciary responsibilities under this subcomponent. The human resources firm hired by INCOPESCA will also support the strengthening of the capacity of the Marine Ecosystem Services Support Entity to implement subcomponent 3.3 as needed. Detailed operational modalities for the blue PES pilots will build on analytical work to be carried out prior to effectiveness and will be detailed in a Procedures Manual (PM) to be approved by the Bank as a condition of disbursement for this subcomponent. The PM will build on existing manuals operated by the National Forest Financing Fund¹², for its Spanish acronym) to run the current forest PES. Operational aspects to be covered include contract modalities, results-based metrics for blue ecosystem services, eligibility criteria for beneficiaries, fiduciary responsibilities, reporting requirements, financing modalities, flow of funds, audit arrangements, and screening for social and environmental impacts. The PM will further provide the standard terms and contract templates of financing agreements with beneficiaries for all types of eligible PES-type modalities.

Figure 1.1. Project implementation structure



Implementation Support Plan

5. **The World Bank will oversee appropriate implementation of the Project, in line with World Bank procedures standards and requirements.** The World Bank has put in place a task team comprising a diverse skill mix from various Global Practices, including Environment and Natural Resources; Social Protection and Labor; Finance, Competitiveness and Innovation; Poverty and Equity; Environmental and International Law; Social, Urban, Urban and Resilience; Transport; and has established an active collaboration with the International Finance Corporation to identify private sector investment opportunities. Skill sets required for continuous effective implementation support include, among

¹² Fondo Nacional de Financiamiento Forestal (FONAFIFO)



others, project management, natural resources management, marine fisheries and aquaculture, community development, private sector finance, M&E, structural port engineer, procurement, financial management, information and communications technologies, communications, citizen engagement, environment, legal, and social. It is expected that implementation support by the Bank team will be more intense during the first two years of operation with at least three annual visits.

Procurement

6. **Procurement will be carried out in accordance with “World Bank Procurement Regulations for IPF Borrowers”** (July 2016, revised November 2017 and August 2018) (“Procurement Regulations”). A PPSD was prepared by the Borrower describes how procurement in this operation will support the PDO and deliver value for money under a risk-based approach. The PPSD will provide adequate supporting market analysis for the selection methods detailed in the Procurement Plan. Mandatory Procurement Prior Review Thresholds detailed in Annex I of the Bank’s Procurement Procedure are observed. All procurement procedures, including roles and responsibilities of different units, will be defined within the POM.

7. **Procurement Plan.** In accordance with paragraph 5.9 of the Procurement Regulations, the Bank’s Systematic Tracking and Exchanges in Procurement (STEP) system will be used to prepare, clear and update Procurement Plans and conduct all procurement transactions for the Project. A Procurement Plan covering the first 18 months of project implementation was prepared by the Borrower in accordance with the results provided by the PPSD and was agreed with the Bank as part of the Negotiations. A summary of PPSD, including recommended procurement approach for higher risk/value contracts, is detailed in Table 1.1 below.

8. **Civil Works.** The Project will finance civil works. This includes new constructions and rehabilitations of fishing terminals, collections center, and others minor constructions.

9. **Goods.** Goods to be financed under this Project will include vehicles, boats, hardware and software, information systems, laboratory equipment, etc.

10. **Non-consulting services.** The Project will finance services such as an advertising campaign and updating of the fisher registry.

11. **Selection of consulting services.** Consulting services to be financed under the Project will be focused on fishery regulations, feasibility studies, M&E services, design and supervision of civil works, external auditing, among other services.

12. **Bidding Procurement Documents.** Standard Procurement Documents shall be used for all contracts subject to international competitive procurement and those contracts as specified in the Procurement Plan tables in STEP. Procurement using a national market approach shall be conducted using bidding documents to be agreed with the Bank.

13. **Operating costs.** Operating costs refer to the incremental expenses incurred by INCOPESCA or the Marine Ecosystem Services Support Entity (as applicable) on account of project implementation, supervision, monitoring and evaluation, which may include office supplies, rental expenses, reasonable commercial banking charges and fees, vehicle operation and maintenance, communication and insurance costs, operation and maintenance of office equipment, office (and office equipment) maintenance, utilities, document duplication/printing, travel cost and per diem of staff assigned to carry out responsibilities under the Project (but excluding consulting services), none of which would have been incurred in the absence of the Project.



14. **Capacity assessment.** The Bank carried out the procurement capacity assessment to evaluate the adequacy of procurement arrangements of INCOPESCA. The assessment focused on how INCOPESCA will be organized to procure using the loan's funds, in terms of staffing structure, procurement record system, internal controls, roles and responsibilities, etc. INCOPESCA does not have prior experience in procurement under Bank Procurement Regulations; however, it has qualified procurement staff with significant experience in national procurement procedure. In addition, procurement record systems, internal controls and roles/responsibilities were found acceptable.

15. **Subcomponent 3.3 will be implemented by the Marine Ecosystem Services Support Entity through a separate agreement with INCOPESCA.** The Bank also carried out a capacity assessment of FUNBAM as the pre-identified Marine Ecosystem Services Support Entity. FUNBAM has no prior experience in procurement under Bank Procurement Regulations and its capacity will be strengthened through the Project depending on the procurement needs. The Marine Ecosystem Services Support Entity is expected to handle minor procurement of consulting services and goods for a total amount of up to US\$1 million. Once the procurement items have been identified under implementation, the PPSD and procurement plan will be updated accordingly. In addition, the PM for the blue PES pilot (to be developed during the first 12 months of implementation) will define whether the PES modalities will operate through the financing of subprojects that include procurable items by subproject entities, based on similar schemes in the land sector. To ensure FUNBAM (or any other Marine Ecosystem Services Support Entity) has the capacity to carry out procurement, at least one procurement specialist with appropriate qualification and experience will be hired, and the World Bank will provide necessary capacity building to ensure smooth implementation.

16. **The key issues concerning procurement for project implementation include:** (i) lack of experience in projects financed by the Bank; (ii) incremental work-flow due to new available resources; (iii) coordination between technical areas, procurement unit, and PCT; (iv) potential delays in: (a) hiring the human resources firm to assist INCOPESCA in the selection, recruitment and processing of payments to individual consultants for establishing the PCT and strengthening the institutional capacity of FUNBAM as the pre-identified Marine Ecosystem Services Support Entity as needed; and (b) starting feasibility studies and designs/supervision of civil works; and (v) lack of experience in technical areas to define specifications (ToR) for the digital information system and some consulting services as well as for the supervision of these contracts.

17. **The corrective measures agreed are:** (i) hiring, no later than 30 days after effectiveness, one procurement specialist with at least eight years of experience in the application of Procurement Regulations, to carry out key initial procurement activities such those related to the human resources firm and design/supervision of the civil works, and to advise INCOPESCA on carrying out other non-complex procurement activities; (ii) during implementation, strengthen the procurement unit with one senior procurement specialist with at least five years of experience in the use of the Procurement Regulations and two assistants; (iii) detail in the procurement section of the POM on the appropriate roles and responsibilities for the technical areas, procurement unit, and PCT; (iv) start feasibility studies and designs/supervision of civil works as soon as possible; and (v) strengthen the procurement capacity of FUNBAM as the pre-identified Marine Ecosystem Services Support Entity with at least one procurement specialist with experience in the use of the Procurement Regulations and further strengthening of its capacity in proportion to procurement needs for the operation of the blue PES pilot.

18. **Frequency of Procurement Supervision.** In addition to prior review supervisions to be carried out by the Bank, an annual supervision mission will be carried out and the procurement post review will cover at least 10 percent of contracts not prior reviewed by the Bank. The ratio will be reviewed and adjusted as required, based on performance of the PCT.



Summary of PPSD (recommended procurement approach for higher value contracts)

Table 1.1: List of Main Procurement Activities

Description	Estimated cost (US\$M)	Prior / Post Review	Market approach	Procurement method
CIVIL WORKS				
Construction of fishing terminal in Puntarenas and El Coco processing plant	5.8	Post	National - Open	Request For Bid (RFB) – post-qualification
Conditioning of physical space for satellite monitoring and tracking area	0.3	Post	National - Open	RFB – post-qualification
GOODS				
Development of INCOPESCA Digital Information System, including software and hardware	2.3	Prior	International - Open	RFB
Vessel monitoring (equipment and tracking system	3.4	Prior	International - Open	RFB
Purchase of boats and engines - National Coast Guard Service	1.7	Prior	International - Open	RFB
Transport equipment for technical assistance, project management and support to the National Coast Guard	0.3	Post	National - Open	RFB
NON-CONSULTING SERVICES				
Media campaigns to promote fishery and aquaculture products	1.8	Prior	National - Open	RFB
Socioeconomic and Productive Fishing and Aquaculture Registry	1.5	Prior	National - Open	RFB
CONSULTING SERVICES				
Construction design and construction management for terminals and processing plants	1.5	Prior	National - Open	Quality and Cost Based Selection (QCBS) - Shortlist
Technical Assistance for Organizational Strengthening of Fishermen's and Fish Farmers' Groups in Responsible Fishing Areas	1.9	Prior	National - Open	QCBS - Shortlist
Consulting on stock evaluation and management plans for sustainable use	8.5	Prior	International - Open	QCBS - Shortlist
Establishment of Inclusive Production Program: includes socioeconomic diagnosis of communities, training program and training for alternative media	3.2	Prior	National - Open	QCBS - Shortlist



Market research and value chains for fishery and aquaculture products	1	Prior	National - Open	QCBS - Shortlist
Hiring a firm for professional and technical project management services	3.6	Prior	National - Open	QCBS - Shortlist

Financial Management

19. **INCOPESCA's Administrative and Financial Directorate will be responsible for financial management tasks and will manage the Designated Account of the Project.** FUNBAM's Operations Department will implement the financial management tasks related to the incentive mechanisms for marine ecosystem services under subcomponent 3.3. Both entities' financial management capacities were assessed in October and December 2018. The Bank concluded that overall INCOPESCA has in place adequate administrative structures, controls and systems; and FUNBAM has limited arrangements. However, the lack of experience on Bank's policies and procedures and the prospective increase in transactions require additional financial management staff capacity, which will be financed by the Project. INCOPESCA's financial management tasks under the proposed Project include: (i) budget formulation and monitoring; (ii) cash flow management (including processing payments and submitting loan withdrawal applications to the Bank); (iii) maintenance of accounting records (including the administration and maintenance of an inventory of project assets); (iv) preparation of semi-annual reports and annual financial statements; (v) administration of underlying information systems; and (vi) arranging for execution of external audit.

