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March 29, 2019

<p>Closing Date: Wednesday, April 17, 2019 at 6:00 p.m.</p>
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FROM: Vice President and Corporate Secretary

Tonga - Pathway to Sustainable Oceans Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed grant to Tonga for a Pathway to Sustainable Oceans Project (IDA/R2019-0070), which is being processed on an absence-of-objection basis.

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Report No: PAD2807

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 7.2 MILLION (EQUIVALENT TO US\$ 10 MILLION)

TO THE

KINGDOM OF TONGA

FOR A

PATHWAY TO SUSTAINABLE OCEANS PROJECT

March 27, 2019

Environment & Natural Resources Global Practice
East Asia And Pacific Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective Feb 28, 2019)

Currency Unit = Tonga Pa'anga

TOP\$ 2.26 = US\$1

US\$1.39798 = SDR 1

FISCAL YEAR

July 1 – June 30

Regional Vice President: Victoria Kwakwa

Country Director: Michel Kerf

Senior Global Practice Director: Karin Erika Kemper

Practice Manager: Ann Jeannette Glauber

Task Team Leader(s): Cary Anne Cadman



ABBREVIATIONS AND ACRONYMS

ACIAR	Australian Centre for International Agricultural Research
ADB	Asian Development Bank
CEO	Chief Executive Officer
CGAP	Consolidated Gender Action Plan
CSU	Central Services Unit
DA	Designated Account
DLI	Disbursement Linked Indicator
DPWG	Development Partner Working Group
EEZ	Exclusive Economic Zone
ESMF	Environmental and Social Management Framework
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organization
FFA	Pacific Islands Forum Fisheries Agency
FM	Financial Management
GDP	Gross Domestic Product
GoT	Government of Tonga
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Services
IDA	International Development Association
IPF	Investment Project Financing
IPSAS	International Public-Sector Accounting Statement
IRR	Internal Rate of Return
IUFR	Interim Unaudited Financial Report
IUU	Illegal, Unreported and Unregulated Fishing
LFPR	Labor Force Participation Rate
M&E	Monitoring and Evaluation
MCS	Monitoring, Control and Surveillance
MF	Ministry of Finance
MOF	Ministry of Fisheries
MT	metric ton
NGO	Non-Governmental Organization
NPOA	National Plan of Action
NPV	Net Present Value
OCS	Operational Compliance Strategy
PDO	Project Development Objective
PIC	Pacific Island Country
PMU	Project Management Unit
PNA	Parties of the Nauru Agreement

POM	Project Operation Manual
PPA	Programmatic Preparation Advance
PPP	Purchasing Power Parity
PPSD	Project Procurement Strategy for Development
ProcFish	Inshore Fisheries Development Programme
PROP	Pacific Islands Regional Oceanscape Program
PSC	Project Steering Committee
PSMA	Port States Measures Agreement
SEP	Stakeholder Engagement Plan
SMA	Special Management Area
SOP	Series of Projects
SPC	Secretariat of the Pacific Community
STEP	Systematic Tracking of Exchanges in Procurement
TFSP	Tonga Fisheries Sector Plan
TKA	Tokelau Arrangement
TOP	Tonga Pa'anga
UNCLOS	United Nations Convention on the Law of the Sea
US\$	United States Dollar
WA	Withdrawal Application
WB	World Bank
WCPFC	Western and Central Pacific Fisheries Commission



BASIC INFORMATION

Country(ies)	Project Name	
Tonga	Tonga: Pathway to Sustainable Oceans	
Project ID	Financing Instrument	Environmental Assessment Category
P164941	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 checked="" type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
17-Apr-2019	30-Apr-2025

Bank/IFC Collaboration
No

Proposed Development Objective(s)

To improve management of selected fisheries and aquaculture in the Recipient's territory.

Components

Component Name	Cost (US\$, millions)
Strengthening Fisheries Governance	2.11



Strengthening the Knowledge Base for Fisheries and Aquaculture	4.55
Investing in Sustainable Fisheries Management and Development	1.72
Supporting Effective Project Management	1.62

Organizations

Borrower: Kingdom of Tonga
 Implementing Agency: Ministry of Fisheries

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	10.00
Total Financing	10.00
of which IBRD/IDA	10.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	10.00
IDA Grant	10.00

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
National PBA	0.00	4.35	0.00	4.35
Regional	0.00	5.65	0.00	5.65
Total	0.00	10.00	0.00	10.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024	2025	2026
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Annual	0.01	0.45	0.63	0.94	1.53	2.45	2.86	1.14
Cumulative	0.01	0.46	1.09	2.02	3.55	6.00	8.86	10.00

INSTITUTIONAL DATA

Practice Area (Lead)

Contributing Practice Areas

Environment & Natural Resources

Climate Change and Disaster Screening

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

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category

Rating

1. Political and Governance

● Moderate

2. Macroeconomic

● Moderate

3. Sector Strategies and Policies

● Moderate

4. Technical Design of Project or Program

● Moderate

5. Institutional Capacity for Implementation and Sustainability

● High

6. Fiduciary

● Substantial

7. Environment and Social

● Moderate



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 Financing Agreement

Project Steering Committee



The Recipient shall maintain, until the Closing Date, the Project Steering Committee, with a mandate, composition and resources satisfactory to the Association, which shall be responsible for, inter alia, providing general oversight and policy direction of the Project. To this end, the Recipient shall ensure that the Project Steering Committee shall be chaired by its Minister responsible for finance, and comprised of, inter alia, the Deputy Prime Minister (or his or her designee), the Minister responsible for fisheries (or his or her designee), other relevant ministers as required, and representatives of relevant stakeholders, including the Central Services Unit.

Sections and Description

Section I.A.2 of Schedule 2 to the Financing Agreement

Technical Working Group

The Recipient shall provide technical advice and recommendations to the Project Steering Committee through the Technical Working Group. To this end, the Recipient shall maintain until the Closing Date, the Technical Working Group, chaired by the Minister responsible for fisheries (or such other person which the Association has confirmed in writing to the Recipient as acceptable to the Association), and comprised of the Chief Executive Officer for the Ministry of Fisheries (or his or her designee) who shall act as the deputy chairperson, representatives of relevant stakeholders including the Central Services Unit, and the Project coordinator, and with an institutional framework, functions, and resources satisfactory to the Association as shall be required for the Project.

Sections and Description

Section I.A.3 of Schedule 2 to the Financing Agreement

Central Services Unit

The Recipient shall maintain, until the Closing Date, or other such date which the Associate has confirmed in writing to the Recipient as acceptable to the Association, its Central Services Unit within the Ministry of Finance, with a mandate, composition and resources satisfactory to the Association, which shall be responsible for, inter alia, supporting the Project Management Unit on safeguards and fiduciary aspects of Project implementation, monitoring and evaluation, and preparing Project Reports.

Sections and Description

Section I.A.4 of Schedule 2 to the Financing Agreement



Project Management Unit

The Recipient shall, by not later than two (2) months after the Effective Date (or such other date which the Association has confirmed in writing to the Recipient is reasonable and acceptable under the circumstances, as determined by the Association in its sole discretion) and thereafter maintain, until the Closing Date, a Project Management Unit within the Ministry of Fisheries, with a mandate, composition and resources satisfactory to the Association, which shall be responsible for, inter alia, carrying out day-to-day implementation of the Project, with support from the Central Services Unit.

Sections and Description

Section I.B.1 of Schedule 2 to the Financing Agreement

The Recipient shall, by not later than two (2) months after the Effective Date (or such other date which the Association has confirmed in writing to the Recipient is reasonable and acceptable under the circumstances, as determined by the Association in its sole discretion) prepare and furnish to the Association for its review and no-objection, and subsequently adopt, a Project operations manual.

Sections and Description

Section II.1 of Schedule 2 to the Financing Agreement

The Recipient shall furnish to the Association each Project Report not later than forty-five (45) days after the end of each calendar quarter, covering the calendar quarter.

Sections and Description

Section I.B.2 of Schedule 2 to the Financing Agreement

The Recipient shall thereafter ensure that the Project is carried out in accordance with the Project Operations Manual, and except as the Association may otherwise agree in writing, the Recipient shall not amend or waive, or permit to be amended or waived, any provision of the Project Operations Manual.

Sections and Description

Sections I.C.1 and I.C2 of Schedule 2 to the Financing Agreement



Annual Work Plans and Budgets

The Recipient shall prepare and furnish to the Association, by not later than February 1 of each subsequent year during the implementation of the Project (or such other interval or date as the Association may agree), for the Association's review and no-objection, an annual work plan and budget (once the Association has provided its no-objection, an "Annual Work Plan and Budget"), and shall ensure that the Project is implemented in accordance with the Annual Work Plans and Budgets accepted by the Association for the Recipient's respective fiscal year; provided, however, that in the event of any conflict between the Annual Work Plans and Budgets and the provisions of the Financing Agreement, the provisions of the Financing Agreement shall prevail.

Sections and Description

Section II.2 of Schedule 2 to the Financing Agreement

The Recipient shall carry out, jointly with the Association, not later than three (3) years after the Effective Date, or such other period as may be agreed with the Association, a mid-term review of the Project.

Sections and Description

Section I.D of Schedule 2 to the Financing Agreement

The Recipient shall 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.D.5 of Schedule 2 to the Financing Agreement

The Recipient shall ensure that:

- (a) all monitoring, control and surveillance activities carried out by the Recipient shall be under the control of a civilian fisheries officer or another civilian agency of the Recipient acceptable to the Association, and shall be carried out under terms of reference limited to fisheries surveillance;
- (b) in accordance with Section 5.06 of the General Conditions, all goods, works, services, and Operating Costs for fisheries monitoring, control and surveillance activities financed out of the proceeds of the Financing are used exclusively for the purposes of the Project, and not for any military purpose, or for any criminal investigation, prosecution or proceedings, or for any other purposes unrelated to the objectives of the Project, noting that the



Ministry of Fisheries may conduct fisheries-priority joint missions in conjunction with other agencies of the Recipient's Government for the joint purpose of enforcing the Recipient's laws regarding border security, and human, drug and wildlife trafficking, in accordance with the provisions of this Section I.D.5 to Schedule 2 of this Agreement;

(c) each surveillance mission carried out by the Recipient shall be governed by detailed protocols prepared in accordance with terms of reference satisfactory to the Association, providing, inter alia, that: (i) the mission is a fisheries-priority mission and the mission task is duly recorded and documented prior and subsequent to the mission; (ii) memoranda of understanding in a form and substance acceptable to the Association are concluded between the agencies involved in the surveillance operations, including both government agencies and any civilian contractors involved; (iii) the accounts of the entities receiving or benefiting from the Financing for such mission are maintained in a manner enabling effective compliance with the provisions of this Section I.D.5 of Schedule 2 to this Agreement; (iv) the mission is conducted by personnel who have been properly trained in the operation of any equipment used in the surveillance mission; (v) the mission is under the control of an authorized fisheries officer, but subject to the overarching authority of the master of the vessel, in particular with respect to safety and emergency response; and (vi) where a fisheries priority mission is re-tasked for non-fisheries activities, the authorized fisheries officer on board shall record the change and the duration of the change and the responsible agency for the non-fisheries task shall maintain a record of such changes and accounts in a manner acceptable to the Association demonstrating that the resourcing of the non-fisheries task is independent from the Financing, and provide access to the Association or its representatives for audit in accordance with auditing rules acceptable to the Association;

(d) where a patrol or surveillance mission has multiple tasks: (i) accounts are maintained in a manner acceptable to the Association which demonstrate that the Financing has been used for the exclusive purpose of financing fisheries surveillance activities; and (ii) that the Association is granted access to such accounts;

(e) the Recipient shall take all actions needed on its part to ensure that by no later than June 30, 2022, the provisions of Article 73 of the United Nations Convention on the Law of the Sea are incorporated in its fisheries laws and regulations in a form and substance acceptable to the Association, which ensure that: (i) vessels and their crew arrested in the Recipient's exclusive economic zone shall be promptly released upon the posting a reasonable bond or other security; (ii) penalties imposed by the Recipient for violations of fisheries laws and regulations in the Recipient's exclusive economic zone may not include imprisonment, in the absence of agreements to the contrary by the states concerned, or any other form of corporal punishment; and (iii) in cases of arrest or detention of foreign vessels, the Recipient shall promptly notify the flag state, through appropriate channels, of the action taken and of any penalties subsequently imposed.

Conditions



Type	Description
Disbursement	<p>Section III.B.1(b) of Schedule 2 to the Financing Agreement</p> <p>No withdrawals shall be made for payments under Category (2) unless and until the Association is satisfied that the Recipient’s fisheries laws and regulations are consistent with the provisions of Article 73 of the United Nations Convention on the Law of the Sea.</p>



TONGA: PATHWAY TO SUSTAINABLE OCEANS

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I. STRATEGIC CONTEXT

A. Country Context

1. **The Kingdom of Tonga is an archipelagic nation in the southern Pacific Ocean distinguished by its diminutive land area and vulnerability to natural disasters.** With an Exclusive Economic Zone of 700,000 km², Tonga's land comprises only 0.001% of its territory. Despite the paucity of land, the 177 islands offer a varied topography of limestone mountains, low-lying coral atolls, and volcanos (active and dormant) resulting from the adjacent Tongan Trench subduction zone. These geographic features result in Tonga possessing the world's second highest natural disaster vulnerability ranking with significant exposure to cyclones, floods and storm surges, earthquakes, volcanic eruptions, tsunamis, and droughts. Climate change may further exacerbate many of these vulnerabilities with increasing average temperatures, inshore erosion, and intensity of tropical cyclones. Over the past 20 years, Tonga has experienced 15 major natural disasters with Cyclone Gita in February 2018 being the most recent cyclone causing TOP\$356 million in damages and losses, equivalent to 38% of the 2018 GDP. In any given year, it is likely that Tonga is either hit by a major natural disaster or recovering from a prior one.

2. **The last decade has seen rapid governance changes that have led to strengthened institutions and positive development outcomes.** Governed as an absolute monarchy from 1845 to 2010, Tonga has transitioned to a constitutional monarchy with a legislative assembly. The first democratic elections, following the political reform in 2010, saw an increase in the peoples' representative from nine to 17 with the nobles' representatives remaining at nine. The World Bank Group's Country Policy and Institutional Assessment found that Tonga's institutions and policies have improved rapidly owing to concerted government effort over the past 10 years and were conducive to development in most areas, although institutional impediments to women's economic participation remain. Other weaknesses identified were related to the fact that small countries such as Tonga generally have limited capacity to maintain the level of public services and governance needed for a developing nation state.

3. **Tonga's economic growth continues to be hindered by innately high cost structures and exposure to external shocks, common to many small and remote Pacific Island Countries (PICs).** With a population of 108,000 (2017-WB estimates) and Gross Domestic Product (GDP) per capita of US\$5,425 (Purchasing Power Parity, WB estimates), GDP per capita growth over the last twenty years has averaged 1.2%, but with inflation considered, there has been virtually no real GDP growth per capita. Smallness means cost advantages from economies of scale and/or agglomeration are unavailable, weakening competitiveness of exports. Tonga's economic remoteness is exceptional; it has the largest distance to markets of any country in the world (when weighted by size of market). A high dependence on imports and insufficient size for meaningful diversification make Tonga highly vulnerable to external economic shocks (in addition to natural disasters). These factors combine to make growth elusive.

4. **Economic hardship and unemployment, particularly amongst youth, is widespread across Tonga. There are 36 inhabited islands, but 74% of Tongans live on the main island of Tongatapu of which 47% live in greater Nuku'alofa, the capital.** Extreme poverty across Tonga is negligible (3% in 2016), but "hardship" or lack of cash



for basic goods, is widespread. The Basic Needs Poverty Line, which is a summation of the food and non-food poverty lines, estimates a poverty rate of 35%. Across all poverty and hardship indicators, rural populations are at a disadvantage. Furthermore, 24% of Tongans are 24 years old or younger and face poor labor prospects. Only 65% of male and 35% of female youth (aged 15-24) participate in the labor market. Although Tonga's exceptional dependence on remittance inflows and foreign aid have been a critical driver of increased living standards, remittances have also inflated wage rates for Tonga's willingness to work.¹ Combined with weak demand for domestic labor, outmigration (seasonal or permanent) will likely continue to be the primary opportunity for a large portion of the population. However, Tonga also needs to fully exploit other economic opportunities where it could be competitive: tourism, knowledge services and fisheries.

B. Sectoral and Institutional Context

5. **All of Tonga's fisheries sector activities are conducted in accordance with agreed regional approaches to fisheries management.** Whilst the level of interconnectivity within and between Central Pacific marine ecosystems is not yet fully understood, it is known that migratory pelagic species (e.g., tuna) move extensively between Central Pacific states. The homogenous nature of PIC fish populations at the species level also suggests connectivity for most species of importance to inshore fisheries. Management of Tonga's tuna longline, deepwater snapper and inshore commercial fisheries affects neighboring PICs' fisheries.² Effective management of these stocks in Tonga will therefore contribute to the sustainability of regional stocks. In accordance with Tonga's international agreements and commitments (detailed in Annex 5), the Project will provide targeted support for improved fisheries management across selected priority fisheries, utilizing improved scientific methods to ensure the long-term sustainable use of offshore and inshore fish stocks.