20. **INCOPESCA will be responsible for preparing and monitoring the annual operating plan and budget, which will include the budget of the Marine Ecosystem Services Support Entity.** The budget will then be integrated into INCOPESCA's annual budget and monitored through the Integrated Financial Administrative System (Enterprise). The financial management tasks and responsibilities of the Marine Ecosystem Services Support Entity include: (i) budget formulation and monitoring; (ii) cash flow management (including processing payments and submitting cash forecasts to INCOPESCA); (iii) maintenance of accounting records (including the administration and maintenance of an inventory of project assets); (iv) preparation of monthly and bi-annual reports, and annual financial statements; and (v) administration of underlying information systems.

21. **Project accounting and budget will be managed through the Integrated Financial Administrative System, including the sub-component expenditures of the Marine Ecosystem Services Support Entity.** The enterprise system includes budgeting, procurement, treasury, assets inventory, and accounting modules. Project accounting is on accrual basis, in accordance with the Government accounting policies; however financial statements required by the Bank will be prepared on cash basis. It is expected that the existing system will produce the financial reports under the required formats. The project transactions of the Marine Ecosystem Services Support Entity could be recorded using Excel inter-related spreadsheets (macros). Additional financial information and conciliation of advances will be provided to INCOPESCA on a monthly basis, in agreed formats to be included in the POM; these reports will serve as the basis for monitoring, expenditures recording, and consolidation. INCOPESCA will ensure that the financial reports of the Marine Ecosystem Services Support Entity are supported by adequate records and documentation in accordance with Bank requirements.

22. **INCOPESCA has adequate internal control and procedures.** The POM will include: (i) roles and responsibilities of INCOPESCA and the Marine Ecosystem Services Support Entity; (ii) adequate internal controls for the Project; (iii) content and formats of the IFRs, annual financial reports, and financial reports of the Marine Ecosystem Services Support Entity; (iv) auditing arrangements; (v) procedures for advancing funds to the Marine Ecosystem Services



Support Entity and its monitoring and documentation; and (vi) payment terms for the marine ecosystem services program under subcomponent 3.3 and monitoring processes for signed contracts.

23. **The Designated Account will be opened at the Central Bank of Costa Rica in United States Dollars (US\$);** for this Project, “the Treasury Single Account” would apply using the Digital Treasury System, whereby INCOPESCA will have its sub account in US\$. On a quarterly basis, INCOPESCA will transfer funds to the Marine Ecosystem Services Support Entity from the Designated Account, into a separate account in US\$, as an advance supported by quarterly cash forecasts. The Marine Ecosystem Services Support Entity will be required to document advances on a monthly basis. Expenditure justifications will be reported through Statement of Expenditures. Funds deposited into the Designated Account as advances, would follow the World Bank’s disbursement policies and procedures as described in the Disbursement and Financial Information Letter and Disbursement Guidelines.

24. **INCOPESCA will prepare and submit semi-annual IFRs within the 45 days after the end of the semester.** The IFRs will contain at least: (i) a statement of sources and uses of funds (with expenditures classified by category of expenditures) and cash balance; (ii) a statement of budget execution per component and sub-component; (iii) a reconciliation of the Designated Account; and (iv) a conciliation of advances to the Marine Ecosystem Services Support Entity.

25. **INCOPESCA will prepare project financial statements on an annual basis.** The Project’s annual financial statements will be audited by a private firm under the terms and conditions acceptable to the World Bank. The auditors will conduct semiannually interim reviews and the results of the review will be communicated to INCOPESCA and the Marine Ecosystem Services Support Entity in a management letter within 90 days after the review is conducted. The Project’s annual audit reports will be submitted to the World Bank not later than six months after the end of each audited period. Audit costs will be financed by the Project. Audited financial statements will be disclosed on the websites of INCOPESCA and the selected Marine Ecosystem Services Support Entity and the World Bank will make them available to the public in accordance with the World Bank Policy on Access to Information.

26. **INCOPESCA and the Marine Ecosystem Services Support Entity shall retain all records (contracts, orders, invoices, bills, receipts and other documents) evidencing expenditures under their respective parts of the proposed Project until at least the later of:** (i) one year after the World Bank has accepted the audited Financial Statements covering the period during which the last withdrawal from the Loan Account was made; and (ii) two years after the Closing Date. INCOPESCA and the Marine Ecosystem Services Support Entity will provide access to the World Bank to examine such records.

27. **Frequency of FM Supervision.** In order to monitor the Project’s financial management arrangements, the World Bank will conduct at least two financial management supervision missions per year and carry out desk reviews of interim unaudited financial reports and annual audit reports.

**ANNEX 2: Detailed Project Description**

Republic of Costa Rica
Costa Rica Sustainable Fisheries Development Project
(*Programa Desarrollo Sostenible de la Pesca y Acuicultura en Costa Rica*)

- 1. The Project reflects the first phase of an ambitious Government effort to transform the fishing sector and harness the country's significant blue natural capital for long-term gains in inclusive economic growth.** The aim is to increase domestically generated revenues from both fishing resources and downstream value chains to create a viable and sustainable fisheries sector that generates wealth for the country. INCOPESCA has begun this process by enforcing an annual total allowable catch in the foreign purse seine tuna fishery within the Costa Rican EEZ, increasing the likelihood that more tuna and other species become available for the domestic longline fleet, value chains, and tourism recreational sectors. The regulation of foreign vessels will foster the underdeveloped domestic tuna longline fishery; as a result, less tuna would be caught in Costa Rican waters but the value per ton will be several times greater. Additionally, by-catch of species commonly associated with purse seining would be reduced and the longline fleet would likely catch fewer vulnerable species such as sharks as they redirect their efforts towards tuna. To allow for greater oversight of foreign-owned vessels using Costa Rica's national allocation of purse seine capacity under IATTC rules, the Project will help the Government establish a vessel registry authority office and require owners to register under the Costa Rican flag. The Project will drive these changes by significantly strengthening monitoring, control and surveillance of these fisheries.
- 2. The Project will unlock the country's vast blue natural capital and transfer the economic opportunities from the ocean to address the development challenges along the coast.** In addition to public revenue increasing from the scarcer purse seine fishing licenses, the Project will assist INCOPESCA to develop and apply a methodology (e.g. an auction) to assign its national allocation of purse seine capacity (9364 m^3 of well space) in the Eastern Tropical Pacific to maximize public revenue while increasing the amount of tuna supplying Costa Rica's canning industry. Currently about 9,000 metric tons of tuna are landed in Costa Rica by purse seiners but Costa Rica's well space capacity could allow for as much as 25,000 metric tons, greatly increasing the supply of tuna for canning in the country. This will secure the approximately 1300 canning-related jobs currently existing in Puntarenas province (mostly held by women) and potentially enable the expansion of the canning sector, creating more jobs along the Pacific coast. Increased rents derived from the assignment of high-seas purse seine fishing capacity will be used to support fisheries management plans along the coast that enable near-shore stock recovery. As the supply of "fresh tuna" and other species grows, investments will be made in strategic infrastructure to ensure efficiency in landing, refrigeration and transport, along with capacity building and training to strengthen fisheries value chains. The Project will also support the establishment of a seafood traceability system and outreach to high-value export markets, enabling private sector investments to improve product quality and value added. This will strengthen the resilience of the sector to climate risks.
- 3. With regard to small-scale fisheries, the Project will lay the foundations for rebuilding near-shore fish stocks and establish participatory management plans for their long-term sustainability.** The Project will support INCOPESCA's efforts to formalize small-scale fishers that wish to remain in the sector, track their fishing activities to support safety at sea and assess fishing effort levels, and support traceability to improve markets access. Data will be shared with fishermen to help them monitor fishing activities as part of co-management. This will greatly reduce the amount of illegal fish entering the market and improve the unit price that fishers receive for their products. To manage fishing effort, INCOPESCA will work closely with local fishing organizations to create new and strengthen existing



participatory arrangements along the coast called RFAs. This will be based on the principle of co-management, built on traditional knowledge and based on the FAO “Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication”¹³. Building on the country’s extensive experience with PES in the land sector, the Project, through a collaborative effort between INCOPESCA and MINAE, will pilot the development of similar economic instruments in the marine sector to provide incentives for an effective transition to a sustainable fisheries management model while promoting the maintenance of marine ecosystem goods and services. To mitigate the temporary loss of income resulting from reduced fishing effort in RFAs and elsewhere, the Project will also support INCOPESCA in its efforts to coordinate with other institutions such as IMAS, MTSS, and INA to promote access of vulnerable fishing households to existing government programs that provide income support to eligible households, as well as support for alternative livelihood and employment opportunities. Strengthening fisheries management will also contribute to decreased vulnerability of small-scale fishing families to climate change risks, which are projected to impact catch potential.

4. Investments in the value chain will aid fishing and fish farming cooperatives to gain a greater share of the value of seafood they produce. Fisher and fish farming organizations will be encouraged to form cooperatives to take full advantage of the more transparent value chain and help them expand the services they offer their members and others. The Project will finance the construction of viable small fish processing and cold storage facilities in Playa Coco in Guanacaste, near San Isidro in the central mountains, and on the Diamantes fish hatchery and extension center in Guapiles, offering operating concessions to those cooperatives that meet minimum standards and support improved food safety and quality. Together, investments will contribute to improved livelihoods and resilience to climate change by scaling up cold chains and sanitary practices.

5. The Project will strengthen collaboration and coordination among all agencies in a concerted effort to improve sector governance and harness fisheries for growth. It will also enable INCOPESCA to coordinate more closely with other government agencies and local authorities to strengthen oversight and stimulate growth in the fisheries sector to facilitate landing, preservation of product quality, value-added and transport of fish and by identifying and creating higher value markets both domestically and abroad. These agencies will include SNG, INA, National Cooperative Development Institute, MOPT, SENASA of the MAG, COMEX, National Export Promotions Agency, and the National Tourism Institute.

6. To achieve its objectives the Project consists of three closely related and mutually reinforcing components, focusing on strengthening governance of the fisheries sector, investing in enhancements of related markets and value chains, and linking socioeconomic benefits with efforts to restore the coastal fishery asset base. A fourth component will support project management, monitoring and communications. Figure 2.1 below illustrates the Project’s detailed Sequence of Change.

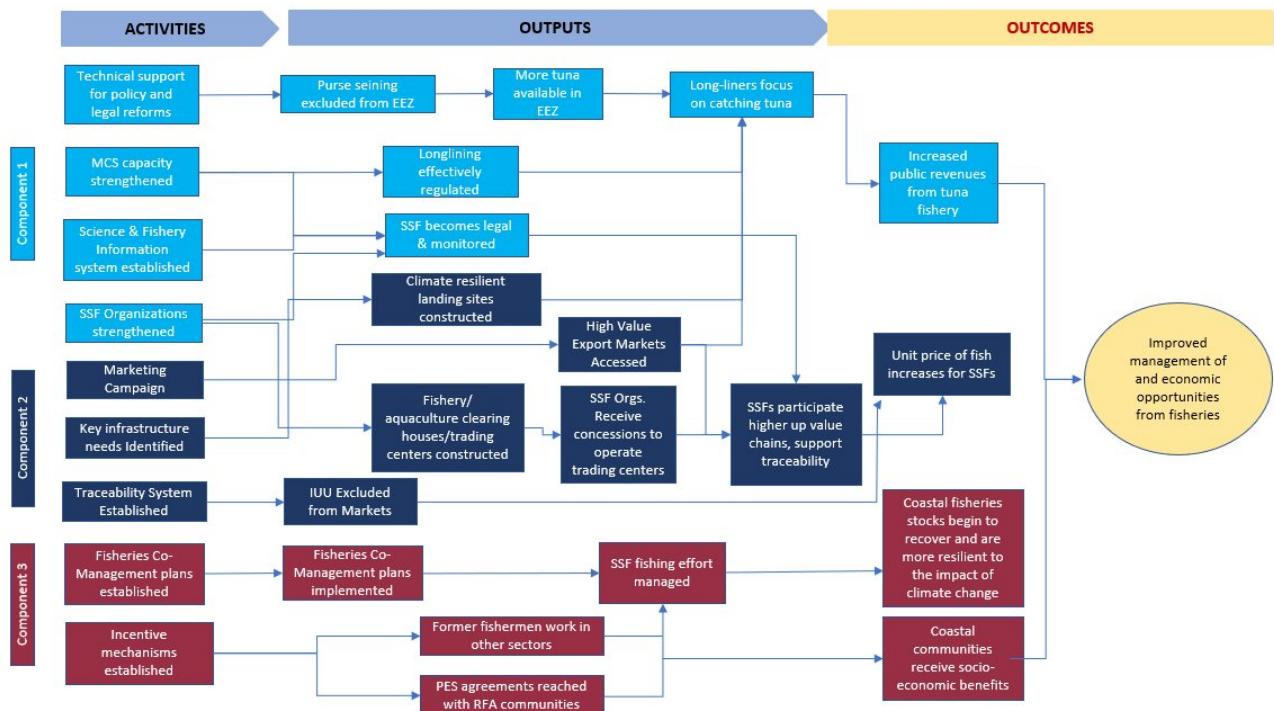
7. Since fisheries and coastal communities are on the front lines of intensifying climate change impacts, the Project will address climate risks and build the resilience of the sector. The World Bank report “*Climate Change and Marine Fisheries in Africa: Assessing Vulnerability and Strengthening Adaptation Capacity*” concludes that -while the reduction of catch potential are beyond the control of coastal states- the socio-ecological risks can be mitigated through a variety of measures geared towards improved management and healthier ecosystems which are generally more resilient. Protecting them and restoring degraded marine habitats can increase their ability to withstand climate-related disturbances and safeguard the poor who are depended upon these resources. The Project intends to decrease climate vulnerability through (i) recovering and maintaining the health of priority fish stocks by implementing climate-informed governance and management plans (Component 1); (ii) climate-resilient fisheries infrastructure and

¹³ Costa Rica in 2015 became the first country in the world to incorporate these guidelines in national legislation.



investments (Component 2); and (iii) creating alternate livelihood options to help fishing communities adapt to and manage climate risks (Component 3). The Project will also contribute to the mitigation of greenhouse gas emissions by using climate-smart and energy efficient innovative designs in the construction of fisheries-related infrastructure by applying national carbon neutrality voluntary certification standards.

Figure 2.1. Project Detailed Sequence of Change



8. **Component 1: Strengthening the governance and management of fisheries resources (US\$20.67 million).** The national fisheries law calls for sustainable resource management, but gaps in the current regulatory and institutional framework have limited INCOPESCA's ability to focus on its core regulatory role as the country's fisheries authority such as monitoring catches, assessing stock status and effectively deterring illegal fishing in coordination with port authorities, the coastguard and police. Recognizing this, the OECD Committee on Fisheries has called for a series of policy reforms to strengthen their case for accession. These include the need to reinforce the legal and regulatory framework based on scientific evidence and with long-term horizons; creating the necessary incentives to prioritize sustainable use of natural resources; scaling up monitoring and controls; and focusing government supports on promoting sustainable socio-economic development of the sector. Component 1 therefore will primarily target policies, strategies, institutional and legal frameworks, and actions by the public sector necessary to improve fisheries management and legal seafood trade, as well as coastal and marine environmental health and resilience to climate change. It would be backed by activities aimed at understanding the resource base and building human and institutional capacity necessary to implement fisheries policies and management plans. These and other actions by the public sector are necessary to improve the management of priority off-shore and coastal fisheries, orienting them towards providing greater economic value for the country and coastal communities. Governance and management reforms will consider identified climate risks in the sector and take measures to mitigate and adapt to them. To achieve this, three closely-linked and mutually supportive activities, directed to both the public sector and coastal



communities, are envisaged.

9. Subcomponent 1.1: Legal and institutional strengthening for effective fisheries management (US\$1.24 million). This subcomponent will provide goods, training and consulting services to support policy and regulatory reforms to optimize the management of large-scale pelagic fisheries and to promote effective management of small-scale fisheries along the coast. Reforms will support compliance with OECD recommendations and with the obligations under the recently ratified FAO PSMA. The National Fisheries Development Plan will also be updated reflecting a clear shift towards an institutional focus on greater sector oversight and improved governance. Early in the Project, a public expenditure and institutional review will be conducted. Recommendations will be incorporated into the above-mentioned reforms and investments will be made in commensurate equipment and trainings to strengthen INCOPESCA and other agencies. To reinforce the recognition of the economic value from rebuilding fish stocks and protecting other marine natural resources, this subcomponent will also support the expansion of Costa Rica's natural capital accounts to include fish stocks and other marine assets. Management reforms will be informed by climate change effects on fisheries and will be targeted at fisheries that have experienced the highest pressures due to climate change to provide highest returns to climate change adaptation. Effective fisheries oversight is in itself a necessary foundation that will enable the sector to adapt to climate change.

10. Subcomponent 1.2: Scientific and information systems strengthening (US\$13.23 million). As part of the broader government effort to make government services and information more accessible and transparent, this subcomponent will fund consulting services, goods and operating costs to ensure INCOPESCA establishes a digital platform ("INCOPESCA Digital") linked with multiple ministries and focused on user services (vessel registration, fishing permits, fuel subsidies, food safety, etc.), monitoring and surveillance, (sex-disaggregated) statistical information, and traditional knowledge among others. Access to these services will require fishermen to register and regularly report their catches. This system will also contribute to helping the industry meet market demands for traceability, verify legality and eventually meet environmental and social standards required by high-value markets, and will also provide a foundation for tracking climate change impacts on catch and on fish populations. To underpin recovery and inform climate-adaptation plans for overexploited fisheries, this subcomponent will also support INCOPESCA in establishing collaboration agreements with academic and other institutions to apply data-poor stock assessments and monitoring of biological, climate and socioeconomic variables. Agreements will also focus on strengthening data-gathering and analytical systems within INCOPESCA and produce targeted research designed to anticipate and mitigate climate impacts and provide other key information for effective management, including inputs to the national early warning system for climate-related shocks. Finally, this component will support INCOPESCA in designing and establishing an effective video-based observer program on all domestic longline fishing vessels, which will be used primarily to gather scientific data to better manage Costa Rica's oceanic fisheries.