6. **The need to sustainably manage Tonga's marine wealth has been enshrined in its legal and regulatory frameworks, including the Tongan Constitution, but implementation remains to be strengthened.** The legal instruments for management and development of Tonga's fisheries are the Fisheries Management Act (2002) and Aquaculture Management Act (2003). The critical importance of robust fisheries management in Tonga was demonstrated by establishment of the Ministry of Fisheries (MOF) as a stand-alone ministry in July 2016. Tonga's MOF is mandated to control, manage, and develop the country's fisheries sector, including aquaculture. Although this is a positive step, it also means that MOF is still in the process of establishing adequate staffing levels (approximately 60 staff as of November 2018) to successfully deliver on its mandate. Tonga has developed a range of fishery-specific management plans (e.g., aquarium fish, tuna, deepwater snapper and sea cucumbers) that form an important cornerstone of the regulatory framework. All plans are based on agreed regional approaches supported by regional agencies such as the Pacific Islands Forum Fisheries Agency (FFA) and the Secretariat of the Pacific Community (SPC). However, implementation remains compromised by a lack of measurable targets, financing plans, and monitoring; all gaps this Project will address.

7. **The Tonga Fisheries Sector Plan³ (TFSP) for 2016 - 2024 presents the strategic direction and guides**

¹ Tonga has one of the highest remittances flows in the world relative to the country's GDP (26%). Also, development assistance grants financed 33% of government expenditure in FY2014.

² The terms fishery and fisheries are used in different forms with respect to the nomenclature of specific legislation.

³ Developed with support from the World Bank and the International Fund for Agriculture Development.



investment planning for Tonga’s priority fisheries. The TFSP has strong Government ownership and was approved by Cabinet in 2017. It is a tool to organize, coordinate and implement priority fisheries activities within Tonga’s Strategic Development Framework. The TFSP provides a consensus vision for the future of the fisheries sector and a process for realizing that future. It provides a set of objectives consistent with national policies and plans, a prioritization of activities with steps and milestones and a description of the resources required to implement the plan.

8. **The Tongan fisheries sector is one of the potential avenues for economic growth and increased household resilience.** Although prone to large annual fluctuations, from 2005 to 2014 fisheries contributed approximately 3% annually to the overall economy. Total annual fisheries volume (of all types) is estimated at 10,155 metric tons (mt) valued at approximately US\$30.7 million. Fisheries products are one of Tonga’s largest exports, with exports in 2013 and 2014 accounting US\$3.0 million and US\$5.5 million (equaling approximately 31% to 44% of total exports). Overall commercial fisheries jobs represent a modest 2% of national employment, however like other PICs, subsistence fishing is critical for large portions of the population. SPC’s Inshore Fisheries Development Programme (ProcFish, 2009) surveyed four Tongan rural communities and found that, on average, 82.8% of all households were involved in reef fisheries and fisheries were the most important source of income for 39% of households (as high as 70% for an outer island community). Fisheries, marine biodiversity, and coral reefs are also intimately connected with the growing tourism industry, estimated at 7.7% of annual GDP and a significant source of jobs.⁴

9. **While Tongan women have traditionally held high status in local culture, legislative, economic and social changes over the years have entrenched exclusion of women from certain realms, including aspects of the fisheries sector.** While cultural norms and historical experience have contributed to voice and agency of Tongan women being at higher levels than other Pacific countries, in general, the proportion of women in formal governance roles remains low.⁵ And, although participation of women in the labor force has increased over the past two decades, in 2017, the Labor Force Participation Rate (LFPR) for men in Tonga was 74.2% while for women LFPR was 45.2%.⁶ Women’s harvesting and fishing is often not counted in official statistics, but available data show that in 2013, women comprised 41% of those employed in the fisheries sector, but only 4% of the skilled agricultural and fishery workers.⁷

10. **Further details on Tonga’s fisheries sector are presented herein according to four functional subdivisions: a) community subsistence, b) inshore commercial, c) offshore commercial, and d) aquaculture.**

a) **Community subsistence.** Community subsistence fisheries provide livelihoods for most Tongan fisherfolk and are a vital source of protein for local consumption. Community fisheries are characterized by utilization of basic fishing gear (such as lines, hooks, nets, spears and small boats) predominately along reefs and lagoons for subsistence needs. There are a wide range of species captured, including

⁴ Tongan Ministry of Commerce, Tourism, and Labor (2014)

⁵ Following the 2016 elections there were only 2 local government officers, 1 female district officer and one female town officer and 354 males occupying these positions for example⁵

⁶ UNDP (2018) Human Development Indicators and Indices 2018 Statistical Update.

⁷ Tonga National Marine Ecosystem Service Valuation, SPREP/IUCN/GiZ (2015)



herbivorous finfish (e.g., parrotfish, rabbitfish, and surgeonfish), clams, crabs, octopus, and sea cucumbers. Although precise data on community fisheries' total catch are lacking, best estimates indicate that harvesting is on the order of 3,000 mt annually worth US\$ 8.26 million. The TFSP states that in some areas of the country women fishers account for over 75% of invertebrate harvests.⁸ Tongans consume significantly more fish per capita than the global average of 16 kg/person/year (average fish consumption across four Tongan study sites was 68.6 kg/person/year of finfish and 11.6 kg/person/year of invertebrates).⁹

b) **Inshore commercial**

- i. **Inshore commercial fisheries have the potential to produce a wide variety of popular seafood items, but some important fish populations are already over-exploited.** Inshore commercial fisheries are defined as fishing along inshore environments with the primary motive to sell the catch. An open access fisheries management regime coupled with an increasing human population, improved fishing gear, and destructive fishing practices have resulted in most reef and lagoon fisheries being moderately to seriously over-exploited. Over 800 inshore commercial fishers are estimated to be operating in Tonga, producing around 3,900 mt of fish destined for local markets, and small amounts for export of aquarium fish and coral and sea cucumber (bêche-de-mer). While in total, this annual harvest is estimated to be worth around US\$14.8 million to the commercial fishers, the commercialization of certain species has led to over-exploitation. For example, mullet was one of the most important commercial fish in the 1970 but is now virtually extinct on Tongatapu. Sea cucumber exports peaked in 2009 at US\$2 million, before experiencing a population crash in 2010. Despite a lucrative international market, exports have only recovered to less than US\$400,000.
- ii. **Tonga's main tools to protect inshore fisheries are regulatory provisions, Special Management Areas (SMAs) and the forthcoming inshore commercial fishery management plan.** Under the Fisheries Management Act (2002), coastal communities can establish SMAs to control fishing activities and create resource management rights for areas adjacent to their village. An SMA grants management control to a community of its inshore resources. Key features of SMAs include: (i) only registered persons and fishing vessels are authorized to fish in an SMA; (ii) no harvesting of any marine organisms for the aquarium industry (e.g. coral, small invertebrates, fish); (iii) no-take zones; and, (iv) prohibition of destructive fishing methods. SMAs are run by local committees, and there is considerable enthusiasm and support amongst government and coastal communities for the program. The Government's goal is to implement SMAs for all 110 coastal communities by 2025 (ref Annex 7 for further details on the SMA Program).
- iii. **While SMAs are sound in principle, there is a need for strengthening the model and enhancing institutional capacity to achieve improved inshore fisheries outcomes.** A 2017 Food and Agriculture

⁸ One study in 2002 of villages in Ha'apai and Vava'u found women did 72% to 92% of gleaning fish from reefs and in Ha'apai 50% of women also fin fished. 80% of women in more urbanized areas gleaned, mostly for shellfish, and significant numbers in some villages used cast nets and spears to fish. Participation of children, boys and girls, was also high with 0% of boys and 4% of girls reporting they "never" fished.

⁹ Pacific Regional Oceanic and Inshore Fisheries Development Programme, Secretariat of the Pacific (2009)



Organization (FAO) review of the SMA program found that interest in adopting the SMA model had far exceeded resources available for management, and the effectiveness of SMAs had suffered as a result. In some cases, SMA fishing rules were inadequate for recovering fish populations and in other cases, enforcement was insufficient, as a result, illegal fishing continued. Although all SMA management plans include regular monitoring by MOF, available resources are insufficient to support the required level of monitoring and enforcement. This Project is designed to address these critical gaps.

- c) **Offshore commercial fisheries.** Offshore commercial fisheries are characterized by sophisticated fishing fleets that dominate Tonga’s fish product exports and are generally considered to be sustainably managed. Offshore fishing has only been sustained for two groups of species: tuna and deepwater snapper. Tonga’s major target species are South Pacific albacore, yellowfin and bigeye tuna. Due to its southern latitude, Tongan offshore waters naturally contain reduced abundance of yellowfin and bigeye tuna, with very few skipjack present. Tonga does not have a purse seine fishing industry. However, the South Pacific albacore tuna fishery provides government revenue through license fees of US\$500,000 annually as well as supports 45 Tongan jobs at landing sites and processing facilities.¹⁰ Tonga’s tuna fishery catch rates are more variable than those of other Pacific countries. Catch rates vary significantly between years due to fish migration - not overfishing. In 2014, there were four domestic and five foreign longline vessels that caught US\$3.4 million and US\$4.2 million worth of tuna (including by-catch), respectively. However, no advanced processing facilities exist in Tonga, so the value-added benefit for Tonga is limited. For deepwater snapper, the fishery management plan allows up to 30 licenses to be issued for domestic deepwater snapper vessels; this fishery contributes around US\$600,000 of foreign earnings to the Tongan economy through export sales. Further details on both priority fisheries are described below:
- i. **Tuna Longline Fishery:** There are currently six domestic and seven foreign licensed longline vessels. The maximum number that can be licensed is 20 (10 domestic and 10 foreign). Domestic license fees are dependent on vessel size but vary between around US\$ 537 for a 10-meter vessel to US\$ 2,238 for a 20-meter vessel. Foreign license fees are US\$ 14,000 plus 5% resource rent (based on the value of fish caught). Each vessel must also unload at least 3 mt of fish per trip for domestic consumption, to be sold at affordable prices set by Government. In the near term, it is possible that charter vessels may be used to introduce more domestic vessels into the fleet. In the long term, Tonga aspires to have a larger domestic longline fleet, with fewer foreign vessels.
 - ii. **Deepwater snapper fishery:** This fishery operates on Tonga’s continental slopes and seamounts, harvesting about 14 snapper and grouper species and some jacks. Historical catches exceeded 400 mt/year and declined to a low point of 88 mt in 1996. Current catches have remained relatively stable at an average of 190 mt/year with a fleet of 14-25 vessels. While the maximum sustainable yield is 250 mt/year, a key indicator is the maximum economic yield and the number of vessels that can profitably fish. While additional bioeconomic data on cost and earning per catch value are needed, the maximum economic yield is 200 mt with a fleet of 7-16 vessels, based on current

¹⁰ The Tongan National Tuna Fisheries Management and Development Plan states that “all licensed fishing vessels shall offload all catch in authorized ports of Tonga”.



literature. The current management plan calls for introduction of an enforceable scheme to address the persistent gap in implementation of robust fishery management recommendations. The fishery can generate significant rents and foreign exchange, but only if strict limits are placed on fishing capacity. This Project is designed to address this gap.

d) **Aquaculture.** To date, Tongan aquaculture production has been limited due to difficulties in achieving economies of scale, regular natural disasters, and a challenging business environment. Consequently, aquaculture development has been limited in scope and species, with nascent success in mabé pearl and giant clam production. Both are priority species for further development as identified in the TFSP and will be supported by this Project. Further details on both are indicated below:

i. **Mabé pearl** farms (half pearls grown in oyster species *Pteria penguin*, common name "penguin's wing oyster") have been established in Tonga in the last eight years, with 12 license holders in Vava'u producing pearls. The mabé pearl sector is well structured, with support from an ongoing research program funded by the Australian Centre for International Agricultural Research (ACIAR), regular seed supply from MOF's Sopu hatchery and technical support from a Pearl Farmers Association. Although current sales are restricted to the tourism industry, there is room for expansion in the domestic market and unexplored potential for export. This Project will support MOF to increase the size of the industry and its commercialization, particularly in post-harvest activities (e.g., artisan skills, jewelry making and marketing).

ii. **Giant clams** have been exported for the aquarium industry (valued at US\$24,000 over 10 years) but have had their greatest utility in contributing to fisheries enhancement in SMAs, via stocking of spat produced by MOF's Sopu hatchery. In this regard, the clams are a culturally iconic species facilitating an ethos of marine stewardship within communities, while also being valued as a food item for ceremonial occasions or family and community obligations. Another aspect of giant clam production in Tonga is aquarium sales. Currently, a local company purchases giant clams from the Sopu hatchery, and exports these to aquarium suppliers overseas. Project partners will investigate the possibility of expanding the business, by, establishing supply chains involving hatcheries for spat production, communities for on-growing spat and subsequently harvesting them, and commercial operators for selling juvenile clams into the international aquarium trade.

11. **Based on these four functional subdivisions, the Project will invest in the following selected fisheries and aquaculture shellfish species in order to:** (i) support implementation of key TFSP priorities, (ii) address fundamental gaps hampering improved fisheries management in high priority fisheries and high potential aquaculture, (iii) close essential gender gaps in the sector, and, (iv) improve food security and climate resilience (ref Annex 1 for further details):

a) **Fisheries**

- 1) Offshore Fisheries: i) Tuna Longline; and ii) Deepwater Snapper
- 2) Inshore Commercial Fisheries



b) **Aquaculture shellfish species**

- 1) Mabé Pearl (*Pteria penguin*)
- 2) Giant Clam (*Tridacna spp*)

12. **The original Pacific Islands Regional Oceanscape Program (PROP) was developed in 2013 as a Series of Projects (SOP) to be implemented in three phases, each six-years in duration.** Phase 1 began in 2014 and is under implementation in four countries (Federated States of Micronesia, Republic of Marshall Islands, Solomon Islands, Tuvalu) and one regional institution, FFA. Phase I national Projects share the same Project Development Objective (PDO) and Results Framework and reflect the same component design drawing on a pre-set menu of agreed investment activities (Annex 5). All four countries are members of the Parties of the Nauru Agreement (PNA) and operate the Vessel Day Scheme for their tuna purse seine fisheries and two longline fisheries. The main tuna species targeted in the Phase I cohort are skipjack, bigeye and yellowfin.

13. **The Phase I (2014-2020) cohort are midway through their Project cycle and are all undergoing moderate to comprehensive restructuring to adjust design issues related to:** (i) the original Disbursement Linked Indicator (DLI) modality; and, (ii) incorporate strategic opportunities in both oceanic and inshore fisheries given advancements made during the first stage of these Projects.

14. **Phase II (2019 – 2024/5) includes this Project in Tonga along with parallel Investment Project Financing (IPF) in Samoa and Kiribati.** The new Projects will diverge in key design features from the PROP SOP, applying lessons learned during implementation of the Phase I cohort (Annex 5). The Phase II projects place a more prominent emphasis on the regional role of inshore fisheries than was evident with the Phase I cohort. And, the Phase II cohort will permit incorporation of key members of the Tokelau Arrangement (TKA) for the South Pacific albacore tuna into the PROP family with inclusion of the Samoa and Tonga IPFs, thereby complementing the PNA cohort supported under Phase I.

C. Higher Level Objectives to which the Project Contributes

15. **The Project directly contributes to the priorities of the Government of Tonga (GoT) by supporting the TFSP.** The TFSP presents the strategic direction and guides investment planning for Tonga’s fisheries sector and identifies three long-term goals for the sector: (i) sustainable community fisheries and use of inshore marine ecosystems; (ii) profitable, sustainable and responsible commercial fisheries and aquaculture; and (iii) efficient, knowledge-based government services that collaborate effectively with industry and civil society. This Project supports achievement of the long-term goals of the TFSP.

16. **The Project is designed to support Tonga’s fisheries sector activities conducted in accordance with agreed regional approaches to fisheries management,** including: (i) Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, (ii) Western and Central Pacific Fisheries Commission (WCPFC); (iii) FFA, (iv) SPC; (v) TKA; and (vi) the Noumea Strategy (detailed in Annex 5).

17. **The operation is aligned with the World Bank’s Regional Partnership Framework FY17-21 for PICs (Report number 100997-EAP).** The Project will contribute to Focus Area 1: Fully Exploiting the Available Economic Opportunities. Specifically, under this Focus Area, it supports “improved management of oceanic and inshore



fisheries” (Objective 1.1.). The Project will also support “expanded tourism opportunities” (Objective 1.3) through improving reef fisheries health critical to snorkeling and scuba diving, supporting the Mabé pearl handicraft sector, supporting provision of a continuous supply of fresh fish to hotels and resorts, and providing sport and game fishing opportunities for tourists.

18. **The proposed Project directly contributes to the World Bank Group's twin goals of ending extreme poverty and boosting shared prosperity.** Tonga’s Basic Needs Poverty Line is at 35 percent, and large parts of the population rely on coastal and marine ecosystems for employment, nutrition, and livelihoods. This Project recognizes the importance of fisheries in terms of employment generation, food security, rural development, and livelihoods in Tonga. The Project aims to enhance the social, economic and environmental benefits gleaned from the fisheries sector, and thus is aligned with the twin goals of ending extreme poverty and boosting shared prosperity.

19. **The Project addresses climate change risks in a holistic manner through embedding responses to the threat of climate change throughout its components.** The Project considers the Government of Tonga’s *Joint National Action Plan 2 on Climate Change and Disaster Risk Management 2018 – 2028* and recognizes that climate change will impact fisheries and aquaculture, including individuals and communities that depend on these for their livelihoods. The Project includes actions for adaptation that emphasize the need for ensuring compliance (national, regional and international levels), improving knowledge and data of potential impacts, enabling opportunities for diverse livelihoods, and empowering stakeholders to participate effectively in improved and more resilient resource management arrangements.