11. Subcomponent 1.3: MCS to deter IUU fishing (US\$6.20 million). This subcomponent will fund goods, consulting services, training and operating costs for the design, installation and transferring of know-how on the use of a state-of-the-art VMS to track oceanic fishing vessels including those that are intentionally avoiding detection. The principle of cost-recovery will be applied, resulting in a gradual transfer of key MCS costs to larger commercial fishing operations to ensure the financial sustainability of the system. A similar monitoring system will be designed and installed specifically for small-scale fishing vessels to promote safety at sea, help communities monitor fishing effort and promote transparency. Funding will also support the provision of equipment to the SNG including, inter alia, vessels, vehicles, computer hardware and software to strengthen its MCS capacity in support of coastal fishery recovery plans. Said equipment will be acquired by INCOPESCA through loan proceeds and transferred to the SNG, while specific fisheries enforcement activities will be financed through SNG counterpart funds to ensure their sustainability. This will be accompanied by targeted training for coast guard and police officers in effective and efficient



detection and reporting of IUU fishing. The subcomponent will also support INCOPESCA in carrying out the country's first national fisheries survey which will provide critical socioeconomic data on the sector. This will be complemented with a fisher registration campaign to formalize all fishermen as a critical first step toward improving co-management plans, effort-reduction¹⁴ and provision of social supports. By investing in MCS, the Project will also help address the increased likelihood of climate-induced IUU fishing resulting from reduced availability of fish stocks and increased competition among fishers.

12. Component 2: Investing in sustainable fisheries value chains (US\$26.54 million). This component will create an enabling environment for sustainable growth in the fisheries sector by supporting public investments in critical infrastructure and related market services to stimulate value addition, develop market strategies and improve the business climate for viable private sector investments. Decisions on site location for infrastructure investments shall be made in an informed manner, based on financial viability criteria and in a way that will benefit local communities and lead to increased sustainability and value added in the fisheries sector. The physical infrastructure will be required to be climate resilient, energy and resource efficient. Investing in preserving fish quality and value addition at landing sites, when done in coordination with strengthened management can help mitigate the short-term income losses faced by fishers who reduce fishing effort to restore fish stocks as part of the implementation of the co-management plan developed by the fisherman organizations overseeing RFA. In the mid to long-term, as stocks recover, catches will improve further increasing the economic value to local fishermen. Rural families producing trout and tilapia face similar challenges meeting food safety standards and preserving product quality. They will also benefit from similar infrastructure investments. Linking these higher value products to the right markets will also be critical. Costa Rica has relatively high seafood production costs in the fisheries sector when compared to similar seafood products from Asian fisheries and aquaculture. To secure greater economic benefits for Costa Rican fishers in a competitive global market, efforts must be focused on identifying distinguishing attributes valued by markets that could be added to Costa Rica's seafood products. These could include social and environmental qualities –validated through traceability– that could garner a higher price in certain domestic and international markets. This component will have two subcomponents.

13. Subcomponent 2.1: Investments in key fishery infrastructure (US\$22.31 million). This subcomponent will finance works, consulting services and training to prepare and build key fishery infrastructure and related capacity needed to increase the value added by local fishermen and fish farmers in key locations and seafood value chains, therefore increasing their share of the final consumer price. The Project will focus on three fish processing/cold storage facilities, one for small-scale fisheries and two for small-scale fish farmers, which will provide adaptation Co-Benefits by reducing fish waste and losses. It will also invest in larger fish terminals to improve landing and storage capacity for the full range of vessels offloading fish along both coasts. This will include financing works to build the facilities deemed financially viable and necessary by both INCOPESCA and artisanal fishing communities and fish farmer organizations. An analysis will be financed to explore how these types of infrastructure investments could be linked to specific private investment opportunities to support greater profits for small-scale fishers while incentivizing compliance with licensing, registration and recovery plans. This subcomponent will also finance training and operating costs to help targeted fishermen and fish farmers strengthen existing and (where viable) establish new cooperatives and/or associations, including training on climate resilient technologies and fishing practices. The recurrent costs for the operation of small-scale processing/cold storage facilities will be managed through concessions offered to small-scale fishing and aquaculture organizations that have received organizational and enterprise training and meet minimum standards of organizational and business capacity, including requirements for increasing the participation

¹⁴ Fishing effort reduction is part of a co-management plan that are developed by fisherman organizations. The Project can support the mitigation of short-term income losses faced by fishers who reduce fishing effort.



of women. Improvements will be made in the INCOPESCA's tilapia hatchery in Limon Province to ensure sufficient production of fingerlings to supply local farmers and support extension services and training. In addition, all infrastructure work will be screened for disaster and climate risk while construction designs will be required to be climate-resilient following best practices beyond prevailing standards. The Project will also apply energy-efficient technical specifications in construction design based on Costa Rica's voluntary carbon neutrality certification system as a means to mitigate greenhouse gas emissions. Given the time it may take for the infrastructure works to be investment-ready, INCOPESCA will prepare the ToRs for the design, the feasibility study and the required impact assessments shortly after Board approval to ensure that construction works begin within the second year of project implementation.

14. Subcomponent 2.2: Value chain and market development (US\$4.23 million). This subcomponent will complement investments in key infrastructure by financing training (including on climate proofing value chains), consulting services and operating costs to formulate value chain action plans for selected species through a Competitive Reinforcement Initiative or similar methodology, taking into account gender and climate change considerations¹⁵; establish a Seafood Traceability System for capture fisheries and aquaculture to track and certify the origin and legality of seafood along with environmental (including carbon neutrality) and social (including gender) attributes; and develop and implement a gender inclusive and climate resilient seafood marketing strategy for Costa Rican products to reach exports and domestic markets. The marketing strategy will promote climate-smart fishing and processing technologies, involving complementary adaptation and mitigation techniques and practices.

15. Component 3: Strengthening mechanisms for social and environmental sustainability (US\$21.85 million). This component will focus on supporting the Government's efforts to ensure an effective, efficient, and equitable transition towards a sustainable fisheries management regime while addressing short-term socio-economic costs and optimizing the environmental (including climate) benefits associated with that transition. The transition path to a sustainable fisheries management model needs to be mindful of the multifaceted social, cultural, ecological and economic context within which adjustments take place, particularly in cases involving multi-species fisheries. Effectively implementing fisheries management plans will require more than simply dealing with technical challenges of ensuring the sustainability of the resource. Care needs to be taken to ensure that the burden of the transition does not fall unevenly on different segments of the fishing community; and to provide those who obtain their livelihood from fishing with a coherent set of incentives and support systems so that the adjustment process occurs smoothly, while at the same time avoid fostering a culture of dependency within those same communities. Effective implementation of fisheries management also requires knowledge and consideration of other important uses of and impacts to marine space and ecosystems to minimize conflicts and externalities. It will also help ensure fisheries are accounted for in a broader blue economy context. Component 3 sets the fisheries sector on a climate-resilient growth path that reduces pressures on stocks, allowing for their recovery and adaptation to climate change. It consists of three subcomponents.

16. Subcomponent 3.1: Participatory fisheries management arrangements (US\$5.50 million). This subcomponent will finance training, goods, technical assistance, and operating costs to support planning and implementation of climate and gender informed co-management plans for coastal and pelagic fisheries developed through participatory processes with the main segments of the national fisheries sector. First, the Project will reinforce existing co-management instruments for coastal fisheries already applied in Costa Rica based on the FAO Voluntary Guidelines for Small Scale Fisheries, called RFAs. The Project will expand the number of existing RFAs currently covering an area

¹⁵ Climate-induced changes will require adaptation at all stages of the fisheries and aquaculture value chain, including the resilience of vulnerable coastal and riparian communities and their livelihoods (FAO Report, Impacts of climate change on fisheries and aquaculture, 2018).



close to 125,000 hectares to about 300,000 hectares, increasing the number of RFAs from 11 to 20. A team of community co-management promoters will be trained, and where necessary contracted, to support this process while fisher organizations will be strengthened and trained on how to manage RFAs, apply zoning restrictions, resolve conflicts, and monitor progress in stock recovery and socioeconomic outcomes. The Project will focus on strengthening women's participation and leadership in fisher organizations while minimum quotas for women participation in trainings will be established and family-friendly services will be provided such as provision of child-care service during meeting and trainings.

17. Second, the Project will support participatory arrangements with other targeted segments of the fisheries sector. The Project will work closely with the national longline fleet and provide support for the implementation of a vessel monitoring system, an observer program and other selected activities for the management of large pelagic fisheries, drawing from recent consultative exercises developed with support from the GEF/UNDP. Nearshore and deep-water shrimp fisheries will also be supported by conducting scientific studies and providing technical assistance for developing alternative, low-impact fishing techniques. Finally, the Project will support the design and implementation of a national fisheries and aquaculture zoning process that would account for the conservation of essential fishery habitats, climate resilience, marine pollution and coastal/marine biodiversity conservation, allowing fisheries and aquaculture to be clearly positioned as a significant contributor to a broader Blue Economy Framework. This will build on analytical work that the Bank will carry out during project preparation and in the early stages of implementation. It will also be linked to policy reforms under subcomponent 1.1 to formalize the integrated planning process and its outputs. Drawing from the planning process, additional investments will be made to implement fisheries-related aspects of the plan including mitigating the impacts of pollution and climate change on fisheries. All three activities under this subcomponent will consider the results of climate vulnerability-related research financed by the Project to incorporate climate-risk reduction and adaptation measures.

18. **Subcomponent 3.2: Support for alternative livelihood and employment opportunities (US\$5.0 million).** This subcomponent will finance goods, trainings, consulting services, and operating costs to provide a comprehensive package of support to vulnerable families for overcoming potential adjustment rigidities associated with the economic and social implications of the transition to sustainable fisheries management. Three main activities are envisaged. First, the Project will finance analytical work to inform the design of an alternative, climate resilient livelihood and employment opportunities support package. The analytical work would seek to complement the planned national fisheries survey in Component 1 and include (i) qualitative work to better understand household profiles and livelihood-related aspirations (with a focus on youth/next generation's opportunities) and (ii) local-level labor market diagnostics to identify other sectors with employment potential and that face lower climate risks. Second, the Project will strengthen INCOPESCA's efforts to support the most vulnerable fishers and their families who choose to limit their fishing effort or exit the sector by linking them with existing governmental social and income support programs, labor market services, and training. To do this, the Project will build on the successful experience of the *Puente al Desarrollo* (Bridge to Development) extreme poverty reduction strategy, which deploys *co-gestores sociales* (social co-managers) to work with extremely poor families and link them to Government programs needed to overcome poverty. Specifically, the Project will finance (i) *co-gestores sociales* to work with vulnerable fishers' families, with a focus on generating alternative livelihoods and (ii) the provision of complementary training, asset transfers and technical assistance that might be needed in addition to those provided by existing Government programs. This activity will be implemented in close coordination with IMAS, MTSS, and INA building on existing institutional arrangements¹⁶ and the design of the complementary support would be informed by the analytical work. Third, the Project will invest in

¹⁶ A joint implementation unit between INCOPESCA, IMAS, MTSS and MINAE was established through Decree No 40312 for the Gulf of Nicoya.



promoting aquaculture and/or mariculture as an alternative livelihood for fishers, seafood workers and their families through technical assistance, the carrying out of pilot activities aimed at demonstrating the application of aquaculture and/or mariculture techniques, carrying out research and development, and developing a national aquaculture zoning plan. The goal is to develop resource-efficient and competitive aquaculture and/or mariculture business models that are adaptive to climate change and bring climate mitigation co-benefits while also providing a source of alternative livelihood for vulnerable fishers.

19. All three activities under this subcomponent will target communities with high climate risks and will incorporate climate-smart and adaptation measures in their training programs. Particular attention will be placed on targeting women, youth, and marginalized populations such as Afro-descendants along the Caribbean coast. The Project will ensure that female family members have access to specialized training aimed at improving working conditions and increasing their skills in specific activities where they are currently involved (such as shrimp peeling and mollusk gathering), as well as diversification possibilities in other sectors. Children, and youth will be encouraged to stay in school to complete their primary and secondary education through available scholarship programs such as those provided by IMAS and the National Scholarship Fund. The operational procedures for the activities under this subcomponent will be further detailed in the POM to be developed and approved prior to effectiveness.

20. **Subcomponent 3.3: Incentive mechanisms for marine ecosystem services (US\$11.35 million).** This subcomponent will pilot the development of economic instruments to support the transition to sustainable fisheries management under an ecosystem-based and climate-resilient approach. Efforts to improve fishery management usually rely solely on regulatory approaches which have sometimes proven of limited effectiveness or imposed hardships on affected fishers. Building on the country's extensive experience with PES in terrestrial ecosystems, the Project will pilot similar instruments that complement or substitute regulatory approaches in marine ecosystems. Such instruments are likely to be particularly helpful in easing the transition to sustainable and climate-resilient fisheries and in protecting valuable coastal ecosystems such as mangroves, as they would simultaneously create incentives for improved environmental management while supporting the incomes of participants (unlike regulations or taxes, which often impose costs on participants). The Project will pilot the financing of environmental service contracts with participating fishers and fisher organizations linked to measurable improvements in fisheries as well as the provision of other marine ecosystem goods and services and climate-resilient practices, taking care to ensure that the instruments provide the right incentives, are cost-effective, and have sufficiently high levels of additionality. These pilots will be designed in the early part of the Project; multiple pilots may be undertaken in different areas to test alternative approaches. In the case of fisheries, it is expected that payments would be transitional in nature and eventually phased out as stocks recover. The Project will also finance technical and legal studies to explore options for implementing such instruments beyond the end of the Project, when needed, including options for financing them in the long term. For example, long-term payments (as in the country's forest PES program) may be necessary to secure the conservation of coastal ecosystems such as mangroves and support adaptation of the sector to climate change. Importantly, more resilient ecosystems constitute a key response to mitigate the magnitude of the projected reduction of catch potential due to climate change. The Project will explore whether a long-term payment scheme could replace the short-term scheme aimed at supporting the transition to sustainable fisheries, to help ensure that fisheries continue to be managed sustainably once stocks have recovered and in the face of climate change by rewarding the continued use of sustainable fishing practices and the conservation of essential fish habitats.

21. **Component 4: Project management, monitoring and communications (US\$6.04 million).** This component will provide goods, training, consulting services and incremental operating costs to strengthen INCOPESCA's capacity to manage, implement, monitor, and report on project activities. Specifically, support will include: (i) staffing and operation of a PCT, including establishment of adequate financial and procurement management systems and audits;



(ii) establishing monitoring and evaluation tools and mechanisms to report on project results and overall sector statistics, including periodic socio-economic surveys, market surveys, and rapid stock-assessments; (iii) preparation and implementation of specific environmental and social safeguard instruments as per the Environmental and Social Management Framework, Indigenous Peoples Planning Framework and RPF, including a Gender Action Plan for the fisheries sector and an Afro-descendants Strategy; (iv) implementation of an overall communication plan, including sharing of knowledge and experience gained through the Project related to sustainable fisheries management at the regional level; and (v) supporting interinstitutional coordination, stakeholder dialogue and consultations; and strengthening of the existing grievance redress mechanism.

**ANNEX 3: Preliminary Gender Gap Analysis**

Republic of Costa Rica
Costa Rica Sustainable Fisheries Development Project
(*Programa Desarrollo Sostenible de la Pesca y Acuicultura en Costa Rica*)

- 1. Differences in gender roles in artisanal fishing communities have led men and women traditionally engaging in distinct jobs with different wages, health and safety and conditions.** For the most part men control the majority of the fishing activity at sea while women work on jobs onshore, associated with the pre-harvest and the post-harvest (processing) segments of the value chain. In particular, many women in the fisheries sector in Costa Rica work as shrimp peelers or mollusk gatherers, often without social protection despite the risks posed by their work.
- 2. Key gender gaps in the sector and identified as relevant to the Project include:** (i) women's limited access to formal jobs and business opportunities, mainly driven by women's lack of formal education, lack of opportunities to access training and extension services, occupational sex segregation in the fisheries sector, and women's time poverty due to domestic chores (for example, cooking, cleaning, taking care of children and elderly); and (ii) low representation of women in formal sector institutions and community organizations, especially in leadership positions,¹⁷ because of women's limited access to finance to open new or expand existing businesses or to cover the costs of association; lack of specialized skills in the sector (not only in fisheries, but in other alternative sectors); and limited time to work out of their households, among other factors.¹⁸
- 3. The Project will make important contributions towards closing the gender gaps and providing opportunities for women and men in the fisheries sector.** It will do so by providing training, technical and financial support to new and existing women-led entrepreneurial initiatives aimed at generating alternative livelihoods not only in the fisheries sector (e.g. processing, aquaculture, shell-collection) but also in related or other sectors (e.g. secondary products such as clothing, oils, fertilizer, etc.). The Project will also strengthen women's participation and leadership in fisher organizations by providing child-care services during meetings and trainings, so women can increase their voice and enhance skills for increased income and employment opportunities. In addition, the Project will generate sex-disaggregated fisheries statistics for the first time in the country and develop a gender action plan for the fisheries sector. The results framework includes an indicator on the number of women-led initiatives aimed at income generation and alternative livelihoods that will be supported by the Project. Therefore, the Project would specifically support the WBG Gender strategy by supporting women through (i) more and better jobs, and (ii) ownership and

¹⁷ Enterprise Survey data for Costa Rica (2010) found that: (i) 43.5% of firms had female participation in ownership - not necessarily as the only owner of the business – and only 15.4% of firms had female top manager; and (ii) in manufacturing firms, female workers represented only 19.0% of the permanent full-time production workforce.

¹⁸ Despite the limited availability of sex disaggregated data, the team has identified the gender gaps based on interviews with stakeholders and available literature. Sources of information included: INCOPESCA. 2010. Propuesta de Plan de Ordenamiento Pesquero del Área Marina para la Pesca Responsable Golfo Dulce; Carvajal, Daniel. Artisanal Fishing and Poverty in the Communities near the Nicoya's Gulf. UCR, Rev. Ciencias Sociales 140: 137-152 / 2013 (II), ISSN: 0482-5276; CoopeSoliDar. 2015. Sistematización del proceso nacional para la generación de una Política Pública en torno al Aprovechamiento Sostenible del Camarón en Costa Rica. San José, Costa Rica: CoopeSoliDar R.L.; PROCASUR and FIDA. 2015.; INAMU and IICA. 2001. Grupos de Mujeres Generadoras de Ingresos en Cifras – Estudio de Caso: 400 Grupos de Mujeres en Costa Rica. Additionally, multiple testimonies of women in the fisheries sector are found the following documents: FAO. El reconocimiento de los derechos de las mujeres, clave en la sostenibilidad de los recursos pesqueros en Costa Rica, and Situación de las mujeres en la pesca artesanal; Plataforma de Pesquería Sostenible de Grandes Pelágicos. Historias de Vida; SciDevNet. 2018. e; El País. 2019. Sector Pesquero costarricense elabora Política Pública para la Igualdad de Género; and Sector Pesquero. Historias.



control over assets.

ANNEX 4: Economic and Financial Analysis

Republic of Costa Rica
Costa Rica Sustainable Fisheries Development Project
(*Programa Desarrollo Sostenible de la Pesca y Acuicultura en Costa Rica*)

1. Introduction

1. According to the World Bank's Sunken Billions report¹⁹, global marine fisheries are in crisis. The proportion of fisheries that are fully fished, overfished, depleted, or recovering from overfishing increased from just over 50 percent in the mid-1970s to about 75 percent in 2005, and then to a staggering 90 percent in 2011. This biological overfishing has led to economic overfishing, which creates substantial economic losses, estimated at \$83 billion in 2012, compared with the optimal global maximum economic yield equilibrium. According to the report, global marine fisheries could achieve their maximum economic potential by reducing aggregate fishing effort by nearly 50 percent, allowing to double the fishable biomass, increase the sustainable global marine harvest by almost 13 percent, and recover the sunken billions. Transitioning to a sustainable level of fishing however involves significant policy and governance challenges at the global, national, and local levels as, if not managed properly, adjustment costs may fall disproportionately on some stakeholders.