II. PROJECT DEVELOPMENT OBJECTIVES

A. Project Development Objective (PDO)

20. The PDO is to improve management of selected fisheries and aquaculture in the Recipient’s territory.

B. Project Beneficiaries

21. Direct Project beneficiaries are the communities in the 46 strengthened and/or newly established SMAs (41 established and five new) by the Project and the 30 Mabé pearl producers. Indirectly, the 10,000+ people directly engaged in fishing will benefit from improved management and recovery of the selected fisheries stocks. If managed correctly, it is estimated that maximum sustainable yields will likely be larger than current harvests. Key Government stakeholders including Ministry of Finance (MF) and MoF will benefit from the development of relevant knowledge and skills, leading to enhanced institutional capacity. Ultimately, given Tonga’s reliance on fish products for nutritional purposes and export earnings, all Tongans will benefit from strengthened fisheries management. Regional beneficiaries include member states of the WCPFC, FFA and SPC.

C. PDO-Level Results Indicators

22. Achievement of the PDO will be measured by the following indicators:



Indicator	Baseline	End of Project Target
Inshore commercial fishery compliance (Number)	0	30
SMA's effectively implementing compliance measures (Number)	0	15
Mabé pearl producers operational (Number)	12	30
Female mabé pearl producers operational (Number)	0	8
Regional Indicator: Tuna Longline, Deepwater Snapper and Inshore Commercial Fishery management plans implemented by the Ministry of Fisheries (Number)	0	3
Regional Indicator: Tonga's annual reporting to WCPFC based on data gathering during implementation of the tuna longline fishery management plan (YES/NO)	Yes	Yes

III. PROJECT DESCRIPTION

23. This Project is designed to complement and build on the PROP SOP, and reflects lessons learned from PROP Phase I (Annex 5). Specifically, the Project supports priority activities of the TFSP. The operation is intended to mark the beginning of a longer-term partnership between Tonga and the Bank in the fisheries sector. The Project is structured with an implementation period of six years, which may be followed by a second project of six years depending on the success of this Project, government priorities, and the availability of financing. The two-phased program design is expected to provide sustained investment in Tonga's fisheries sector needed to comprehensively support fisheries management policy and legislation, capacity building, strategic resource management and development efforts as well as inclusive stakeholder collaboration across the selected fisheries. The Project is organized in four components described below reflecting MOF's organizational structure¹¹.

A. Project Components

24. **Component 1: Strengthening Fisheries Governance (National IDA US\$0.4 million; Regional IDA US\$1.71 million).** The objective of this component is to improve fisheries governance in Tonga's tuna longline, deepwater snapper and inshore commercial fisheries through priority interventions, including licensing and registration, and implementing fishing rights frameworks. This will ensure that Tonga meets its regional and international obligations and commitments as well as improves compliance with Tonga's domestic legislation.

25. Currently, the tuna longline and deepwater snapper fisheries have relatively few vessels and are largely compliant with national and regional requirements. One compliance activity targeted for these fisheries, to be implemented under this Project, is the FAO's Port State Measures Agreement (PSMA) that prevents vessels engaged in Illegal, Unreported and Unregulated Fishing (IUU) fishing from using ports to land their catches. Levels of compliance activity in the inshore commercial fishery is low, despite the limited number of regulations (e.g. size limits, gear controls). This Project will help strengthen capacity and the institutional and regulatory

¹¹ Component costs (Components 1, 2, 3 and 4) are inclusive of the amounts for refinancing the PPA.



framework to better manage these fisheries and increase the level of enforcement, including through small vessel patrols. Although compliance rates for the inshore commercial fishery are not systematically tracked at this time, by the end of implementation, the Project is expected to show a 30% compliance averaged across all inspections conducted. A key strategy will be building awareness amongst fishers and explaining the purpose and benefits of the regulatory program. During the Project, this is expected to result in increased regulatory awareness and compliance.

26. The component focuses on achievement of two strategic priorities for the three selected fisheries: (i) improving fisheries compliance, and (ii) strengthening licensing and rights-based management.

27. This component is organized into two sub-components to support these strategic priorities, as follows:

- a) **Sub-component 1.1: Strengthening Fisheries Compliance Capacity (National IDA US\$ 0.4 m; Regional IDA US \$1.69 m)** This sub-component will support MOF to improve fisheries compliance and strengthen licensing and rights-based management for inshore fisheries and fisheries in the Recipient's territorial sea, by: (i) reviewing and updating the Recipient's Operational Compliance Strategy; (ii) reviewing and updating the Recipient's national plan of action for illegal, unreported and unregulated fishing; (iii) undertaking a scoping study into the use of electronic monitoring and electronic reporting in fisheries; (iv) undertaking a review of the Recipient's fisheries observer program including updating the Recipient's observer manual; (v) undertaking an assessment of options for community engagement in SMA compliance activities; (vi) establishing a program to identify and register commercial fishers; (vii) developing a rights-based fisheries management framework to support the aforementioned commercial fisher registration program; and (viii) providing equipment and facilities to the Ministry of Fisheries to undertake inshore fisheries compliance activities.
- b) **Sub-component 1.2: Monitoring, Control and Surveillance in Tonga's Exclusive Economic Zone (Regional IDA US\$ 0.02 m)** This sub-component will support fisheries monitoring, control and surveillance activities in the Recipient's exclusive economic zone through the provision of fuel for joint patrols by MOF.

28. **Component 2: Strengthening the Knowledge Base for Fisheries and Aquaculture (National IDA US\$1.17 million; Regional IDA US\$3.38 million).** The objective of this component is to improve fisheries science for informed management decision-making to underpin the three selected fisheries and two aquaculture species supported by the Project. The component is organized in three sub-components:

- a) **Sub-Component 2.1: Improving Fisheries Science for Decision-making of the Selected Fisheries (National IDA US\$0.3 million; Regional IDA US\$2.01 million).** This sub-component will support MOF to improve fulfillment of its obligations in fisheries monitoring and stock assessment to FFA, SPC and WCPFC. Specific work includes conducting monitoring and assessment studies for improving fisheries science for decision making in offshore and inshore commercial fisheries. It is expected that by the end of the Project, the tuna longline, deepwater snapper and inshore commercial fisheries will have their catch and effort data systematically recorded annually.
- b) **Sub-Component 2.2: Developing High Potential Aquaculture Technologies (National IDA US\$0.39 million).** This sub-component will support Tonga's small aquaculture industry, prioritizing two well



established aquaculture products - mabé pearls and giant clams - to expand their positive economic impacts. Specific activities will include developing high potential aquaculture technology for mabé pearls and giant clams, by: (i) reviewing and updating the mabé pearl industry development plan; (ii) supporting development of the Mabé Pearl Industry Association including strengthening governance, and providing operational support, training, and tools and equipment; (iii) upgrading equipment and facilities at the Sopa Mariculture Centre; and, (iv) providing training and capacity building of Ministry of Fisheries staff. The Project will specifically target women for extension services. The Project will support MOF and the Mabé Pearl Industry Association to recruit and support at least eight new women-owned mabé pearl businesses (out of 30 total producers). Increasing women owned portion of this sector from 0% to 25% will be a considerable contribution of the Project.

- c) **Sub-Component 2.3: Strengthening Tonga's Special Management Area Program (National IDA US\$0.48 million; Regional IDA US\$1.37 million).** The objective of this sub-component is to support MOF in strengthening and expanding the SMA program. The Project will specifically support the Ministry of Fisheries in strengthening its SMA program, by: (i) reviewing and updating SMA management plans; (ii) providing training and capacity building activities to Ministry of Fisheries staff to support improved SMA management and compliance with SMA management plans; (iii) providing training and equipment to Coastal Community SMA Management Committees to strengthen SMA management; (iv) providing training and support to Ministry of Fisheries staff to improve SMA monitoring and evaluation developing a community based SMA monitoring program; and (v) reviewing and strengthening SMA establishment procedures.

29. **Component 3: Investing in Sustainable Fisheries Management and Development (National IDA US\$1.22 million; Regional IDA US\$0.5 million).** The objective of this component is to strengthen sustainable fisheries management and development of the selected fisheries. Currently, there is strong legislation for management of the tuna longline and deepwater snapper fisheries. However, an effective policy and regulatory framework to support aquaculture development, specifically for mabé pearl and giant clam, does not yet exist nor is there an inshore commercial fishery management plan. The latter is identified as a priority activity in the TFSP, and acknowledged at the highest levels of government, with Cabinet recently approving development of an inshore commercial fishery management plan which the Project will finance.

30. This component will support sustainable commercial fishery and aquaculture management and development, by:

- a) Fisheries Management: (i) reviewing and updating existing commercial fisheries management plans; (ii) developing and implementing an inshore commercial fishery management plan; (iii) developing a code of conduct for responsible fisheries;
- b) Aquaculture Development: To advance on priority work in aquaculture development identified in the TFSP, the Project will support the following key activities for mabé pearl and giant clam: (i) undertaking a review of aquaculture development plans; (ii) developing aquaculture biosecurity measures; and, (iii) conducting aquaculture market analysis to understand requirements and opportunities for growth.
- c) Fisheries Development: (i) developing marketing strategies for domestic operators for offshore tuna



longline and deep water snapper fisheries; and (ii) developing a master plan and conducting a feasibility study to identify specific fisheries infrastructure needs.¹² The prioritized public infrastructure identified would not be financed under this Project, rather the Project would seek to crowd in private sector financing to develop these assets in tandem to implementation of phase I of the Project as well as consider key infrastructure to be financed under the proposed second phase of the Project to further complement private sector support.

31. **Component 4: Supporting Effective Project Management (National IDA US\$1.56 million; Regional IDA US\$0.06 million).** This component will ensure effective and efficient Project management through supporting the Project Management Unit (PMU). These funds will provide needed resources for Project management, financial management, procurement, monitoring and evaluation, and safeguards. Specifically, this component will provide technical and operational assistance to: (a) the PMU on Project management and implementation; and (b) MOF to facilitate inter-agency engagement and cooperation, development partner coordination, and coordination of training and capacity development activities under components 1, 2 and 3 of the Project.

32. In parallel, a Central Services Unit (CSU), overseen by the MF, will provide additional Project management and fiduciary support services to this Project and other World Bank financed projects in Tonga. For implementation, the CSU will provide both implementation support and advisory services in procurement, financial management, safeguards, M&E, and contract management. The CSU will also review Project reports prepared by the PMU and submit such reports to the World Bank in accordance with the Financing Agreement. For capacity building, the CSU will play a central role in capacity building of staff in MOF and other ministries engaged in World Bank financed operations.

B. Strategic Alignment

33. **Citizen Engagement.** An important feature of this Project is the Stakeholder Engagement Plan (SEP), which forms part of the Environmental and Social Management Framework (ESMF). A key delivery principle of the Project is to provide opportunities for ongoing engagement with the National Fisheries Council, coastal communities, industry, interest groups, civil society, and non-governmental organizations. The SEP identifies stakeholders who may be interested in or affected by the Project and identifies methods for engaging stakeholders throughout the Project lifecycle. The SEP has been prepared to ensure ongoing consultations and engagement in the Project, and provides details on how to enable women, youth and other groups to effectively participate. The Results Framework includes a dedicated Intermediate Results Indicator relevant to monitoring citizen engagement: Grievances registered related to delivery of project benefits that are addressed (Percentage).

34. **Specifically, stakeholders will be actively engaged in the Project through a variety of mechanisms.** Effective planning of stakeholder engagement for the duration of the Project will involve a hands-on approach to the establishment of consultative forums, developing terms of reference and meeting procedures, organizing meetings, reporting on outcomes, and maintaining records. Key stakeholders and their involvement in the Project are detailed in the SEP. The MOF has well-established relationships with many of the identified stakeholders.

¹² As outlined in the TFSP, Tonga has not yet detailed its fisheries infrastructure needs (e.g., quays, port facilities, cold storage).



35. The SEP will ensure that the following stakeholder engagement principles are applied to all engagement activities:

- a) Timing and number of engagement events are designed to maximize stakeholder involvement and avoid disruption to the daily business of local stakeholders and stakeholder fatigue;
- b) Considers the needs of different groups within the community including gender, age and those with any form of disability;
- c) A senior MOF staff member will participate actively in all engagement events;
- d) Engagement events occur in line with the SEP schedule so that there is clear linkage between engagement activities and the key stages in the Project;
- e) Engagement is managed so that it is culturally appropriate, adequate and timely information and opportunities are provided to all stakeholders to contribute;
- f) Engagement is free from coercion, undertaken prior to key decisions and informed by provision of objective and meaningful information, and that feedback is provided to stakeholders after engagement has concluded; and,

Stakeholders can participate in the engagement process at any time, even if they had not previously been identified as stakeholders.

36. Consultation and Engagement Methods: The following table summarizes the engagement techniques that will be used during the Project and when each will be applied:

Engagement Technique	How and when they will be applied
Correspondences (Phone, Emails)	Distribute information to Government officials, Non-Governmental Organization (NGO), Local Government, and organizations/agencies. Invite stakeholders to meetings and follow-up.
One-on-one meetings	Seek views and opinions. Enable stakeholder to speak freely about sensitive issues. Build personal relationships. Prepare meetings minutes.
Formal Meetings/Workshops	Present the Project information to a group of stakeholders. Allow group to comment – opinions and views. Disseminate technical information. Inclusive discussions. Prepare meeting minutes.
Village Council meetings (Fono)/Public Meetings	Present Project information to a large group of stakeholders, especially communities. Allow the group to provide their views and opinions. Build relationship with the communities, especially those impacted. Distribute non-technical information. Facilitate meetings with presentations, PowerPoint, posters etc. Record discussions, comments, questions. Prepare meeting minutes.
Focus group meetings	Present Project information to a group of stakeholders. Allow stakeholders to provide their views on targeted baseline Information.



	Build relationships with communities. Prepare meeting summaries.
MOF communication and outreach programmes e.g. website and radio broadcasts	Present project information and progress updates. Brief updates on project. Disclose ESMF and relevant safeguards documentation.
Direct communication with affected persons	Share information on nature of impacts.
Project leaflet	Brief project information to provide regular update. Site specific project information.
Signs	Share information on project activities.

37. **Climate Change, Disaster Risk Screening and Co-Benefits.** The project has been screened for short and long-term climate change and disaster risks. Tonga is vulnerable to the impacts of climate change impacts, and under certain climate change scenarios, rainfall is expected to decrease in the dry season and increase in the wet season relative to the long-term average. Furthermore, in addition to increasing temperatures, projected changes to the Pacific Ocean surrounding Tonga in relation to the long-term averages include increases in sea surface temperature, sea level rise and ocean acidification. Changes to ocean currents and reductions in nutrient supply are also expected to occur, as well as expected decreases to maximum catch potential. It is possible that tuna migration patterns could alter to either benefit or disadvantage Tonga. Furthermore, inshore flooding is likely to increase and increasing intensity of storm surges will adversely affect coastal communities, as well as fisheries sector infrastructure.

38. **The Project includes activities that integrate climate change adaptation and resilience into the sector.** Diverse actions will improve the efficiency and resilience of fishing operations in Tonga through: (i) policy development; (ii) long-term strategic planning; (iii) improved maintenance and operations of fishing vessels and fish aggregating devices (FAD); (iv) improved data gathering, monitoring and information systems; and, (v) capacity building, training and outreach. Furthermore, inclusion of measures to better manage and monitor coastal fish habitats and fish stocks will help secure long-term food security. In addition, the Project will enhance sustainability through diversification of opportunities for increasing the number of livelihoods based on the fisheries sector. Specifically, the Project includes the following actions to increase climate resilience:

- a) **Component 1:** includes actions to improve fisheries compliance and regulation in offshore and inshore fisheries and reduce illegal fishing, strengthen licensing and rights-based management, and strengthen decision making and long-term sustainability and resilience of the fisheries sector.
- b) **Component 2:** involves activities to: (i) improve fisheries science and decision making to better inform fishery management plans and policies; (ii) improving the monitoring and data collection for inshore fisheries; (iii) develop high potential aquaculture technologies to identify development opportunities for pearl oysters and giant clams; and, (iv) strengthen the SMA Program to support sustainability of inshore fisheries. Project investments in the fisheries sectors will adopt ‘climate smart’ practices, and mainstream a disaster risk reduction approach, to reduce the vulnerability of rural communities. All management plans developed under this Project will be adaptive, considering possible climate change impacts and



reflecting actions that reduce vulnerability. All the infrastructure (e.g., upgraded Sopu hatchery and potential satellite hatcheries in Vava'u and/or Ha'apai should the feasibility study indicate that both or either are viable investments) will be built to withstand storms to the highest degree possible given resources available (e.g., investments built in less vulnerable locations, improved building materials). Aquaculture supported under this Project lends itself well to being resilient to climate change (e.g. Mabé pearl industry). When tropical cyclones hit Tonga, the pearl aquaculture industry is at risk of losing the lines of oysters suspended in the ocean. However, with proper awareness raising and advanced warning of weather conditions, oyster farms can be prepared to drop their lines of suspended oysters to rest on the seafloor. Here they will be safe from the storm surge and can be retrieved once the storm has passed. The Project will also take full advantage of the existing World Bank Pacific Resilience Program under implementation in Tonga to ensure that this Project's climate change adaptation is maximized.

- c) **Component 3:** involves activities to support sustainable management of commercial fisheries and aquaculture development through feasibility studies and investment policy development.

39. **Nutrition.** Fish and other aquatic animals provide 50-90% of the animal protein consumed across the Pacific and are essential for food security in PICs. In rural areas, much of the catch is taken by subsistence fishers operating nearby their communities, indicating their reliance on inshore resources, which is often intensified by lack of other locally available nutritious foods. Tonga's Ministry of Health and the Tonga Health NGO have been actively supporting promotion of increased fish consumption to improve nutritional outcomes in Tonga. From 2017 to 2018, the Tonga Health NGO financially supported expansion of the SMA program to five communities to increase availability of fish for consumption. Hence, while this Project is not specifically focused on increasing food production for improved nutrition, in the long-term, it will indirectly contribute to improved nutritional outcomes in Tonga and support national nutrition policy (e.g., Non-Communicable Disease Plan 2015-2020). During implementation, MOF is expected to join the national sub-committee on "Healthy Eating" under the National Non-Communicable Diseases Committee. At the development objective level, if fishing effort remains constant, strengthening sustainable management of fisheries will increase the supply of fish to local communities thereby indirectly improving nutrition outcomes over the long-term.

40. **Gender and social inclusion considerations have been comprehensively addressed in the Project** through identification of opportunities for women's participation in Project activities (summarized in Annex 6) and setting targets for this participation through specific PDO and Intermediate Results Indicators in relation to aquaculture (number of female Mabé pearl producers) and SMAs (number of female SMA committee members) emphasizing platform and voice, decision-making power as well as increased access to long-term, meaningful employment opportunities for women.

41. Specifically, the Project will invest in ensuring expanded formal representation of women on SMA Committees. This work will be supported and proactively managed to increase women's involvement in decision making about fisheries management in their local inshore area. The Project will also invest to enhance the proportion of women in skilled Mabé pearl production at Project sites. Project beneficiaries will be referred to gender-based violence prevention support services and small business and financial literacy services. Skills and participation gaps among women due to less access to productive resources, training and finance will be addressed by linking Project beneficiaries with key organizations (e.g., Tonga Skills, Tonga Development Bank)



providing finance and financial training to informal workers, and by targeting women for technical and financial training and support. The Project will also respond to youth unemployment through the following types of Project activities: to support their entry into industry, with a focus on young women; provide equal access to training and support for young men and women in the Mabé pearl industry; and support women entering fisheries beyond pearl production through outreach to female students to increase interest in commercial fisheries. Liaison between the Project and the Tonga Skills Project (which addresses employment and livelihood barriers for women and people with disabilities through training and other services) will increase access of women to economic opportunities in the sector. While women are involved in inshore fisheries, opportunities exist for promoting women's entry into the inshore commercial fisheries through Project-supported liaison between stakeholder engagement staff, industry and civil society. A review of the observer program will include an assessment of how women can be formally employed (as observers/compliance officers/e-reporting and monitoring data processors) to support participation in the tuna longline fishery.

42. **Maximizing Finance for Development.** There is strong rationale for public sector support of the fisheries sector. There are also areas where the Project will promote increased private sector engagement. The Project seeks to put Tonga's fisheries sector on a more sustainable pathway that channels and promotes private sector investment in areas with the highest potential returns. Component 3 provides targeted support in developing effective policy and regulatory support for private sector investment and development in the sector, particularly for Mabé pearl producers. Likewise, for selected fisheries, comprehensive legal and regulatory reviews will help improve the business environment. In addition, the Fisheries Sector Master Plan and Feasibility Study on strategic fisheries infrastructure investments will analyze the value-chain for the selected fisheries from producer infrastructure to cold room facilities to ports and wharfs to transport to market. A key aspect of this work will include industry involvement (National Fisheries Council and Mabé Pearl Industry Association) and identification of potential private-public partnerships. In addition, Component 2 will provide direct support for Mabé pearl industry expansion. The Results Framework is anticipating a tripling of the number of Mabé pearl producers under the Project.

43. The Government is committed to development of the Mabé pearl industry. Government has a formal Tongan Pearl Industry Development Plan 2012-13 that is focused on private sector driven industry development, with the overall ambition of making Tonga the Mabé pearl hub of the Pacific. Government has supported formalization of the industry association and provided facilities in Vava'u for a handicraft training (producing jewelry and artifacts) and sales center. At the Government's instigation, the Mabé producers and Ministry staff now share a stall at the Annual Tongan Agricultural Show. MOF is a partner in the Australian-funded research program to support all aspects of Mabé pearl industry development – hatchery production, genetic selection, seeding, husbandry, post-harvest jewelry making and marketing. As a result, the industry has expanded in both size (production value and numbers of registered producers) and geographic spread in the last eight years.

44. The Project will build on these advances and involve the private sector to update the Mabé pearl industry development plan, including a code of practice, to support commercial expansion and development of the Mabé pearl industry. The Project will also fund the Mabé Pearl Industry Association to support its operation and expansion, including establishment as an incorporated entity. In Vava'u (and potentially in Ha'apai), the Project will support private sector engagement through connection of utilities, provision of tools and equipment,



capacity building, and further development of safe working environment at the training center. In addition, MOF has been, and will continue to be, engaged with the private sector in the expansion of Mabé pearl farming in Tonga. Jointly they have developed a shared vision of future expansion, necessitating increased supplies of seed stock from government-owned hatcheries, a stronger industry association at the forefront of industry development initiatives, further geographic expansion of production centers, and realistic marketing initiatives (focused on in-bound tourists, and expanding to niche export markets). The Project includes activities to address these bottlenecks to industry development.

45. The Project aims to more than double the size (number of participants and value) of the Mabé pearl industry in Tonga. While the industry is small (12 producers) in international terms, within Tonga is the only commercially-oriented aquaculture industry in the country. Should it achieve its goal of becoming the Mabé pearl hub of the Pacific within six years, it will be a regionally significant commercial endeavor.

C. Project Cost and Financing

Project Components	Project cost	IDA Financing
Total Costs		10.00
Total Project Costs		10.00
Total Financing Required		10.00

D. Lessons Learned and Reflected in the Project Design

46. **The World Bank has extensive experience supporting development and management of fisheries worldwide. The Project design reflects lessons from analytical work, sector and thematic studies, ongoing and completed operations,¹³ in particular ongoing implementation of the PROP SOP (Annex 5), and international good practice.** Key lessons reflected in the design include:

- a) Building on national strategies and institutions. In some countries, PROP was not closely aligned with national priorities, leading to limited Government buy-in. This Project is founded on the TFSP which presents the strategic direction and guides investment planning for Tonga's commercial and community fisheries and has strong government ownership. The Project is linked with Regional fisheries agreements and operating frameworks such as WCPFC, FFA, SPC and TKA. The components of the Project contribute to the three long-term goals for the sector as outlined in the TFSP and the structure of the components match the core functions of the respective divisions of MOF.
- b) Strengthening and building institutions for better resource management. The Project is designed based on the TFSP, first and foremost, but draws heavily on the experience to date of the World Bank's active portfolio of US\$1 billion in sustainable fisheries and aquaculture. Beginning in 2005, the World Bank re-

¹³ Kenya Coastal Development Project; Tanzania Marine and Coastal Management Project; South West Indian Ocean Fisheries Governance and Shared Growth Project; West Africa Regional Fisheries Program; Bangladesh Sustainable Coastal and Marine Fisheries Project.



oriented this portfolio away from a focus on financing inputs for sector development, and towards strengthening and building institutions for better resource management. This focus on resource management as a key challenge and opportunity in the sector, has been confirmed subsequently by biological and economic research clearly demonstrating that levels of fishing exploitation that are environmentally sustainable (i.e., at levels sufficiently below the maximum amount that can be harvested and still allow stocks to regenerate to their previous size) are also much more economically profitable. The Project will work towards achievement of its PDO by addressing identified technical, capacity and resource constraints to improved resource management of Tonga's offshore and inshore fisheries.

- c) Defining achievable outcomes. Fisheries are highly variable and therefore, interventions that have good intent, frequently fail, or only partially achieve the desired outcome. The Project recognizes this potential weakness in the design of fisheries projects and focuses on activities that make a difference to coastal communities, and that have potential for success. Project design also recognizes that achieving growth in fisheries, which are already overexploited, may not be practical. The intent of the Project is to make improvements in the fish stocks exploited and provide an enabling environment for sustained investment in Tonga's fisheries sector to comprehensively support fisheries management policy and legislation, capacity building, investments, and inclusive stakeholder collaboration.
- d) Safeguards. The original cohort of PROP Projects suffered from a lack of safeguards staff within implementing agencies. In addition, environmental and resettlement safeguard requirements were sometimes outside the Government's mandate and experience. As such, core arrangements such as Grievance Redress Mechanism (GRM) and Environment, Health and Safety Incident reporting forms were not in place and safeguards were not proactively managed. A dedicated safeguards PMU member will be in place to allow effective coordination of tasks and help with timely preparation and implementation of safeguard instruments.
- e) Monitoring and evaluation. The original PROP cohort shared a highly complex results framework that was difficult for personnel without specific skills in M&E and fisheries to implement. This combined with a lack of M&E staff led to limited monitoring carried out by the implementing agencies. This Project has an entirely new, standalone, clear results framework and will have a dedicated M&E PMU staff member in charge of project monitoring and evaluation.

E. Results Chain

47. Development of the Project's Theory of Change (Annex 1) and experience from previous operations have demonstrated that some conditional outcomes are required to contribute to the goals stated in the TFSP and achievement of the PDO. These outcomes are: (i) Strengthened IUU enforcement, including licensing, (ii) SMA and fishery-specific management plans developed and under implementation, (iii) aquaculture policies on Mabé pearl and giant clam submitted to Cabinet, and (iv) strengthened fisheries policy and regulatory instruments submitted to Cabinet.



IV. IMPLEMENTATION

A. Implementation Arrangements

48. **A Project Steering Committee (PSC) has been established for strategic oversight and coordination of the Project across government.** Overall Project oversight will be provided by the Ministerial level Sector Based Project Steering Committee established by Cabinet Decision 822/Sept 21, 2019. The Committee will meet on a quarterly basis. Functions include providing overall policy guidance, facilitating coordination among relevant agencies, reviewing and endorsing the annual work plan, budget and end of year reports. A Technical Working Group has also been established and provide guidance on key Project inputs and review outputs on a regular basis. The PSC shall be chaired by the Minister of Finance, and composed of, *inter alia*, the Deputy Prime Minister, representatives of MOF, the Ministry of Internal Affairs' Local Government Division, relevant development partners and other project stakeholders and the CSU.

49. The Executing Agency for the Project is MF, entrusted with overall responsibility for execution of the Financing Agreement. MF also hosts the CSU, which will provide support to the PMU for procurement, safeguards, finance, and M&E through the employment of technical consultants, on an as needed basis.

50. MOF is the Implementing Agency and is responsible for coordination and implementation of the Project. While the Minister for Fisheries chairs the PSC, the CEO of MOF is the Project Director. The MOF structure, including the PMU is outlined below (Figure 1).

51. The Project has been designed so that each of the MOF's divisions will have responsibility for the Project component that directly correlates with their division's responsibilities:

- a) Component 1 (Strengthening Fisheries Governance) - Fisheries Compliance Division.
- b) Component 2 (Strengthening the Knowledge Base for Fisheries and Aquaculture) - Fisheries Science Division.
- c) Component 3 (Investing in Sustainable Fisheries Management and Development) – Fisheries Management Division.
- d) Component 4 (Supporting Effective Project Management) – PMU



Ministry of Fisheries Organizational Chart

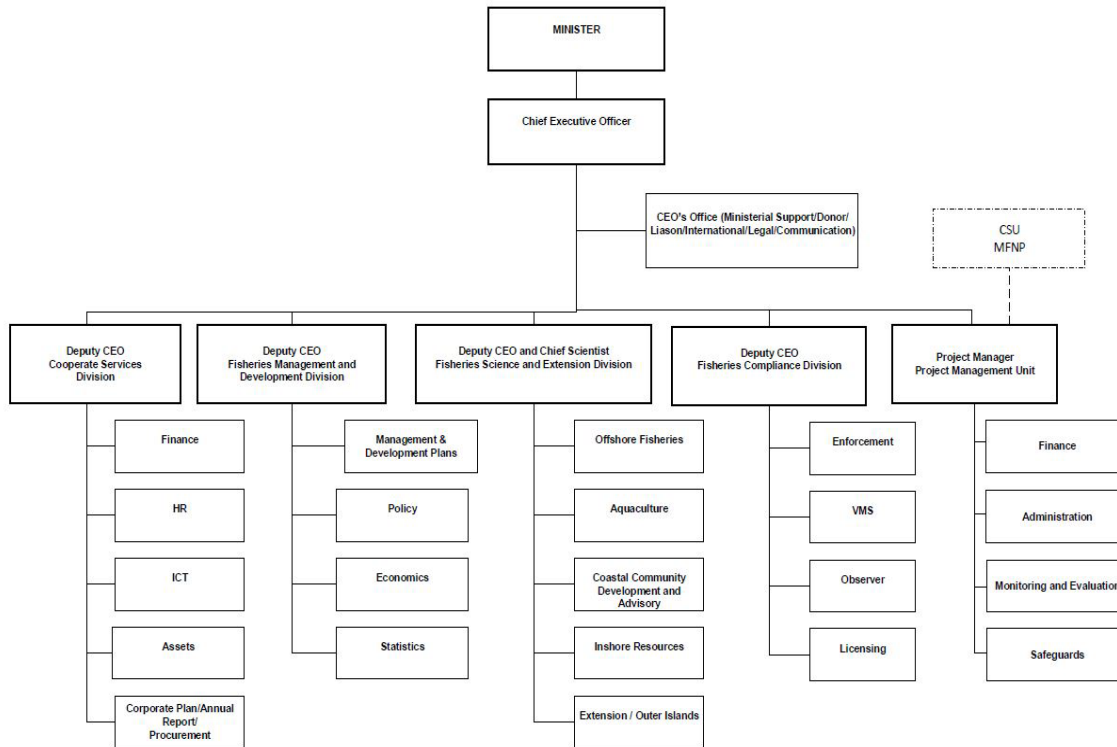


Figure 1: Ministry of Fisheries Organizational Chart including CSU

52. This Project involves a wide range of issues relevant to other ministries that are neither directly involved in Project delivery nor receiving Project funding. These Ministries may collaborate with and support Project activities, including: i) Ministry of Meteorology, Energy, Information, Disaster Management, Climate Change and Communications.; ii) Ministry of Lands, Survey and Natural Resources; and iii) His Majesty’s Armed Forces.

53. A Programmatic Preparation Advance (PPA) in the amount of US\$ 590,000 has been approved for the GoT, of which US\$ 20,000 will be used to reimburse MOF for expenses incurred during preparation including MOF staff travel, per diem and accommodation during field visits in Vava’u, Ha’apai and procurement training in Sydney as well as the costs of Project preparation meetings in Nuku’alofa.

B. Results Monitoring and Evaluation

54. Proper planning, monitoring, and enforcement of the fisheries sector is important. Fisheries management planning requires knowledge of target and bycatch species, stock levels, location of fish stocks, fishing methods and how much effort is sustainable relative to potential yields. Whilst communities can be delegated management responsibility for fisheries monitoring in SMAs, comprehensive catch and effort monitoring needs to be a core requirement across all types of commercial scale fisheries.

55. Considering that there is currently no comprehensive catch and effort monitoring system in fisheries management in Tonga, it will be a significant part of all components to create and implement an appropriate



monitoring program. This will require significant capacity building. Having this information readily available will be a powerful tool in improving performance and outcomes of SMAs and commercial fisheries. This information will also be indispensable in designing effective fisheries management approaches in Component 3.

56. Achievement of the PDO and progress made toward generating the planned outputs and expected outcomes of the Project will be measured against key indicators and targets presented in the Projects' Results Framework. The M&E Specialists mobilized by the CSU and PMU (Component 4) will be responsible for overall monitoring under the close supervision of the PMU Project Coordinator. To ensure sustained progress is made with overall implementation and timely M&E activities, the Project will undergo a comprehensive Mid Term Review in the third year of implementation, as noted in the Financing Agreement.

C. Sustainability

57. **Institutional Sustainability.** Improved fisheries management is a national priority and there is strong buy-in from the MOF and MF for this Project. MOF is a new ministry, with a rapidly expanding staffing complement (expected to increase to over 70 staff in 2019). A core objective of this Project is to invest in establishing a strong technical and management foundation in MOF that can be sustained post-closure.

58. **Economic Sustainability.** The Project will work with smallholder fishers and commercial operators who are motivated to move onto a more sustainable and growth-oriented pathway. Funds will be invested in profitable business plans and strong SMA management plans to ensure sustainability of fishing operations. Training and advisory services will be provided to fishers and communities, with guidance for transitioning into more ambitious commercial and resource management activities. The economic analysis conducted for this Project considered a time horizon of 30 years to account for the long-term benefits of the Project. The ex-ante economic analysis suggests that Project-supported investments will generate substantial long-term benefits for beneficiaries in areas served by the Project, as well as substantial benefits for Tongan society. Overall, the net present value (NPV) is Projected to reach US\$ 1.6 million. The investments evaluated for the economic analysis will generate an internal rate of return of 9 percent. The economic analysis shows that if Project implementation is effective and efficient, Project-supported investments will bring substantial economic benefits to the beneficiaries.