2. In line with the report findings, this Project aims to improve management of priority fisheries and to enhance the economic opportunities from those fisheries in Costa Rica, with due attention placed to the social and environmental sustainability aspects of such a transition. The Project consists of three components closely interrelated: strengthening the governance and management of fisheries resources (Component 1); investing in sustainable fisheries value chains (Component 2); and, strengthening mechanisms for social and environmental sustainability (Component 3). The ex-ante economic analysis of the Project confirms that the proposed investments and approaches will generate attractive rates of return compared to alternative investment opportunities that may be available in Costa Rica.

3. Activities financed through the Project are expected to generate three main benefit streams:

- (i) Improved sustainability of priority fisheries management and governance.
- (ii) Increased added value captured by local stakeholders in fishery supply chains.
- (iii) Recovery and improvement of marine ecosystem services²⁰.

4. Under the first benefit stream, it is expected to (i) maximize the public revenues from the tuna national purse sein capacity allocations to foreign-owned purse seiners; (ii) strengthen MCS leading to an increase of tuna supply; and (iii) formalize small-scale fishers that wish to remain in the sector to ensure legality and support improved food

¹⁹ World Bank (2017), "The Sunken Billions Revisited: Progress and Challenges in Global Marine Fisheries", Environment and Development; Washington, DC: World Bank.

²⁰ Marine ecosystem services are produced by a healthy, well-functioning environment providing great benefit to local (coastal) communities. Examples of marine ecosystems include marshes, mangroves, reefs, among others. While they have significant economic importance, these habitats are the most heavily exploited ecosystems throughout the world. Source: Barbier, Edward (2017), "Marine ecosystem services", Current Biology 27 (11).



safety and quality, among others. The second benefit stream is expected to (i) increase key infrastructure investments for near-shore fishermen and targeted aquaculture infrastructure; and (ii) establish a traceability system adding value to fishing products; among others. It is expected that the third benefit stream will overcome the short-term socioeconomic losses resulting from efforts to restore the medium to long term coastal fishery asset base, while enhancing the provision of marine ecosystem goods and services. Some of these benefit streams lend themselves more readily to evaluation than others. The economic analysis focuses on the first and second benefit streams, which are to some extent easier to measure and value. The economic analysis did not consider the third benefit stream which is limited by a lack of clear consensus on the economic value of marine ecosystem services, and, more importantly, a lack of national or regional analysis relevant for Costa Rica.²¹

2. Justification for public funding

5. In addition to calling for a quantitative assessment of project-supported investments, the World Bank's economic analysis guidelines require an assessment of the public funding justification for all World Bank lending operations. Public funding is justified when important market failures are present, or when additional investment is needed to remedy a policy/government failure. In both cases, the intervention to be supported with public funding must address the relevant failure(s) in some convincing way.

6. Market failures clearly are present in each of the three main areas in which the Project will operate:

- i. Fisheries governance: Strengthening the capacity of institutions responsible for the governance of the fishery sector is clearly a public function. Given the potentially enormous payoffs to improved governance (for instance, by improving tuna fish governance, by reducing illegal fishing, and by establishing and enforcing health and quality standards), the justification for public funding is clear.
- ii. Marine capture fisheries: In most cases, wild fish stocks have the characteristics of common goods (rival and non-excludable). Because individual fishers, processors, and distributors have little incentive to safeguard the resource for the common good, use of public resources is justified to reduce over-exploitation, strengthen monitoring and control, and ensure enforcement and compliance with regulations.
- iii. Artisanal fisheries and fish farmers: Small scale fisheries suffer from a series of market failures stemming from lack of coordination among productive agents, information asymmetry, non-availability of working capital and high cost of credit, and limited infrastructure. Because individual fishermen, processors, and distributors have little incentive to invest in activities from which they themselves derive minimal benefit, use of public resources can enable access to financial resources to improve strategic infrastructure and optimize their processes, leading to increased value of fishery supply chains.

7. Therefore, use of public funding to address these market failures is justified from an efficiency standpoint, as

²¹ Schuchmann and Mahon (2015) reports that the economic valuation of marine ecosystem services in the Wider Caribbean Region have focused on a limited number of benefits derived from marine ecosystems, primarily those that are relatively easy to measure and convey, such as recreation opportunities in protected areas, and benefits that are ascribed to easily measured market indicators. However, the economic impacts of overfishing remain largely unexplored, as well as the regulating and maintenance services provided by marine ecosystems. Source: Peter W.Schuhmann and Robin Mahon (2015), "The valuation of marine ecosystem goods and services in the Caribbean: A literature review and framework for future valuation efforts", *Ecosystem Services* 11, Pages 56-66.



long as the activities to be supported are well designed and are cost-effective.

3. Baseline scenario

8. The baseline scenario for this Project would deliver some short-term benefits, but considerably less than the potential benefits derived from improved fisheries management and supply chains delivered through the Project; and net benefits would likely gradually erode. The current situation of local fisheries in Costa Rica is at a critical stage and the cost of inaction can be large in the medium and long term. Nearly 8 of the 10 priority fish species in the Gulf of Nicoya, one of the most important fishing regions in Costa Rica and Central America (particularly for small-scale fleet), are facing high rates of overexploitation while maximum sustainable yields were reached between 1964 and 1999, suggesting that overfishing has been a decades-long trend.

9. Thus, the baseline scenario would incur costs and losses due to (i) suboptimal public rent derived from current management arrangements for the exploitation of oceanic fisheries; (ii) a continuing trend in the overexploitation of coastal fisheries; and (iii) increased pressure on already overexploited marine habitats, ecosystem services and biodiversity. In the economic assessment, the baseline scenario includes the current situation for which there is data available and it is assumed constant throughout the project life (i.e., it does not include the continued negative trend from 'business-as-usual'), therefore leading to conservative estimates of project economic benefits.

4. Analytical approach used to measure project benefits

10. For the first two benefit streams considered, profitability measures were estimated highlighting the most important outcomes of the Project, data availability, and avoiding potential double counting. Table 4.1 summarizes the main benefits included in the analysis, the main beneficiaries, and the specific mechanism through which the Project will generate such benefits. The results for all specific benefits were then combined to derive overall measures of project worth.

Table 4.1: Summary of estimated project benefits

Benefit Stream	Estimated Benefit	Main Effect	Main Beneficiaries
Improved sustainability of priority fisheries management and governance	Increased public revenue from fishing capacity concessions in international waters	Higher prices	Gov. of Costa Rica
	Increased public revenue from licenses to purse seiners to fish in EEZ	Higher prices	Gov. of Costa Rica
	Increased volume of tuna landed from fishing capacity concessions	Higher quantity	Industrial fishing sector
	Increased volume of tuna landed by longline vessels due to improved MCS	Higher quantity	Industrial / Semi-Industrial fishing sector
	Increased fish value due to improvements on fishing regulation related to minimum size	Higher prices	Small-scale / Artisanal fishing sector
	Recovery of priority coastal fisheries	Higher quantity	Small-scale / Artisanal fishing sector
Increased added value captured by	Increased price received by fishermen due to infrastructure investments and traceability	Higher prices	Small-scale / Artisanal fishing sector



local stakeholders in fishery supply chains	Increased production by fish farmers due to infrastructure investments and value chain investments	Higher quantity	Small-scale fish farmers
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4.1. Improved sustainability of priority fisheries management and governance

4.1.1. Increased public revenue from licenses and fishing capacity concessions fees in tuna fisheries

11. Fisheries governance and management are limited or outdated in Costa Rica. Currently, the two main public revenue sources from fishing activities include: (i) licenses to tuna purse seiners, and (ii) tuna fishing capacity concessions in international waters. For the past 50 years, the main objective of Costa Rica's tuna policy has been to ensure continued supply of fish to the canning sector. Thus, landing at least some tuna in Costa Rican ports has been a condition of all licenses. In 1995 it was established that any tuna vessel had to pay a single license fee of US \$19 per metric ton registered²² representing just 1 percent of the value of catch²³. This was the minimum rate that was charged since 1990, but that became a single rate for all boats regardless of their size or capacity (Jimenez and Salazar, 2017)²⁴. Further, nearly 18 percent of total licenses per year are at zero cost due to additional benefits (Jimenez and Salazar, 2017), undermining further public resources for the country.

12. Meanwhile, fishing capacity concessions fees have been poorly managed. Costa Rica resigned to negotiate its quota in international markets, and for decades, it was distributed among the canning plants existing in the country (Jimenez and Salazar, 2017). In 2012, the capacity concession fee was established at US \$150 per m³/year, still very low considering the high demand from private firms for a capacity quota that would allow them to fish in the Eastern Pacific Ocean under the jurisdiction of the IATTC.

13. One of the major goals of this Project is to increase public revenue primarily due to fishery policy reforms and stronger institutional capacities. It is expected to increase both fees. License fees are expected to increase to US \$50,000 per license/year and the fishing capacity concession fees are expected to increase to US \$600 per m³/year²⁵, increasing public revenue from the current levels of US \$1.319 million per year (baseline) to US \$3.500 million per year (end of project), during project implementation. Assuming a linear growth rate, we estimate that every year public revenues will increase 18 percent during project life. After that, we assume revenues are constant.

4.1.2. Increased volume of tuna landed in Costa Rica

14. Activities to deter illegal fishing will inherently increase the volume of tuna landed in Costa Rica. While the size of illegal activities is inherently difficult to assess as catches are often not landed in Costa Rica, INCOPESCA estimates indicate that illegal fishing lies between 25 percent and 26 percent of all total catches, particularly for tuna.^{26,27} In

²² Or US\$54 per Moorsom ton (TNR).