59. **Climate, Disasters, and Environmental Sustainability.** Given the severe climate and disaster risks Tonga faces, these considerations are mainstreamed into Project design. Training in best practice to increase resilience will be provided. Furthermore, the entire Project is designed to increase the environmental sustainability and resilience of Tonga's fisheries sector.

D. Role of Partners

60. Preparation of the Project was carried out in close collaboration with a wide range of stakeholders, including development partners, NGOs and fisheries communities, among others. The Project is funding implementation of substantial parts of the TFSP and is designed to complement ongoing programs by development partners, including:

- a) **New Zealand:** supported a Technical Advisor to provide policy and corporate support to MOF on



development of commercial fishery opportunities based on under-exploited species, and market development strategies for deepwater snapper. This support has now concluded, however future near-term support may be approved based on the outcome of a fisheries design project assessment currently under way to inform investment in new commercial opportunities for deepwater Blue Nose (Antarctic Butterfish) and squid. The aim of this work is to provide diversification opportunities for the thirty deepwater fishery vessels to reduce fishing pressure on the snapper fishery.

- b) **Asian Development Bank (ADB):** Financed a Climate Resilience Sector Project that supported establishment of seven SMAs in Vava'u. The ADB project was implemented under the Strategic Program for Climate Resilience which itself was under phase II of the Pilot Program for Climate Resilience. The Project aimed to mainstream climate resilience into development planning and address country priorities focusing on the most vulnerable sectors and communities. It has since concluded.
 - c) **FAO:** Supported the 2017 review of the SMA Program and invests in strengthening MOF's capacity on community-based fisheries management. The FAO review underpins the SMA activities in the Project. FAO will provide ongoing technical support to SMAs through a new project (US\$180,000 over two years). This support will be undertaken by FAO staff and consultants. Project outputs include: (i) SMA processes are clarified and information sharing is facilitated; (ii) Capacity of the Ministry of Fisheries, SMA communities and relevant stakeholders are strengthened to improve processes and activities for SMAs; (iii) SMA data and information flows and processes streamlined; and (iv) Enhanced awareness and support for the SMA program. This project is still in the pipeline and the PMU is committed to ensuring that the outputs align with Pathway activities to avoid overlap and duplication of effort.
 - d) **FFA and SPC:** Offer ongoing Technical Assistance in the form of policy development, legislative reform, training and capacity development, and fisheries monitoring, control, and surveillance (MCS) at the regional and national level. FFA and SPC operate under bilateral service level agreements to provide support to the Ministry. FFA provides technical support for the tuna fishery logbook and observer programs and undertake regional stock assessments for the tuna fishery. SPC provides a range of services for advice, training and support activities on coastal fishery science and management. FFA provides support for members attending WCPFC meetings, administers the regional vessel monitoring program, manages the regional vessel register, maintains the minimum terms and conditions for foreign vessel licensing, and supports economic analysis of tuna fisheries. They coordinate four regional surveillance programs each year, and provide fishery officer training courses, as well as undertake short-term consultancy projects on a range of activities.
 - e) **Australian Centre for International Agricultural Research (ACIAR):** Supports the Mabé pearl sector in Tonga. The ACIAR research project provides a sustainable basis for continued development of cultured pearl industries in the Pacific. The initial project was for AU\$1.1 million for three countries (Tonga, Fiji and PNG) over four years and concluded in 2017. ACIAR continued to provide low level maintenance support in 2018. The original project aimed to: (i) develop more effective hatchery culture methods for pearl oysters; and, (ii) enhance sustainable development of the cultured pearl industry. This Project builds on the successes and functional platform provided by ACIAR's previous support.
61. A **Development Partner Working Group (DPWG)** is an informal group, chaired by the MOF CEO and



comprised of representatives from relevant development partner groups, that will be convened on an as needed basis by MOF to reduce the risk of overlap and duplication across donor-partner funded programs, including this Project. The Project will not finance the DPWG meetings.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

62. **The overall Project risk is rated as Substantial.**

63. **Sector Strategies and Policies (Moderate):** It remains unclear whether Tongan law fully complies with the conditions of Article 73, on enforcement of laws and regulations of the coastal state, of the United Nations Convention on the Law of the Sea (UNCLOS). Such compliance is a pre-requisite for Bank financing of MCS activities in Tonga's EEZ. To address the UNCLOS knowledge gap, the Bank is currently undertaking a legal review to ascertain consistency between Tongan law and the conditions of Article 73, and, if necessary, to identify what remedies can be taken with Project support to strengthen related Tongan law and permit financing of the planned MCS activities under Component 1. As a preventive measure, a specific disbursement category is included for said MCS activities, to allow for project implementation even in the case the review finds inconsistencies. These funds will be used once Tonga's legislation is determined to be in, or brought into, full compliance with the conditions of Article 73.

64. **Institutional Capacity for Implementation and Sustainability (High risk):** Tonga suffers from limited capacity in the public sector. MOF was recently established and has limited capacity and staff although this is improving with the recruitment of ten new staff in 2019. When it was part of the Agriculture and Forestry Ministry, it had some experience implementing smaller projects, but as a newly established stand-alone Ministry, it does not yet have direct experience implementing projects nor experience implementing World Bank-financed project safeguards, financial management (FM) and procurement policies and guidelines. To mitigate these risks, investments will be made in strengthening the capacity of MOF to manage and implement the Project, including through additional human resources, provision of ongoing training and targeted implementation support.

65. **Fiduciary (Substantial risk):** The fiduciary risks are associated with the overall experience and capacity of MOF as well as the credibility and accountability of the PSC and PMU. Any risk that key fiduciary principles (economy, efficiency, effectiveness) may not be adhered to will come down to integrity and transparency of the PSC and PMU. Other fiduciary risks will arise from implementation delays due to weak procurement planning and monitoring or technical inputs, limited capacity leading to the poor implementation of procurement activities or contract management causing Project objectives not to be met. To mitigate these risks, actions will be taken including preparing a credible Procurement Plan in Systematic Tracking of Exchanges in Procurement (STEP) and appointing the PMU Project coordinator responsible for oversight of contract management with support of the PMU and CSU Procurement Specialists. The PMU will also hire a qualified FM Officer. In addition, the CSU will provide implementation and advisory services in procurement, FM, safeguards, M&E, and contract management to the PMU.

66. **Stakeholders (Substantial risk):** The issue of improved fisheries management is a priority for a broad



cross-section of ministries, civil society organizations, private sector partners, donors, and the public. However, risks exist related to stakeholders who may question the operation based on the perceived fairness of funding allocations for the 20 selected SMAs who will receive a kit of equipment from MOF under the Project. There is also the potential for certain stakeholders to react negatively to the first management plan for inshore commercial fisheries and the resulting restrictions to fishing that may follow. The Project's ESMF lays out a process toward identifying and mitigation such risks, including regular stakeholder consultations and meaningful engagement throughout implementation.

VI. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

67. **Technical Analysis:** The Project has been designed based on the TFSP, first and foremost, but draws heavily on the focus and experience to date of the World Bank's active portfolio of US\$ 1 billion in sustainable fisheries and aquaculture activities. Beginning in 2005, the World Bank re-oriented this portfolio away from a focus on financing inputs for sector development, and towards strengthening and building institutions for better resource management. This focus on resource management as a key challenge and opportunity in the sector, has been confirmed subsequently by biological and economic research clearly demonstrating that levels of fishing exploitation that are environmentally sustainable (i.e. at levels sufficiently below the maximum amount that can be harvested and still allow the stocks to regenerate to their previous size) are also much more economically profitable. The project will work towards achievement of its the PDO by addressing identified technical, capacity and resource constraints affecting Tonga's offshore and inshore fisheries. A lack of sufficient MOF staff and subject matter experts has been identified as a key constraint for project implementation and will be addressed through capacity building activities and recruitment of short-term specialists to support onboarding of the new cohort of permanent MOF staff throughout the life of the Project. The important lessons learned from Phase I of the PROP SOP have been instrumental in informing the design of the Project as have the design features and lessons learned from other World Bank-financed regional fisheries programs in West Africa and the Indian Ocean.

68. **Economic and Financial Analysis:** 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 Tongan society. Overall, the Net Present Value (NPV) is Projected to reach US\$ 1.6 million. The investments evaluated for the economic analysis will generate an internal rate of return of 9%. The economic analysis shows that if Project implementation is effective and efficient, Project-supported investments will bring substantial economic benefits to the beneficiaries. Results are robust to adverse changes in the key parameters. Increasing Project costs by 10%, reducing Project benefits by 10%, and varying the default discount factor by 2 percentage units do not change these conclusions. It is important to keep in mind that relevant data are scarce and not readily available. Therefore, this economic analysis, and its results, should be interpreted with caution. More data are essential to have a better picture of the associated benefits (further details are provided in Annex 4).



B. Fiduciary

69. **Procurement:** Procurement will follow the procedures specified in the World Bank Procurement Regulations for IPF Borrowers (July 2016 and revised in November 2017 and August 2018) and provisions stipulated in the Procurement Plan approved by the World Bank. MOF will establish a PMU, which includes a Procurement Officer, to implement the Project. The PMU's role will be reinforced by the CSU that will include a Procurement Specialist and a Procurement Officer. The World Bank assessed procurement related risks (e.g., number of technical consultancies and availability of qualified consultants as well as delivery schedule of local vessel builders based on the number and type of vessels needed) and agreed mitigation measures with MOF including comprehensive ongoing training in STEP, onboarding of the PMU Procurement Specialist and detailed procurement instructions included in the Project Operations Manual (POM). MOF prepared a Project Procurement Strategy for Development which was reviewed and cleared by the World Bank. Detailed procurement arrangements are described in Annex 2.

70. **Financial Management:** Overall, the FM arrangements satisfy the World Bank's requirements. Key FM risks arise from potential for misuse or loss of resources deployed under a diverse range of project activities. Sound monitoring, and oversight arrangements must be maintained to provide reasonable assurance that funds are used for the intended purposes, together with successful implementation of specific mitigating measures, that is, timely recruitment of an FM Officer in the PMU, use of an FM system (accounting software) acceptable to the World Bank, and detailed FM instructions to be included as part of the POM. Such elements have been included to mitigate against the risk of MOF's limited experience in financial management of donor-funded projects coupled with weak capacity to undertake the FM activities for this Project. The GoT operates a centralized financial system with the MF approving and processing all expenditure and providing guidelines and ceilings for budget preparation. Additional fiduciary implementation and advisory support will also be provided to the PMU by the CSU.

C. Safeguards

71. **Environmental Safeguards:** The Project will help improve environmental and natural resource quality in Tonga that will in turn increase economic benefits generated by the goods and services drawn from healthy fisheries and related ecosystems. As such, the overall impacts of the Project are expected to be positive and the Project is classified as Category B. Environmental safeguards policies triggered by the Project include: 4.01, 4.04 and 4.36. None of the proposed physical investments include activities that would generate significant risk or irreversible impacts. Some investments under Components 1, 2 and 3 may generate moderate, site-specific and time-bound adverse impacts that can be readily mitigated through standard measures, if screened and managed properly. The ESMF has been completed and published reflecting comprehensive stakeholder consultations. The ESMF incorporates the requirements of the World Bank Group's Environmental, Health and Safety Guidelines and industry specific guidelines for fisheries management. At this stage, potential investments included in the ESMF's screening criteria that may require mitigation are: small scale aquaculture facilities, maintenance of fisheries infrastructure, building renovations, changes to livelihood opportunities and subsistence sources of protein from changes in fisheries management (which may also affect gender roles and the role of children in food gathering, and create community conflict), and overexploitation of unprotected areas adjacent to SMA's.



There are also safety risks to workers on boats in remote areas that have been addressed in the ESMF.

72. **Social Safeguards:** The Project is likely to have a positive impact on rural communities and local economies in Tonga by supporting development of commercial and subsistence fishers and enterprises, supporting complimentary rural livelihood opportunities and promoting improved nutrition. The World Bank's policy on Indigenous Peoples (4.10) has been triggered. However, as the population in Tonga is almost entirely homogenous and indigenous, a separate instrument will not be required. The key elements of an Indigenous Peoples' Plan have been integrated into the ESMF, SEP and Project design. Safeguard Policy 4.12 on Involuntary Resettlement has also been triggered. Project activities may require small-scale inshore land access to establish fisheries-related facilities, however the use of government land will be prioritized in all cases. Where this is not possible, land will be voluntarily donated or subject to a voluntary lease arrangement. Small community-based activities that form part of the Project will rely heavily on engagement and ownership of the community. As outlined in the ESMF and the Resettlement Policy Framework embedded in the ESMF, any voluntary land acquisition, including donations, will need to meet World Bank requirements. The ESMF has been completed and provides guidance related to the screening of social safeguards to assess any potential social impacts, as well as guidance for preparing relevant safeguard instruments. Consultations were completed in November 2018, whereby the ESMF, SEP and GRM were discussed amongst Project beneficiaries, government and development partners.

73. **Gender Analysis:** The Project is considered an important intervention to promote and solidify women and youth involvement in decision-making, implementation and monitoring and compliance of SMAs, and to increase opportunities for livelihoods and economic advancement of women and youth in the fisheries sector. While women comprise 41% of those counted as "employed" in the fisheries sector, they represent only 4% of the skilled agricultural and fishery workers (IFC 2010). Failure to translate women's high sectoral participation into higher skills or income indicates that women's needs are rarely considered in fisheries planning. The Project will address this gap by setting quotas to ensure local SMA committee membership includes women.

74. There is also a risk that women and youth will not be able to access opportunities under the aquaculture activities supported by the Project, due to barriers to their economic advancement, including: remoteness and transport constraints, lack of access to financial skills and small business training and support, less control than men over productive assets, gender norms of male control of finances in households and difficulties establishing security over sea areas (theft from female aquaculture operators). Youth who have been unable to complete secondary or tertiary education are at a disadvantage for employment and entrepreneurship unless targeted with assistance to build skills and confidence. There is also a lack of data on women and youth participation in value chains for fisheries and aquaculture products, and therefore understanding of how to increase their participation. Actions to address these risks include support for stronger women's participation in aquaculture activities. The officer responsible for stakeholder relations under the Project will liaise with national and local civil society organizations to ensure synchronicity of efforts between agencies and women and youth organizations to promote women and youth economic advancement in the sector. Analysis of value chains and women's participation will better assess current participation levels and options to increase this participation. The Project includes dedicated investment to increase female participation in Mabé pearl production.

75. **Grievance Redress Mechanisms:** 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.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY: Tonga
Tonga: Pathway to Sustainable Oceans

Project Development Objective(s)

To improve management of selected fisheries and aquaculture in the Recipient's territory.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
To improve management of selected fisheries and aquaculture in the Recipient's territory							
Inshore commercial fishery compliance (Number)		0.00	5.00	19.00	23.00	27.00	30.00
SMA's effectively implementing compliance measures (Number)		0.00	0.00	7.00	11.00	13.00	15.00
Mabe pearl producers operational (Number)		12.00	15.00	21.00	27.00	28.00	30.00
Female mabe pearl producers operational (Number)		0.00	1.00	3.00	6.00	7.00	8.00
Tuna longline, deepwater snapper and inshore		0.00	0.00	1.00	2.00	2.00	3.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
commercial fishery management plans implemented by MOF (Number)							
Tonga's annual reporting to WCPFC based on data gathering during implementation of the tuna longline fishery management plan (Yes/No)		Yes	Yes	Yes	Yes	Yes	Yes

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Component 1: Strengthening Fisheries Governance							
Tonga National Plan of Action for IUU updated (Yes/No)		No	No	Yes	Yes	Yes	Yes
Annual quality compliance inspections conducted on inshore commercial fishers (Number)		0.00	50.00	75.00	75.00	85.00	100.00
Component 2: Strengthening the Knowledge Base for Fisheries and Aquaculture							
Fisheries with catch and effort data collected (Number)		2.00	2.00	2.00	3.00	3.00	3.00
Mabe pearl producers receiving extension services (Number)		12.00	12.00	18.00	22.00	25.00	30.00



Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Selected SMAs receiving technical support on generating alternative revenue streams (Number)		0.00	0.00	20.00	20.00	20.00	20.00
Approved SMA management plans which align with the Regional Roadmap for Sustainable Pacific Fisheries (Number)		0.00	0.00	10.00	15.00	18.00	20.00
Grievances registered related to delivery of project benefits that are addressed (Percentage)		0.00	75.00	75.00	75.00	75.00	75.00
Component 3: Investing in Sustainable Offshore, Coastal, and Aquaculture Fisheries Management							
Tuna longline and deepwater snapper fishery management plans updated (Number)		0.00	0.00	1.00	2.00	2.00	2.00
Inshore commercial fishery management plan developed (Yes/No)		No	No	No	Yes	Yes	Yes
Updated fisheries legislation drafted and submitted to Cabinet (Yes/No)		No	No	No	Yes	Yes	Yes
Female participants of SMA committees (Number)		76.00	81.00	91.00	101.00	105.00	108.00
Females licensed to operate as mabe pearl producers (Number)		3.00	3.00	5.00	8.00	8.00	8.00



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Inshore commercial fishery compliance	<p>Inshore commercial fishery means: commercial fishing in the specific areas as defined by the Ministry of Fisheries and as detailed and mandated under the Inshore Fishery Management Plan.</p> <p>Fishery compliance: detection of prohibited size fish and/or use of illegal fishing gear (e.g. scuba equipment, undersize mesh, prohibited length nets).</p> <p>Unit of measure is the number of quality inspections undertaken in accordance with MOF Standard Operating Procedures.</p>	Annual	MOF Fisheries Compliance surveillance and marine patrol missions.	<p>Each quality inspection is recorded on an approved form and entered into the Fisheries Compliance Database on an ongoing basis throughout the year.</p> <p>Fisheries Compliance Division, MOF</p>	PMU M&E function
SMAs effectively implementing compliance measures	SMAs means all SMAs including the selected 20 SMAs that will receive	Annual	SMA audit for the selected SMAs	Annual Audit conducted by SMA Leads for each Island Grouping	PMU M&E function



	<p>assets, technical support on compliance, and capacity building activities, financed by the project under SC 2.3. These selected SMAs have a gazetted management plan, an annual work plan, an asset operations and maintenance agreement, and support and training from the project, to apply robust compliance measures within the prescribed SMA boundaries.</p> <p>Implementing SMA compliance measures means: Implementing enforcement activities at the SMA level including (i) placement of information signage adjacent to each SMA, (ii) placement of marker buoys to indicate SMA boundaries, and (iii) contacting fishers from adjacent coastal communities directly to advise them of the SMA boundaries and</p>			Fisheries Management Division, MOF	
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	regulations.				
Mabe pearl producers operational	Number of mabé pearl license holders that have produced a crop of pearls.	Annual	Fisheries Compliance Division, Licensing Section issued licences record	Annual production return as reported to the Licensing Section Fisheries Compliance Division, Licensing Section	MPU M&E function
Female mabe pearl producers operational	Number of licensed female mabé pearl producers who have successfully produced a crop of mabé pearls.	Annual	Fisheries Compliance Division, Licensing Section issued licenses for female producers record	Annual production return as reported to the Licensing Section Fisheries Compliance Division, Licensing Section	PMU M&E function
Tuna longline, deepwater snapper and inshore commercial fishery management plans implemented by MOF	Fishery management plan means: a fishery plan approved by the Ministry of Fisheries and Parliament according to section 7 of the Fisheries Management Act 2002.	Annual	MOF Annual Report	Fisheries Management Division annual progress report on fisheries management plan implementation Fisheries Management Division, MOF	PMU M&E function



	<p>Implemented means: A fishery plan approved by the Minister in accordance with section 7(5), and for which staff and budget are allocated to support the implementation of activities identified in the plan (e.g., control of access, gear and mesh size specifications, closed season), and where those activities are being applied to manage the fishery.</p>				
<p>Tonga's annual reporting to WCPFC based on data gathering during implementation of the tuna longline fishery management plan</p>	<p>Implementation means: The tuna plan approved by the Minister in accordance with section 7(5), for which staff and budget are allocated to support the implementation of activities identified in the plan, and where those activities are being applied to manage the fishery.</p> <p>Fishery management plan means: a fishery plan according to section 7 of the Fisheries Management Act 2002.</p>	<p>Annual</p>	<p>Fisheries Compliance and Science Divisions written work delivery reports as input into the MOF annual report and WCPFC formal submission</p>	<p>MOF Divisions prepare annual reports on tuna fishery compliance and science, with final reports submitted to WCPFC. Fisheries Compliance and Science Divisions</p>	<p>PMU M&E function</p>



	<p>Informs means: WCPFC reports draw on MOF research, science and compliance data derived from management plan implementation used to prepare Part 1 and Part 2 reports to the WCPFC each year.</p> <p>WCPFC reporting commitments Part 1 and Part 2 means: Tonga is a member of the WCPFC. The WCPF Convention Articles 23 and 25 require members to provide information to the Commission each year in an Annual Report on its tuna fisheries management, in two parts. Part 1 relates to research and statistics; Part 2 relates to compliance, and implementation of management measures.</p>				
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Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Tonga National Plan of Action for IUU updated	<p>The National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (NPOA IUU) means: The voluntary international instrument, developed within the framework of the FAO Code of Conduct for Responsible Fisheries</p> <p>The current NPOA IUU only applies to the tuna fishery.</p> <p>With project financing it will be updated to include all Tonga’s commercial fisheries, as well as to recognise Tonga’s recent signing of the FAO Port State Measures Agreement.</p>	Annual	Fisheries Compliance Division, MOF review of revised action plan.	Fisheries Compliance Division will report completion of the consultancy activity, and approval by the Minister Fisheries Compliance Division	PMU M&E function
Annual quality compliance inspections conducted on inshore commercial fishers	Quality inspection means: A compliance inspection conducted by MOF Compliance Division	Annual	Review of compliance inspection logbooks	Standard compliance inspection reports details are entered into the fisheries compliance	PMU M&E function



	Fisheries Officers in accordance with a MOF standard operating procedure.			database Fisheries Compliance Division, MOF	
Fisheries with catch and effort data collected	Catch and effort data means: Details of target fish species catch by weight, and of the fishing effort expended by gear type. MOF currently collects data for the tuna fishery, and the deepwater snapper fishery - in accordance with regional and national reporting requirements - to support assessments of fishery health such as the regional tuna stock assessments. By the end of the project, MOF will also collect catch and effort data for the inshore fishery.	Annual	Fisheries Science Division staff conduct regular fish catch and effort data from vessels at standard landing sites across the country. These data are collected using a standard methodology approved by the Ministry of Fisheries and applied systematically at all sites where data are collected	Catch and effort database maintained by MOF Fisheries Science Division, MOF	PMU M&E function
Mabe pearl producers receiving extension services	A producer means: The holder of an aquaculture	Annual	Aquaculture Division, MOF	Annual report on aquaculture extension	PMU M&E function



	<p>license issued in accordance with the provisions of the Fisheries Management Act 2002 and Aquaculture Management Act 2003.</p> <p>Extension services means: The advisory, education, training, technical support, workshop, and related activities provided by the Ministry of Fisheries to producers under project financing. All producers receive the same package of support by MOF.</p>			<p>services delivered to mabé pearl producers Aquaculture Divison, MOF</p>	
<p>Selected SMAs receiving technical support on generating alternative revenue streams</p>	<p>Selected SMAs means: the 20 existing SMAs that are selected by June 30, 2019 to receive assets, technical support, training and other capacity building support by MOF under this project.</p> <p>Receiving technical support means: Ongoing technical suport financed by the project and delivered by MOF extension staff and</p>	<p>Annual</p>	<p>Project activity records</p>	<p>SMA Program monitoring reports on technical support delivered to selected SMAs. SMA leads responsibility.</p>	<p>PMU M&E function</p>



	<p>SMA Leads to the selected SMAs</p> <p>Generating alternative revenue streams means: The technical support focused on supporting and training fishers to adopt alternative income streams such as FAD fishing, ecotourism opportunities, giant clam and mabé pearl production, amongst others. The main thrust of the technical support will be to reduce fishing pressure in the SMA area by focusing on developing alternate sources of reliable income.</p>				
Approved SMA management plans which align with the Regional Roadmap for Sustainable Pacific Fisheries	SMA management plans are updated to reflect the three goals and five strategies for improved coastal fisheries management of the Regional Roadmap for Sustainable Pacific Fisheries.	Annual	Fisheries Science Division, SMA Unit, MOF	Annual report issued by the SMA Unit.	PMU M&E function
Grievances registered related to delivery of project benefits that are addressed	The new indicator emphasizes the importance	Annual	PMU tracking GRM	GRM register	PMU M&E function



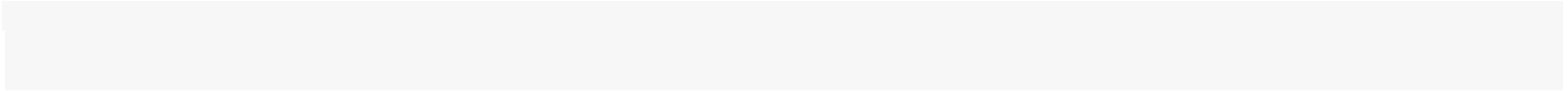
	of strengthening citizen engagement in the Pacific region, as well as measures whether beneficiaries feel project investment benefits them and meets their needs.			grievances registered and addressed.		
Tuna longline and deepwater snapper fishery management plans updated	Updated means: Existing fisheries management plans for tuna and deepwater snapper that have gone through a comprehensive periodic review process in accordance with Section 7(3) of the Fisheries Management Act 2002. Plan objectives and regulatory provisions will be reviewed to ensure relevance to fishery resources and industry sector needs, with changes approved by the Minister, and implemented by MOF	Annual	Fisheries Science Division, MOF	Annual reports of fishery management plans. Fisheries Science Division, MOF		PMU M&E function
Inshore commercial fishery management plan developed	Inshore commercial fishery management plan means: The plan to be developed that will regulate all commercial fishing (take fish for sale) for fish species, fishing methods,	Annual	Fisheries management plan	Annual reports of fishery management plans. Fisheries Science Division, MOF		PMU M&E function



	and fishery areas, that are not already covered by another fisheries management plan.				
Updated fisheries legislation drafted and submitted to Cabinet	Updated fisheries legislation means: Reviews of the Fisheries Management Act 2002, Aquaculture Management Act 2003, Fisheries Management (Conservation) Regulations 2008, and Fisheries (Coastal Communities) Regulation 2009 submitted to Cabinet as the last MOF controlled step, before consideration by the Parliament	Annual	Draft if Act and Submission letter	MOF annual report MOF Legal Officer	PMU M&E function
Female participants of SMA committees	Female members means: Members of SMA committees appointed either in accordance with the regulations, or by the committee chairperson, or by the MOF CEO. SMA community committees (end of Project target 43) aim to comprise a minimum of two and an average of between 2 and 3 female members.	Annual	List of SMA committee members	SMA Unit Annual Reports. SMA Unit, MOF	PMU M&E function



	<p>Note: there are 3 non-community SMAs that are established in unpopulated islands. These SMAs do not have committees, rather they function as marine protected areas for coastal fisheries</p>				
<p>Females licensed to operate as mabe pearl producers</p>	<p>Females who have successfully completed all of the necessary requirements (prepared an approved business plan, delivered the standard MOF approved environmental management review form, and secured a viable legal site for pearl production) to acquire a formal license to produce mabé pearls.</p> <p>And, these females are issued a formal mabé pearl aquaculture license by MOF.</p>	<p>Annual</p>	<p>License Section, MOF Mabe pearl production licenses</p>	<p>Aquaculture License Database License Section, MOF</p>	<p>PMU M&E function</p>



ANNEX 1: DETAILED PROJECT DESCRIPTION

Detailed Project Description

1. The key framework for design of the Project is the TFSP. The TFSP was prepared by the GoT with support from the World Bank and FAO in 2016 and approved for implementation by Cabinet in 2017. The Tonga National Fisheries Policy was developed in accordance with the TFSP and approved by Cabinet in September 2018.
2. The purpose of the TFSP for Tonga is to: i) identify priority areas for investment that will maximize the sustainable contribution of the fisheries sector, food security and economic growth; ii) present and cost specific programs and activities to achieve these priorities; iii) identify possible sources of financing for the specific programs and activities; and, iv) provide a framework for implementation and monitor progress in the short to medium-term.
3. According to the TFSP, key challenges to sustainable fisheries management and development in Tonga are:
 - a) inshore community fisheries are increasingly depleted; the ability to enforce the (legislated) regulations at the community level is weak, or non-existent, and community co-management is at an early stage of development, both in terms of its organization and geographical coverage;
 - b) most of the commercially caught fish species are depleted and exports have declined substantially with poor prospects for recovery under current arrangements;
 - c) management plans have proved difficult to implement;
 - d) the large-scale tuna longline fishery and deepwater snapper fishery are limited by logistic and infrastructure constraints; the deepwater snapper fishery is threatened by economic overfishing (rather than by resource depletion) requiring a strong economic dimension to its management;
 - e) lack of guidelines on investment, including in aquaculture;
 - f) public-private partnerships and engagement with industry and civil society are at an early stage and the dialogue with sector stakeholders requires greater engagement with outer island communities;
 - g) government support services are inadequate at all levels and budget and other resource constraints will limit government intervention funded from internal resources; and,
 - h) at all levels, communities need appropriate tools and equipment (such as boats and fishing gear) to enable them to shift or disperse effort from areas of high concentration to other locations.
4. Project activities will be delivered by MOF and include procurement of consulting services, non-consulting goods and services, training, infrastructure, workshops and equipment, financing of operating costs required to implement and support a range of fisheries management measures; and financing of a PMU.
5. A key delivery principle for the Project is to provide opportunities for engagement with the National Fisheries Council, coastal communities, industry and interest groups, civil society and non-governmental organizations. The primary stakeholders in terms of number, poverty levels and vulnerability are the coastal

fishing communities, particularly women. In terms of contributions to economic growth and development, the coastal and large-scale commercial fishers, the post-harvest sector, and associated support services are primary stakeholders. There may be opportunities for joint venture investments, within a clear foreign investment policy, that leverage local engagement with domestic sources of finance for development of fisheries infrastructure, for value added enterprises, tourism, aquaculture, and vessel repair and maintenance services.

6. This Project is designed to implement the key priorities of the TFSP and address core institutional capacity gaps hindering improved management of selected fisheries. The Project is designed in two six-year phases and organized in the following four components which mirror the organizational structure of MOF.

7. **Component 1: Strengthening Fisheries Governance (National IDA US\$0.4 million; Regional IDA US\$1.71 million).** The objective of this component is to improve fisheries governance in Tonga's tuna longline, deepwater snapper and inshore commercial fisheries through priority interventions, including licensing and registration, and implementing fishing rights frameworks. This will ensure that Tonga meets its regional and international obligations and commitments as well as improves compliance with Tonga's domestic legislation.

8. This component is organized into two sub-components to support the following activities:

- a) **Sub-component 1.1: Strengthening Fisheries Compliance Capacity (National IDA US\$ 0.4 m; Regional IDA US \$1.69 m)** This sub-component will support MOF to carry out a program of activities designed to strengthen licensing and rights-based management for inshore fisheries and fisheries in the Recipient's territorial sea, by: (a) reviewing and updating the Recipient's Operational Compliance Strategy; (b) reviewing and updating the Recipient's national plan of action for illegal, unreported and unregulated fishing; (c) undertaking a scoping study into the use of electronic monitoring and electronic reporting in fisheries; (d) undertaking a review of the Recipient's fisheries observer program including updating the Recipient's observer manual; (e) undertaking an assessment of options for community engagement in SMA compliance activities; (f) establishing a program to identify and register commercial fishers; (g) developing a rights-based fisheries management framework to support the aforementioned commercial fisher registration program; and (h) providing equipment and facilities to the Ministry of Fisheries to undertake inshore fisheries compliance activities.
- b) It is important to note that the review of the observer program will include identification of strategies for program improvement and ensure opportunities for women's participation are included in the program. In addition, the work to strengthen SMA compliance activities will be targeted at bringing the skills and competencies of community members of SMA Committees to a level where they can undertake safe and effective compliance functions. Training will involve: production of a compliance manual that documents standard operating procedures for SMA compliance activities, covering a complete program of activities about fisheries regulatory compliance, including education, advisory, enforcement, and issuing infringements. Fisheries officer training for SMA Committee members will include content on: fishery compliance officer ethics and limits of powers, health, safety and security issues, applicable laws and regulations and

geographic area of jurisdiction, collection, evaluation and preservation of evidence, general inspection procedures such as interview techniques, report writing, and preparing briefs of evidence, among other actions following inspections. It will be made explicit that SMA Committee members involved in compliance activities do not have authority to carry nor use weapons to conduct their activities and are not authorized to conduct investigations into criminal activities or to engage in criminal prosecutions.

- c) In addition, the infrastructure and assets financed by this component will include the purchase of three rigid hull inflatable patrol vessels, three vehicles for inshore fishery compliance activities, compliance operations sheds, and safety equipment to support safe compliance operations. This equipment is purchased for MOF and will be operated and maintained by MOF. It is important to note that the three rigid hull inflatable vessels do not have the capacity to be used as a stand-alone platform for offshore compliance activities. These vessels would operate strictly in coastal fisheries within the 12 nautical miles territorial sea in accordance with Tonga's domestic regulatory framework for coastal fisheries. Compliance operations sheds will be built to house these vessels and to securely store safety and operational equipment used for coastal fisheries compliance activities. The sheds and safety equipment will not be involved in compliance activities beyond the territorial sea.
- d) **Sub-component 1.2: Monitoring, Control and Surveillance in Tonga's Exclusive Economic Zone (Regional IDA US\$ 0.02 m)** This sub-component will support fisheries monitoring, control and surveillance activities in the Recipient's exclusive economic zone through the provision of fuel for joint patrols by MOF. Implementation of sub-component 1.2 will be conditional upon the Tongan fisheries laws and regulations being consistent with the provisions of Article 73 of the United Nations Convention on the Law of the Seas.

9. **Component 2: Strengthening the Knowledge Base for Fisheries and Aquaculture (National IDA US\$1.17 million; Regional IDA US\$3.38 million).** The objective of this component is to improve fisheries science for informed management decision-making to underpin the three selected fisheries and two aquaculture species supported by the Project.