²³ In 2015, tuna average price was US\$1,894 per metric ton.

²⁴ Jimenez, J.A. and E. Ross Salazar [Eds.] (2017), "La Pesquería de Atún en Costa Rica: Una oportunidad para el desarrollo", Fundación Mar Viva, San Jose, Costa Rica.

²⁵ Estimates based on INCOPESCA analysis. From expert opinions, this rate is very conservative. Market allocation via auctions, therefore, seems a good approach to sell the fishing concessions at true market value.

²⁶ Interview to Moises Mug, Head of INCOPESCA. The Tico Times (June 28, 2018). Link: <http://www.ticotimes.net/2018/06/28/a-conversation-with-new-fisheries-head-moises-mug> (retrieved on January 28, 2019).

²⁷ Other studies also suggest that fishing illegal activities in Costa Rica are high. Trujillo et al. (2015) estimated that, from 1950-2010,



response, the Project aims to increase the share of registered fleet monitored through a national Vessel Monitoring System from 5 percent to 85 percent.²⁸ It is expected that the Project will increase volume of tuna landed in Costa Rica from the fishing capacity concessions and from the longline national vessels from 10,000 to 22,500 metric tons per year. However, it is expected that not only will the quantity increase, but also the composition of tuna landed in Costa Rica as depicted in Table 4.2.

Table 4.2: Distribution of tuna landed, baseline and end-of-project estimates

Fishing Type	Current landed volume (metric ton / year)	Expected landed volume (metric ton / year)
Purse seine fleet through licenses	9,000	0
Purse seine fleet through national capacity quota in international waters	0	20,000
Longline national fleet	1,000	2,500
Total	10,000	22,500

15. The Project expects to increase the volume of tuna landed by the national longline fleet and to increase the landing and processing in the country of the tuna fishing purse seine fleet operating with Costa Rican carrying capacity. As tuna landings increase by Costa Rican tuna purse-seine vessels fishing in international waters, the supply of tuna caught by vessels that purchase licenses to fish in the EEZ would be reduced. This, in addition to reduced illegal fishing in Costa Rica's EEZ, is expected to allow tuna resources to become more available to the national longline fleet, and thus be able to surpass the current value of overall tuna landings in Costa Rica. In this section we simply incorporate the value of the tuna resource that goes into the Costa Rican economy at the average price of US \$1,894 per metric ton, according to Mar Viva (2018). We assume that landings increase by 20 percent per year starting in year 4 until it reaches 100 percent by the end of the Project.

4.1.3. Increased fish value due to improvements in fishing regulations related to minimum size

16. A third important objective of the Project is to ensure an effective transition towards a sustainable fisheries management regime. Currently, there are no minimum size regulations in place in Costa Rica (Flores et al., 2017²⁹; and Procuraduría, 2014³⁰). Instead, size selection is managed through gear restrictions. However, studies from Marín et al. (2013)³¹ show that during field biological monitoring, INCOPESCA encountered up to 95 percent of fishing boats with illegal mesh sizes. The lower market value for smaller sized fish requires fishers to extract more individuals to cover their costs. This creates a positive feedback loop between overexploitation and the expanding use of illegal mesh sizes.

reconstructed catches were 2.6 times the data supplied to FAO by Costa Rica. Source: Pablo Trujillo, Andrés M. Cisneros-Montemayor, Sarah Harper, Kyrstn Zyllich and Dirk Zeller (2015). Reconstruction of Costa Rica's marine fisheries catches, 1950-2010. The University of British Columbia

Working Paper Series Working Paper #2015 – 31.

²⁸ In order to avoid double counting, this benefit is not incorporated in this analysis.

²⁹ Flores, Diana; Wagner Quiros; Ignacia Rivera; Alex Smith (2017), "Quantifying the economic potential of small-scale fisheries in the Gulf of Nicoya, Costa Rica".

³⁰ Contraloría General de la Republica (2014), Informe No. DFOE-EC-IF-15-2014. "Auditoria de Carácter Especial Sobre la Gestión del INCOPESCA Vinculada al Cumplimiento de sus Funciones en Materia de Aprovechamiento y Uso Sostenible de los Recursos Marinos."

³¹ Marín, B., Araya, H., & Vásquez, A.R. (2013). Informe del resultado de la veda 2012, basado en encuesta aplicada a pescadores artesanales del Golfo de Nicoya. Documento Técnico No 14 del Departamento de Investigación Pesquera de INCOPESCA. Puntarenas, Costa Rica.



17. According to INCOPESCA, there are four categories of fishing quality considering the fish size, its maturity and the ideal weight for subsequent capture. Based on the General Comptroller of Costa Rica's evaluation (2014)³², 13.84 percent of the lowest category "chatarra" (species less than 450 or 400 grams) would have had greater weight and greater market value if species would have been allowed to reach maturity. In the case of category "clasificado", the second to lowest category (species between 800 grams and 1 Kg), 68.48 percent of catches would have had higher price. In the case of category "primera pequena" (species less than 2 kg. but higher than 1 kg.), 38.16 percent of catches would have had higher prices (see Table 4.3).

Table 4.3: Fish categories by commercial size

Commercial size categories	Price (col/kg) ^{1/}	% of higher quality ²
<i>Chatarra (<0.45 kg)</i>	459	13.84%
<i>Clasificado (0.8-1.0 Kg)</i>	1,013	68.48%
<i>Primera Pequeña (> 1 kg, < 2 kg)</i>	1,950	38.16%
<i>Primera Grande (> 2 kg)</i>	2,787	

1/ Source: INCOPESCA (2015). Average prices in colones per kg.

2/ Source: Contraloría General de la República (2014).

18. Considering the 2015 averages prices³³ per category, provided by INCOPESCA³⁴ (see also table 4.3) we are able to estimate the forgone income for fishers due to lower weight/size and, consequently, lower market price.³⁵ Taking into account the total number of small-scale fishermen in the country (nearly 4,000, according to INCOPESCA estimates), the yearly average income per fisher is nearly US \$2,122 and the average marginal benefit due to lower size is nearly US \$644 per fisher.³⁶ Given the assumption that the percentage of fish caught at lower weight increase its value to the next category and not to the highest category, we are implicitly valuing only the short-term benefits but not the long-term benefits which should reflected on the change from low categories to the highest value category.

4.1.4. Recovery of priority coastal fisheries

19. The Project is expected to develop fisheries management plans for five priority fisheries currently overexploited. A recent study of the corvina fishery in the upper part of the Gulf of Nicoya, estimated how biomass would respond to different management approaches (Flores and others, 2017). It found that all the approaches studied would result in substantial increases in biomass, with long-term closure resulting in the fastest recovery (from 500 mt to over 2,000 mt within 8 years). They further predict that biomass would collapse rapidly once long-term closure is lifted, as previous practices that result in overfishing would re-assert themselves. Although these estimates are for a specific fishery, they are consistent with results for other fisheries. We use them as a basis for estimating the

³² Contraloría General de la Republica (2014), Informe No. DFOE-EC-IF-15-2014. "Auditoria de Carácter Especial Sobre la Gestión del INCOPESCA Vinculada al Cumplimiento de sus Funciones en Materia de Aprovechamiento y Uso Sostenible de los Recursos Marinos."

³³ We assume an exchange rate of 574.7 colones per dollar, average exchange rate for 2018.

³⁴ Link: <https://www.incopesca.go.cr/publicaciones/estadisticas/historico/2015.html>.

³⁵ To be conservative, we assumed that the percentage caught at lower weight increase its value to the next category and not to the highest category (*primera grande*), except the *primera pequena*.

³⁶ Other important assumptions are described here. According to discussions with INCOPESCA personnel, average fishing days per year is approx. 144 (three times per week), average catch per day is 30 kg., and number of fishermen per boat is four. We also assumed a homogeneous distribution of catches per category (*chatarra*, *clasificado*, *primera pequena*), i.e., 33.3 percent each category.



effects of project activities on recovery fishery stocks.

20. Flores and others (2017) estimate that total biomass would increase fourfold, within 8 years with closure, and within about 12 years with alternative approaches. We assume, more conservatively, that biomass would only double within these time periods. Within these time periods, we assume stocks recover linearly. Current catch levels in the Gulf of Nicoya are about 2,500-3,000 m/yr. We assume that catch (once allowed) would increase in proportion to the increase in stocks, that is, it would double. We assume that without-project catch levels remain at 2,500 t/yr, and that with-project catch increases to 5,000 t/yr.

4.2. Increased sustainability of fishery supply chains

4.2.1. Increase price received by near-shore fishermen due to better infrastructure

21. As of now, most of the fish is landed in private infrastructure and, more importantly, little value is added to fish sold by small-scale fishermen to commercial intermediaries. From 2013 to 2016, total fish landings amounted to 13.2 million kg. of which only 0.6 million kg. landed in INCOPESCA infrastructure³⁷. This represents nearly 4 percent of the total – limiting vertical integration, food safety, and access to markets. Further, according to Mar Viva (2018)³⁸ and Ocean Outcomes (2018)³⁹, the price received by fishers represents only between 12–17 percent of the final consumer price. Under the Project, it is expected to increase the number of infrastructure (both landing sites and processing centers), strengthening fisheries value chains and increasing the ratio between the price received by fishers. There is limited evidence on the impact of these type of investments. The Millennium Challenge Corporation has estimated that the construction of fish landing sites and the equipment of ports with artisan fishery infrastructure increased artisanal fishers' income by 54 percent in the landing site⁴⁰. Here we assume a more conservative estimate and assumed that the price just increases by 10 percent at the end of the Project.

22. Considering there are nearly 4,000 small-scale fishermen⁴¹, considering the average price of *primera grande* in Table 4.3, and applying the fishermen price ratio mentioned above, we are able to estimate the total marginal benefit for this benefit stream on nearly US \$950 per fisher per year.