10. The component is organized in three sub-components to carry out the following activities:

- a) **Sub-Component 2.1: Improving Fisheries Science for Decision-making of the Selected Fisheries (National IDA US\$0.3 million; Regional IDA US\$2.01 million).** This sub-component will support MOF to better fulfil its regional fisheries monitoring and stock assessment obligations to FFA, SPC and WCPFC. Specific work includes conducting monitoring and assessment studies for improving fisheries science for decision making in offshore and inshore commercial fisheries. It is expected that by the end of the Project, the tuna longline, deepwater snapper and inshore commercial fisheries will have their catch and effort data systematically recorded annually.
- b) **Sub-Component 2.2: Developing High Potential Aquaculture Technologies (National IDA**

US\$0.39 million). This sub-component will develop high potential aquaculture technology for mabé pearls and giant clams, by: (a) reviewing and updating the mabé pearl industry development plan; (b) supporting development of the Mabé Pearl Industry Association including strengthening governance, and providing operational support, training, and tools and equipment; (c) upgrading equipment and facilities at the Sopa Mariculture Centre; and (d) providing training and capacity building of Ministry of Fisheries staff. Specific activities will include: (i) updating the mabé pearl industry development plan, (ii) support the Mabé Pearl Industry Association to expand and improve operations (specifically through establishment of an incorporated entity, connection of utilities, provision of tools and equipment, and capacity building), (iii) upgrade Government's Sopa hatchery for pearl oysters and giant clams and assess the feasibility of developing satellite hatcheries for both species in Ha'apai and/or Vava'u (and, if deemed viable, the Project may allocate funding to develop one or both of these hatcheries), and, (iv) capacity building. The Project will specifically target women for extension services through MOF and the Industry Association, and support women owning productive assets by becoming mabé pearl producers. The Project will specifically support MOF and the Mabé Pearl Industry Association to recruit and support at least eight new women-owned mabé pearl businesses (out of 30 total producers). Increasing women owned portion of this sector from 0% to 25% will be a considerable contribution of the Project.

- c) **Component 2.3: Strengthening Tonga's Special Management Area Program (National IDA US\$0.48 million; Regional IDA US\$1.37 million).** The objective of this sub-component is to support MOF in strengthening and expanding the SMA program that functions in the inshore territorial sea only out to 12 nm. SMAs are a critical tool to develop community understanding of the need for and benefits of fisheries management, including establishing a network of marine protected areas. Having strong community-based support will assist MOF in implementing more efficient inshore fisheries management actions, including measures to improve the number of women in formal decision-making roles such as SMA committee members. It is important to note that although the benefits to Tonga from SMAs far outweigh the adverse impacts on landlocked and/or neighboring non-SMA communities, the issue is important and several options for mitigation are included in the program to ensure that the effects of SMAs on the food supply and livelihoods of landlocked and/or non-SMA communities are adequately addressed.
- d) Specifically, this sub-component will support MOF in strengthening its SMA program, by: (a) reviewing and updating SMA management plans; (b) providing training and capacity building activities to Ministry of Fisheries staff to support improved SMA management and compliance with SMA management plans; (c) providing training and equipment to Coastal Community SMA Management Committees to strengthen SMA management; (d) providing training and support to Ministry of Fisheries staff to improve SMA monitoring and evaluation developing a community based SMA monitoring program; and (e) reviewing and

strengthening SMA establishment procedures. This support will include, for example: ongoing support for SMA communities to ensure their effective implementation. This will involve training and capacity building for community members directly involved in SMA administration, and a broader group involved in SMA fish harvest or other employment related activities. It will also involve support for minor assets that are consistent with helping the SMA Committee to meet the management plan goals.

e) Specific training and capacity building will be provided for:

- Compliance operations, which would include training on fishery compliance offer ethics and limits of powers, health, safety and security issues, applicable laws and regulations and geographic area of jurisdiction, collection, evaluation and preservation of evidence, general inspection procedures such as interview techniques, report writing and preparing briefs of evidence, analysis of information, such as licenses, logbooks, vessel records as well as vessel boarding and inspection techniques and hold and fishing gear inspections, among other. However, it would also be made clear that SMA Committee and community members will not have any authority to carry or use weapons to conduct their activities and they are not authorized to conduct investigations into criminal activities nor engage in criminal prosecutions.
- Collection and reporting of biological and ecological information
- Collection and reporting of socio-economic information
- Alternate livelihoods

f) Specific minor assets will be provided, such as:

- SMA support vessels
- Community meeting halls (sheds)
- Marker buoys, ropes, and anchors for SMA boundaries
- Safety equipment such as lifejackets and flares
- Fish Aggregating Devices (FADs) to encourage fishing beyond SMA boundaries
- Measuring equipment for surveys
- Compliance catch data equipment such as for fish and net measurement (no weapons)
- Compliance equipment (including binocular, digital camera, marine radio)
- Monitoring and evaluation, and field survey equipment (including underwater camera)

g) Specific actions that may be adopted to mitigate the impacts on landlocked and/or neighboring non-SMA communities in terms of restriction of access to fisheries resources in SMA areas, would include, among others:

- Non-SMA communities can carry out subsistence fishing but not commercial fishing. This method works well in Fiji. In Samoa, coastal communities cannot exclude outsiders from traditional fishing areas, but they can make rules that are applicable to both residents and outsiders. The same approach could be applied in Tonga's SMA program.
- MOF could consider establishing a "Joint SMA" in which several communities (including landlocked and non-SMA communities neighboring SMA community areas) have access

to an extended SMA area managed directly by MOF. Precedent has already been set with three existing SMAs that are on uninhabited islands and are not managed by a coastal community SMA Committee, rather they are managed directly by MOF.

11. **Component 3: Investing in Sustainable Fisheries Management and Development (National IDA US\$1.22 million; Regional IDA US\$0.5 million).** The objective of this component is to strengthen sustainable fisheries management and development of the selected fisheries. Currently, there is strong supporting legislation for management of the tuna longline and deepwater snapper fisheries. However, an effective policy and regulatory framework to support aquaculture development, specifically for mabé pearl and giant clam, does not yet exist nor is there an inshore commercial fishery management plan. This component will support sustainable commercial fishery and aquaculture management and development, by: (a) reviewing and updating existing fisheries management plans; (b) developing and implementing an inshore commercial fisheries management plan; (c) developing a code of conduct for responsible fisheries; (d) undertaking a review of aquaculture development plans; (e) developing aquaculture biosecurity measures; (f) conducting aquaculture market analysis to understand requirements and opportunities for growth; (g) developing marketing strategies for domestic operators; and (h) developing a master plan and conducting a feasibility study to identify specific fisheries infrastructure needs.
12. **Component 4: Supporting Effective Project Management (National IDA US\$1.56 million; Regional IDA US\$0.06 million).** This component will ensure effective and efficient Project management through establishment and operation of a PMU. These funds will provide needed resources for Project coordination, financial management, procurement, monitoring and evaluation, and safeguards. Specifically, this component will support technical and operational assistance to: (a) the PMU on Project management and implementation; and (b) MOF to facilitate inter-agency engagement and cooperation, development partner coordination, and coordination of training and capacity development activities under components 1, 2 and 3. The PMU will include a minimum staffing complement, including: (i) a Project coordinator; (ii) a procurement officer; (iii) a financial management officer; (iv) a safeguards specialist and stakeholder liaison; and, (v) a monitoring and evaluation officer.
13. It is important to note that budget for training and capacity building for MOF staff is embedded in the budget for each component. The PMU will undertake a coordinating role for all training and capacity building provided by the Project, for staff and stakeholders (SMA Committee members, aquaculture producers, etc). The scope of this role will be limited to ensuring efficient coordination and delivery of training and capacity building activities that avoids overlap and duplication. The PMU role will not involve significant levels of direct training nor directly control training budgets.
14. In parallel, a CSU, overseen by the MF, will provide additional Project management, safeguards and fiduciary support services to this Project and other World Bank financed projects in Tonga. For implementation, the CSU will provide both implementation and advisory services in procurement, financial management, as well as safeguards, M&E, and contract management. For

capacity building, the CSU will play a central role in capacity building of staff in MOF and other ministries engaged in World Bank financed operations.

15. **Additional Background on the selected fisheries:** The selected fisheries and aquaculture species targeted by the Project are as follows:

- 1) Fisheries
 - a) Offshore Fisheries: i) Tuna Longline; and ii) Deepwater Snapper
 - b) Inshore Commercial
- 2) Aquaculture shellfish species
 - a) Mabé Pearl (*Pteria penguin*)
 - b) Giant Clam (*Tridacna spp*)

Number of Species that comprise each Selected Fishery

Fishery	# Species in Fishery
Tuna longline	16
Deepwater snapper	12
Inshore commercial	32
Total	60

16. It is important to note that Tonga protects species under Tongan law, WCPFC and CITES. In accordance with WCPFC requirements, any protected species that is caught must be recorded and returned to the water. Tuna logbooks record all fish catch, not just catch for sale. WCPFC Conservation and Management Measures (CMM) describe the reporting requirements for certain species. For example, CMM 2010-07 requires implementation of the International Plan of Action for the Conservation and Management of Sharks. CMM 2011-04 protects oceanic whitetip sharks. CMM 2012-04 protects whale sharks. CMM 2013-08 protects silky sharks. Protection involves bans on retention of any catch, requires release of any catch, and requires reporting of any catch. CMM 2014-05 is a general CMM for sharks. For Tonga’s coastal and deepwater fisheries, section 19 of the Fisheries Management Act 2002 provides the necessary power to prohibit fishing if a species is protected or endangered.

List of Species that Comprise each Fishery

Tuna fishery (current logbook species)

1. Yellowfin tuna (for sale)
2. Bigeye tuna (for sale)
3. South Pacific albacore (for sale)

4. Skipjack (for sale)
5. Bluefin tuna (for sale)
6. Broadbill Swordfish (for sale)
7. Stripe marlin (for sale)
8. Blue marlin (by-catch)
9. Black marlin (by-catch)
10. Sailfish (for sale)
11. Shark species
12. Oceanic whitetip shark (protected, CMM required reporting)
13. Silky shark (protected, CMM required reporting)
14. Blue shark (for sale)
15. Porbeagle (CMM required reporting)
16. Whale shark (protected, CMM required reporting)

Deepwater fishery (current log book species)

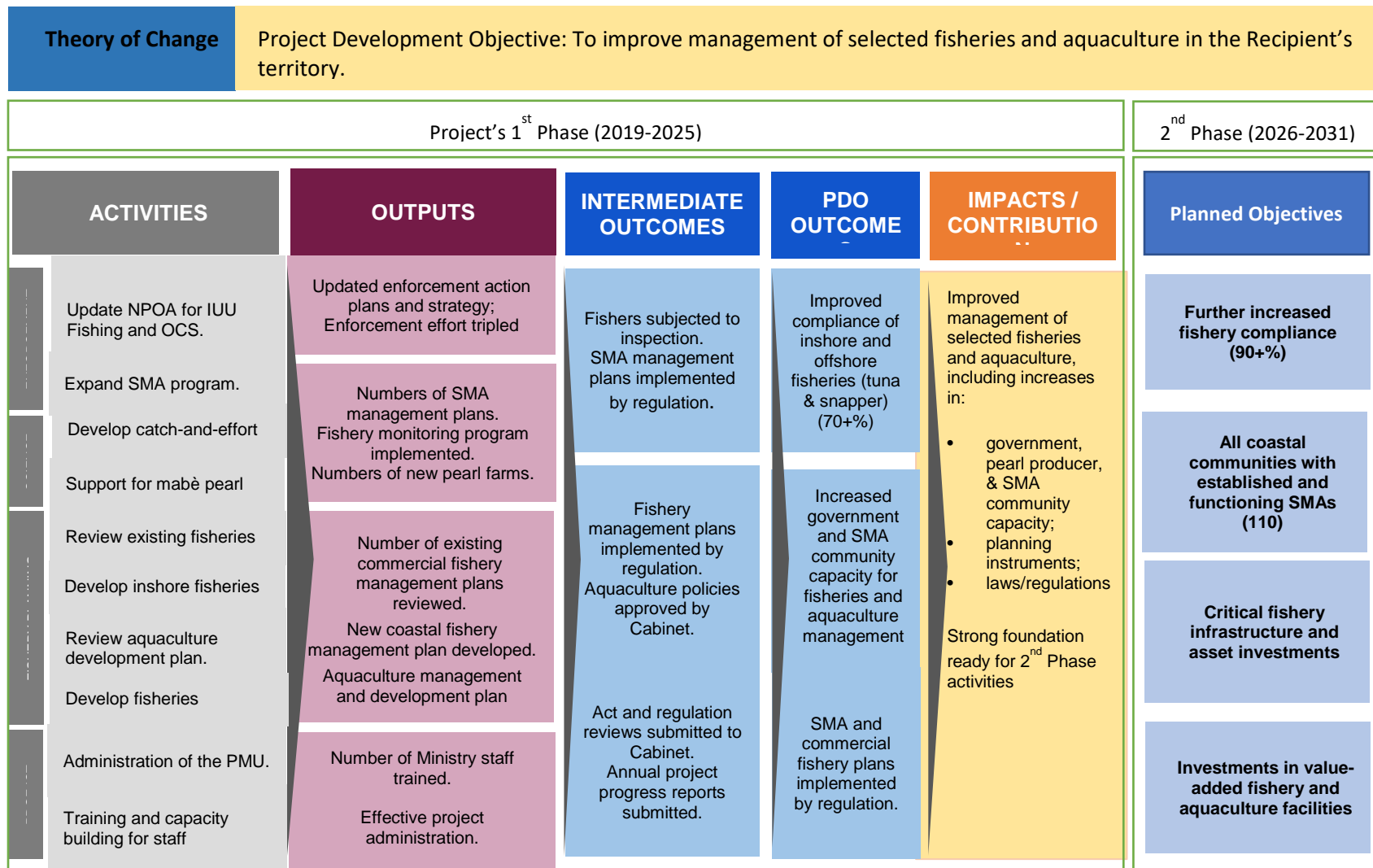
1. Flame snapper (for sale)
2. Ruby snapper (for sale)
3. Crimson jobfish (for sale)
4. Goldeneye jobfish (for sale)
5. Rusty jobfish (for sale)
6. Saddleback snapper (for sale)
7. Bluenose (for sale)
8. Ocean Blueeye (for sale)
9. Redthroat emperor (for sale)
10. Eight Bar Grouper (for sale)
11. Kingfish (for sale)
12. Squid (for sale)

Inshore fishery (Current SPC creel survey species proposed as basis for Tonga catch and effort returns)

1. Striated surgeonfish (for sale)
2. Marbled parrotfish (for sale)
3. Bluespine unicornfish (for sale)
4. Streamlined spinefoot (for sale)
5. Little spinefoot (for sale)
6. Orangespine unicornfish (for sale)
7. Orangespine emperorfish (for sale)
8. Sabre squirrelfish (for sale)
9. Ocean mimic surgeonfish (for sale)
10. Gold spotted spinefoot (for sale)
11. Spotcheek emperor (for sale)
12. Thumbprint emperor (for sale)
13. Elongate unicornfish (for sale)
14. Violet lined parrotfish (for sale)
15. Yellowband parrotfish (for sale)
16. Tricolor parrotfish (for sale)

17. Pinecone soldierfish (for sale)
18. Longface emperor (for sale)
19. Dory snapper (for sale)
20. Longnosed parrotfish (for sale)
21. Bluebarred parrotfish (for sale)
22. Yellowlip emperor (for sale)
23. Spangled emperor (for sale)
24. Striped surgeonfish (for sale)
25. Mullet (for sale)
26. Octopus (for sale)
27. Mud crab (for sale)
28. Lobster (for sale)
29. Sea cucumber (for sale)
30. Dragonfish (for sale)
31. Chalkfish (for sale)
32. Snakefish (for sale)

Diagram 1: Theory of Change



ANNEX 2: IMPLEMENTATION ARRANGEMENTS

Project Institutional and Implementation Arrangements

1. **A Project Steering Committee (PSC) has been established for strategic oversight and coordination of the Project across government.** Overall Project oversight will be provided by the Ministerial level Sector Based Project Steering Committee established by Cabinet Decision 822/Sept 21, 2019. The Committee will meet on a quarterly basis. Functions include providing overall policy guidance, facilitating coordination among relevant agencies, reviewing and endorsing the annual work plan, budget and end of year reports. A Technical Working Group has also been established and will provide guidance on key Project inputs and review outputs on a regular basis. The PSC shall be chaired by the Minister of Finance, and composed of, *inter alia*, the Deputy Prime Minister, representatives of MOF, the Ministry of Internal Affairs' Local Government Division, relevant development partners and other project stakeholders and the CSU.
2. The Executing Agency for the Project is the MF, entrusted with overall responsibility for execution (and any future amendment) of the Financing Agreement. MF also hosts the CSU, which will provide support for procurement, safeguards, financial, and M&E, through the employment of specialists, on an as-needs basis for all World Bank-funded Projects in Tonga.
3. MOF is the Implementing Agency responsible for the coordination and implementation of the Project. While the Minister for Fisheries chairs the PSC, the MOF CEO serves as the Project Director. The MOF structure, including the PMU for implementing the Project, is outlined in Figure 1.
4. The Project has been designed so that each of the MOF's divisions will have responsibility for the Project component that directly correlates with their division's responsibilities:
 - a) Component 1 (Strengthening Fisheries Governance) - Fisheries Compliance Division.
 - b) Component 2 (Strengthening the Knowledge Base for Fisheries and Aquaculture) - Fisheries Science Division.
 - c) Component 3 (Investing in Sustainable Fisheries Management and Development) – Fisheries Management Division.
 - d) Component 4 (Supporting Effective Project Management) – PMU.