4.2.2. Increase price received by fish farmers due to better infrastructure

23. The Project aims to reach nearly 5,000 farmers and provide agricultural assets or services. According to INCOPESCA, national aquaculture production by species in 2018 was 80 percent tilapia (16,667 t), 13 percent marine shrimp (2,689 t), 4 percent rainbow trout (827 t), and 3 percent snapper (600 t). About 76 percent of total tilapia production corresponds to production by *Acuacorporación Internacional S.A.* in Guanacaste Province.⁴² Small scale fish farmers are inefficient, due to a lack formality, use of outdated technology, inability to capture economies of scale, and other factors. Due to better infrastructure and management applied to small-scale tilapia farmers (24 percent of

³⁷ See the Project's pre-feasibility study finalized by INCOPESCA in November 2019.

³⁸ Mar Viva (2018), "Análisis Socioeconómico de las comunidades de pesca a pequeña escala", Fundación Mar Viva y Escuela de Economía de la Universidad Nacional de Costa Rica.

³⁹ Ocean Outcomes (2018), "Gulf of Nicoya Small-Scale Fisheries Supply Chain Analysis", Prepared for: Conservation International Costa Rica.

⁴⁰ Millennium Challenge Corporation (2016). "Measuring Results of the Small-Scale Fisheries Project in Morocco". Summary of Findings. Link: <https://www.mcc.gov/resources/doc/summary-measuring-results-of-the-small-scale-fisheries-project-in-morocco>

⁴¹ Based on discussion with INCOPESCA personnel.

⁴² Aquaculture in Costa Rica. <https://www.was.org/articles/Aquaculture-in-Costa-Rica.aspx#.Xdzyq1dKiUk>



the market), we assume that production will increase 5 percent, which, according to fisheries specialists, are entirely achievable. Assuming a tilapia average price of US\$3.5 per kg.,⁴³ we can estimate the total marginal benefit for this benefit stream.

5. Study limitations & other considerations

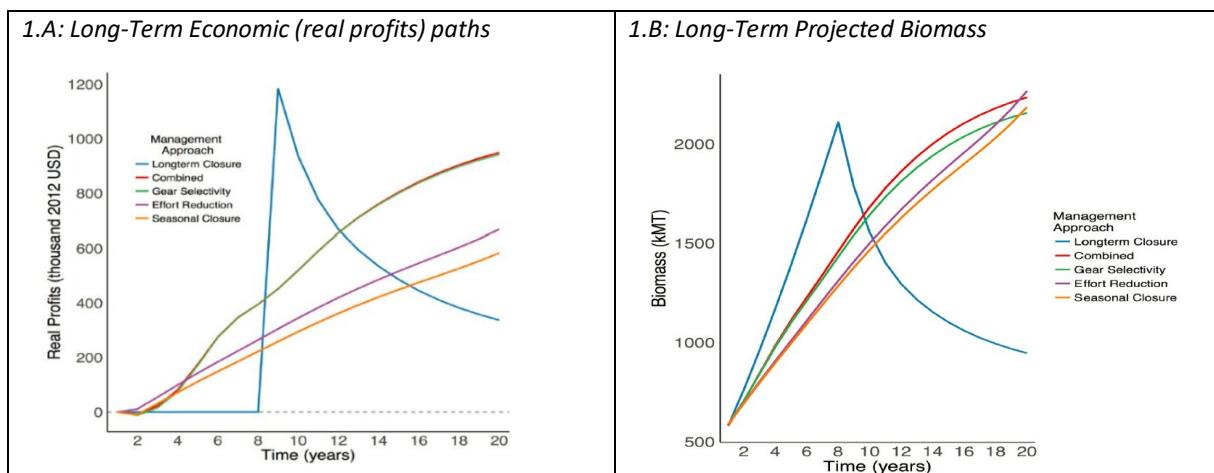
24. The economic analysis has two important limitations. It does not incorporate the negative impacts of fisheries management approaches, and the reduction of illegal shark fishing – an important fishing activity in the country.

5.1. Fishing effort, social programs, and labor markets

25. As mentioned in section 3 of this annex, the business-as-usual scenario is problematic: high levels of overfishing and degradation of marine resources are expected to continue. Component 3 of the Project aims to restore coastal fisheries assets base by limiting fishing effort. While specific management approaches have not been selected yet –as they will depend on a prior understanding of the status for each specific fishery, potential options include (i) long-term recovery closure; (ii) seasonal closure; (iii) effort control; and (iv) size selectivity, among others. Long-term closure allows to recover fisheries stock at a faster rate than the other options.

26. As an example, based on a recent study on corvina fishery in the upper part of the Gulf of Nicoya by Flores et al. (2017)⁴⁴, long-term closure will recover the value of the resource (and real profits) right after the closure (year 8), while seasonal closure and effort control increase resource value over time but at a lower rate than the full closure. However, it is important to consider that management scenarios increase biomass following similar improvement trends with exception of the long-term closure (see Figure 4.1).

Figure 4.1: Impacts of Fishery Management Approaches



Source: Flores et al. (2017)

⁴³ Prices extracted from the following references. See https://web.wpi.edu/Pubs/E-project/Available/E-project-121410-115309/unrestricted/Analysis_of_the_Aquaculture_Market_in_the_Costa_Rican_Metropolitan_Area.pdf (Table 11) and <http://reventazon.meic.go.cr/informacion/estudios/2016/pescado.pdf> (Table 9).

⁴⁴ Diana Flores, Wagner Quirós, Ignacia Rivera, Alexandra Smith (2017). "Quantifying the economic potential of small-scale fisheries through better management in the Gulf of Nicoya, Costa Rica". University of California Santa Barbara Report.



27. All these fishery management options affect the short-term income of local fishers. Thus, alternative livelihood/employment/social protection projects are expected to be implemented to mitigate the negative impacts of fisheries management approaches. For instance, the Project will implement a comprehensive package of support to vulnerable families for overcoming potential adjustment rigidities associated with the economic and social implications of the transition to sustainable fisheries management. The net effect of the Project on overall employment and income levels for fishers however is difficult to estimate, although usually the effects of such social support programs go beyond improvements in employment rates and income, including human capital and overall well-being which is harder to measure. The Project aims to carry out detailed labor market diagnostics to identify employment opportunities and will finance a targeted training program.

5.2. Sustainability of shark fishing

28. Costa Rica has long been one of the leading shark fin exporters. According to the Government, in 2011, 350,000 to 400,000 sharks were killed for their fins in Costa Rican waters. In 2012, Costa Rica closed a number of loopholes that allowed foreign fishing boats to circumvent the ban on finning in its waters (Shark Research Institute, n.a.).⁴⁵ Despite closing this loophole in its current law, other private interests at play have limited significant reductions in the number of sharks killed.

29. As described above, the Project it is expected to make tuna fishing activities more profitable, promoting a shift from a shark-directed fishery to one targeting tunas for high-value export markets. Increasing shark populations should have important economic effects due to higher ecotourism, both in terms of expenditure as well as employment. Based on Cisneros-Montemayor et al. (2013)⁴⁶, expenditure in Costa Rica due to shark watching is nearly US\$ 6 million per year and this could increase substantially due to a higher population. Given the complexity of shark fishing activities, its potential reduction and impacts, it is not included in the economic analysis.

6. Results

30. Finally, the economic analysis considers a time horizon of 10 years, to take into account the long-term benefits of the Project. The analysis uses a baseline discount rate of 6 percent, as suggested by the World Bank⁴⁷, and assumes annual maintenance cost of 1 percent (nearly US\$ 340,000) of the investments to be carried out under component 2 – the component where processing centers and landing sites will be constructed. Further, we assume that benefits start realizing after year 3 of the Project (except for public revenues that start in year 2), under the assumption that investments and policies will require some time to be implemented and to be effective, as well as involved private agents to adapt to these changes.

31. The ex-ante economic analysis suggests that project-supported investments will generate substantial benefits for beneficiaries in areas served by the Project, as well as substantial benefits for Costa Rica's society as a whole. Overall, the US\$ 82.1 million investment, is projected to reach a Net Present Value (NPV) of US\$ 28 million (using a 6 percent discount rate). The investments evaluated for the economic analysis will generate an IRR of 19 percent and the Benefit/Cost (B/C) ratio is 1.4. The economic analysis thus shows that if project implementation is effective and efficient, project-supported investments will bring substantial economic benefits to the beneficiaries.

⁴⁵Loophole in Costa Rica's Shark Fin Law. Link: <https://www.sharks.org/blogs/ocean-log/update-costa-rica> (retrieved January 28, 2019).

⁴⁶Andres Cisneros-Montemayor, Michele Barnes-Mauthe, Dalal Al-Abdulrazzak, Estrella Navarro-Holm, and Rashid Sumaila (2013), "Global economic value of shark ecotourism: implications for conservation", Fauna & Flora International, Oryx.

⁴⁷World Bank, "Technical Note on Discounting Costs and Benefits in Economic Analysis of World Bank Projects".



32. Results are robust to adverse changes in the key parameters (see Table 4.4). Increasing project costs by 10 percent, reducing project benefits by 10 percent, and varying the default discount factor by 2 percentage units (i.e., 4 percent and 8 percent) do not change our conclusions. Increasing project costs and decreasing project benefits by 10 percent reduces IRR by 4 percentage points to 15 percent, and the B/C ratio reduces from 1.4 to 1.3. These two scenarios are the most conservative compared to the scenario of increase in discount rate to 8 percent.

Table 4.4: Sensitivity Analysis: changes in key parameters

Sensibility Analysis	Change	NPV (million US\$)	IRR	B/C Ratio
Baseline	6%	28	19%	1.4
Decrease in discount rate	4%	37	19%	1.5
Increase in discount rate	8%	21	19%	1.4
Increase in project costs	10%	22	15%	1.3
Decrease in project benefits	10%	19	15%	1.3