Ministry of Fisheries Organizational Chart

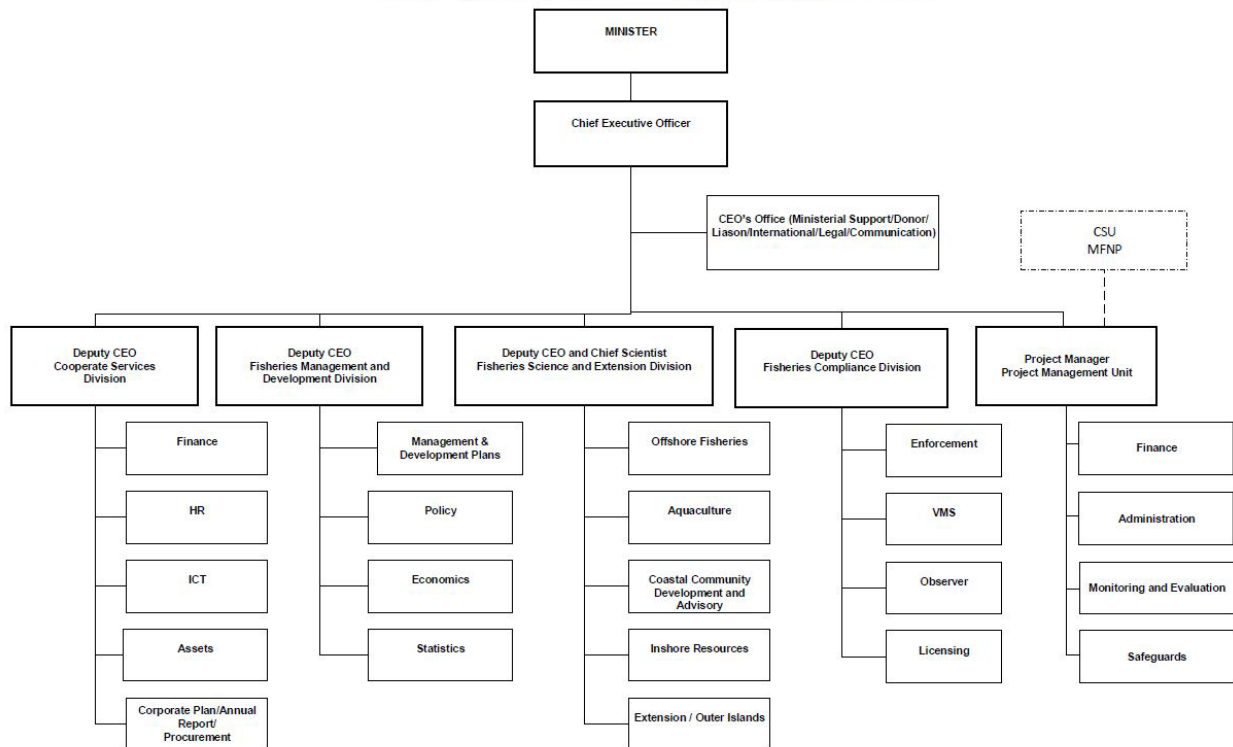


Figure 1: Ministry of Fisheries Organizational Chart including CSU

5. This Project involves a wide range of issues relevant to other ministries, but who are neither directly involved in Project delivery, nor receiving Project funding. These Ministries may provide opportunities for collaboration and support to Project activities. Examples where it is envisaged that there will be a close working relationship include the: (a) Ministry of Environment and Climate Change, (b) the Ministry of Lands, Survey and Natural Resources, and (c) the Tonga Navy (Ministry of Defense).

Financial Management

6. The FM assessment was carried out in December 2018 in accordance with the ‘Principles Based Financial Management Practice Manual’ issued by the Financial Management Sector Board on March 1, 2010, which states that with respect to the World Bank-Financed Investment Operations, the grantee is required to maintain appropriate implementation arrangements which include accounting, financial reporting, and auditing systems adequate to ensure that the PMU can provide the World Bank with accurate and timely information regarding Project resources and expenditures. Overall, the FM arrangements satisfy the FM requirements of the IPF policy. The assessed FM risk of the Project is considered substantial, which will be partially offset by the successful implementation of mitigating measures, that is, timely recruitment of a Financial Management Officer in the

PMU; use of an FM system (accounting software) acceptable to the World Bank; and detailed FM instructions to be included as part of the POM.

Implementing Agency

7. The GoT operates a centralized financial system with the MF approving and processing all expenditure and providing guidelines and ceilings for budget preparation. MOF has limited experience in the financial management of the donor funded projects, and do not have the resources nor the capacity to undertake the FM activities for this Project. Some initial support and training on the procurement and financial management requirements has been provided to the Ministry in October and December 2018 and February 2019 through a World Bank-funded consultant and World Bank fiduciary staff.

8. **Accounting and Staffing Arrangements.** The Project accounts will be maintained either directly in the government accounting system (Sun Systems) or in an off-the-shelf accounting package which will have the capacity to segregate reporting by implementing agency, component, and if required, by category. The Project will be required to employ a qualified FM Officer to maintain Project accounts, prepare the Withdrawal Applications (WAs), work with auditors and prepare annual financial statements, and assist in preparation and monitoring of the Project budget. Administration support will be required for the PMU and this support can develop and maintain a filing system for the transaction documentation. It is envisaged these will be adequate resources to meet the FM requirements of this Project.

9. The CSU will provide support in the startup period, provide expert advice on thematic issues such as taxation and take over the FM responsibilities in closing Projects when the PMU is dissolved on the Project closing date, however the day-to-day accounting functions will be undertaken by the PMU.

10. **Budget Arrangements.** While the budget will be overseen by the implementing agency, the Project budget will be prepared and monitored by the PMU with support from the CSU. The PSC will review and endorse the budget during its annual review meeting with support from the CSU. It should be developed from the work plan. The procurement plan should be consistent with the information provided in the Project budget. The PMU will be responsible to submit the budget to the World Bank by November 30 each year, for review and approval. The annual implementation and budget should be prepared based on the overall budget and monitored on a quarterly basis. Financial reports will include budget to actual comparisons.

11. **Internal Controls.** Where possible internal control procedures will be consistent with the GoT which complies with the Public Finance Management Act 2002 plus all relevant amendments and accompanying Public Finance Administration Regulations and Instructions, which are generally sound.

12. **Flow of Funds.** The funds flow will be to a World Bank Designated Account (DA), in Tongan Pa'anga, held with Treasury. The Project costs will be financed from the DA. Note, the advance of funds for the Project are held in the Programmatic Preparation Advance Designated Account held with Treasury. The project remits evidence of the expenditures to Treasury who submit the Withdrawal Application to the World Bank to document the expenditures made against the PPA.

13. **Financial Reporting Arrangements.** The PMU will prepare interim unaudited quarterly financial reports (IUFRs) which will be required to be submitted to the World Bank within 45 days of the end of the reporting

period. As these reports are to be used as a measuring tool, the PMU should report Project progress (on a component and subcomponent basis and by category) with adequate description, explanation, and analysis of variances. It is expected that the format will be consistent with International Public-Sector Accounting Standards (IPSAS) reporting requirements. In addition, commitments (contractual amounts not yet paid but where a legal obligation exists) will be disclosed in the reports.

14. **External Audit Arrangements.** An annual audit will be required of the Project accounts. The format for the annual financial statements will be consistent with IPSAS reporting requirements. The Project audited financial reports must be received by the World Bank within six months of the end of the reporting fiscal year. The Tongan Audit Office is the auditor for other World Bank-financed Projects and it is anticipated that they will audit this Project. The auditors will be required to provide a detailed Management Letter containing their assessment of the internal controls, accounting system, and compliance with financial covenants in the Legal Agreement.

15. **Supervision Plan.** An FM implementation review field mission will be conducted at least twice a year with consideration given to additional missions early in implementation to ensure that all World Bank FM requirements are met. In addition, the FM team will conduct a desk review of the quarterly interim financial reports, review the annual audit reports and Management Letters, and follow up on material accountability issues by engaging with the Task Team Leader(s), clients, and/or auditors.

Disbursements

16. The disbursement arrangements will allow each program to use the following methods: (a) advances into and replenishment of the DA, (b) direct payment from the grant account, (c) reimbursement, and (d) special commitment. The DA will be operated on an advance basis and the initial advance will be made through the completion of a WA.

17. The subsequent replenishments will be made through submission of WAs providing details on the use of funds previously advanced, based on Statements of Expenditures and reconciliation of the DA. It is expected that direct payments will only be used for payment on large contracts requiring payment in foreign currency, that is, international technical and financial advisers.

18. All direct payment applications would be paid based on documentation provided which would include evidence that the goods or service had been satisfactorily delivered or completed, evidence that the goods or service are part of the work plan and included in the budget, and a copy of the invoice is provided by the supplier.

19. Designated Account (DA). The Project will have a DA for IDA Advances, with the currency of the DA in Tongan Pa'anga. The ceiling of the DA will be specified in the Disbursement and Financial Information Letter.

Eligible Expenditures

Category	Amount of the Financing Allocated	Amount of the Financing Allocated	Percentage of Expenditures to be Financed (inclusive of Taxes)

	(expressed in USD)	(expressed in SDR)	
(1) Goods, works, non-consulting services, and consulting services, Operating Costs, and Training and Workshops under Components 1.1, 2, 3, and 4 of the Project	9,960,000	7,170,000	100%
(2) Operating Costs under Components 1.2 of the Project	20,000	15,000	100%
(3) Refund of Preparation Advance	20,000	15,000	Amount payable pursuant to Section 2.07 (a) of the General Conditions
TOTAL AMOUNT	10,000,000	7,200,000	

20. The Refund of the PPA is to finance the costs of Project preparation pre-paid by MOF to finance the following activities: travel, accommodation and per diem for MOF staff field site visits to Ha'apai, Vava'u and Tongatapu during Project preparation missions and stakeholder consultations, meals (e.g., coffee breaks, dinners) during Project preparation missions in Tongatapu and Vava'u, vehicle fuel to transport mission team members across Tongatapu and Vava'u during field visits and preparation missions in Nuku'alofa, advertisement costs of the core PMU staffing complement and MOF staff travel, accommodation and per diem for a dedicated procurement training session in Sydney.

Funding Sources

Source	Amount (US\$ million)	Share of Total (%)
World Bank – National IDA Grant	4.35	43 %
World Bank – Regional IDA Grant	5.65	57 %
Total	10.00	100%

Procurement

21. **Implementation Agency.** MOF is the implementation agency and responsible for all the procurement activities. Within MOF, a PMU will be established, and a procurement specialist will be recruited in the PMU. Additionally, the CSU will provide support to the PMU on procurement implementation.

22. **Applicable procurement regulation.** Procurement for the Project will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers (Procurement Regulations), July 2016 (revised November 2017 and August 2018), and provisions stipulated in the Procurement Plan approved by the World Bank. Procurement activities will

use the World Bank's Standard Procurement Documents where required or templates which are agreed with the World Bank.

23. **Procurement risk assessment.** A procurement risk assessment of the implementing agency been carried out. Key procurement risk areas include: i) limited capacity of MOF; ii) inadequate staffing of the Project implementation team; iii) low efficiency in processing procurement process; and iv) weak supply capacity of the national market.

24. To help mitigate these risks, the following mitigation measures were agreed:

- a) MOF will establish a PMU during the Project Preparation phase and engage a full time Procurement Specialist in this Unit;
- b) MOF will work closely with the CSU on fiduciary matters;
- c) STEP will be used to monitor procurement progress and identify delays; and
- d) The World Bank task team will provide necessary training to the PMU at the early stage of Project implementation, at the same time, MOF and PMU will seek other training opportunities (e.g. on-line training) for procurement and contract management.

25. **Project Procurement Strategy for Development (PPSD) and Procurement Planning.** A PPSD was prepared by MOF for procurement arrangements and planning. Based on the analysis of the PPSD, a procurement plan has been prepared and will be finalized prior to negotiations. The procurement plan will be updated at least annually or as needed during implementation.

26. The various types of procurements to be financed by the proposed IDA grant are summarized as follows:

- a) These will be total of US\$ 5.89 million worth of procurable activities.
- b) Procurement of consultancy services represents 56% (US\$ 3.33 million) from consulting firms and individual consultants. The procurement methods include: CQS and selection of individual consultants.
- c) Procurement of goods represents about 39% (US\$ 2.3 million) of the total amount, with the procurement of boats required across two components being the single largest procurement activity. All the remaining activities are low-value. The procurement methods involved will be request for bids (international) and request for quotations (international and national).
- d) Procurement of civil works represent about 5% (US\$ 0.29 million) of total funding and given the small size of the activity, the works will be procured via request for quotations at a national level.

27. **PPSD and Procurement Plan.** A draft Procurement Plan has been prepared for the Project based on the analysis of PPSD which was developed by MOF. The procurement plan will be finalized and entered STEP for approval by the World Bank prior to negotiations.

28. **Frequency of Procurement Support Mission.** In addition to the prior review to be carried out by the World Bank, implementation support missions will be undertaken at least once per year. Procurement post review will be conducted annually.

Environmental and Social (including safeguards)

29. The Project is being implemented at the national level by MOF. A PMU has been established in MOF to implement the Project and comply with safeguard policies. In addition, the CSU will provide additional general oversight and backstopping services for all World Bank Projects in Tonga in the areas of safeguards compliance.

30. MOF will have the overall responsibility for ensuring that environmental and social issues are adequately addressed within the Project. Within the Ministry, various roles and responsibilities have been identified:

- a) Deputy CEOs: The subcomponent structure mirrors the organization structure of the MOF. Each Deputy CEO will have oversight of implementation of one of the four components.
- b) PMU: The PMU will have a full-time Environment and Social Safeguards and Stakeholder Liaison and Engagement Officer (20% safeguards, 80% stakeholder liaison) located in the PMU and reporting to the Project coordinator. This person will ensure implementation, monitoring, review, and update of the ESMF, and any other instruments prepared under the ESMF such as Environmental and Social Management Plans. This person will be responsible for ensuring that Project safeguards comply with the Financing Agreement, Tonga's laws, and the World Bank's Safeguard Policies, and for implementing the SEP and the GRM. The Officer will also ensure Project staff receive appropriate safeguards and stakeholder engagement training and capacity building.
- c) CSU: A CSU has been established in the MF. The CSU will have a full-time safeguards specialist who will provide safeguards support for the Project on an as needed basis.

31. **Grievance Redress Mechanism.** Principles of the Complaints Process: The Complaints process is for people seeking satisfactory resolution of their complaints on the environmental and social performance of the Tongafish Pathway project by the Ministry of Fisheries (MoF) in Tonga.

32. This Process is consistent with the Project's Environmental and Social Management Framework (ESMF).

33. The mechanism will ensure the following: i) the basic rights and interests of every person affected by poor environmental performance or social management of the project are protected; and ii) their concerns arising from the poor performance of the project during the phases of design, construction and operation activities are effectively and timely addressed.

34. How to get in touch: Anyone can make a complaint or grievance, ask for information on the project or get in touch for any reason. Complaints can be anonymous. The various ways to get in touch are:

- a) By Phone: +676 21-399 (MoF offices)
- b) By email: complaints@tongafish.gov.to
- c) By mail or in person to: Ministry of Fisheries Head Office, Vuna Rd, Sopo, Tongatapu, Tonga
- d) Website: www.tongafish.gov.to

35. This information, and a summary of the process for answering queries and managing grievances, has been published on the Ministry website or can be provided in person upon request, by email, or by mail.

36. **Roles and responsibilities.** The following are persons involved in the complaints process and their

supporting roles and responsibilities.

- a) Focal Point for managing the TONGAFISH PATHWAY Complaints Process: Project coordinator for the Pathway Project.
 - b) The person who will manage the database and record keeping: Ms. Lavinia Vaipuna, ICT Manager, MoF Head Office.
 - c) Person who will answer simple queries and manage simple complaints: Project coordinator for the Pathway Project.
 - d) Person who will manage difficult complaints or grievances: Mr Vilimo Fakalolo, Deputy CEO Corporate Services.
 - e) Person who will prepare report for World Bank reporting: Project coordinator for the Pathway Project.
 - f) A Grievance Committee will be formed to address any complex or significant grievance management. This committee will be comprised of appropriate senior officials (Assistant Secretary level or above) from the following: i) Department of Finance and National Planning with support from CSU Safeguards Specialist; ii) Division representative (Head of Division) managing the project at which the complaint is aimed; and iii) Representative appointed by the Minister of Fisheries.
37. **The complaints process.** All complaints or grievances are entered into an assigned database that tracks progress of each complaint/grievance. Complaints records (letter, email, record of conversation) are stored together, electronically or in hard copy. Each record has a unique number reflecting year and sequence of received complaint (i.e. 2018-01, 2018-02).
38. Each complaint/grievance is assigned a specific person responsible for close out. Note: The Project coordinator will provide a monthly report of all complaints received to the CEO, including details of their resolution or on-going action to resolve the complaint. All notifications of potential legal action will be immediately notified to the CEO.
39. Each complaint or grievance will have a plan for addressing and closing out:
- a) Contractor or Fisheries Officer or similar project person can address issues on site as required.
 - b) If it relates to Contractor activities, Project should ensure the Contractor remedies any damage, pays compensation for damage or loss.
 - c) Use of community leaders and customary methods of conflict resolution is encouraged if necessary and appropriate when an issue emerges.
 - d) If an issue/complaint cannot be resolved on site, it is elevated to the Project coordinator for resolution (with support from the Safeguards Specialist in the CIU). If the Project coordinator and Safeguards Specialist cannot resolve the issue, it is referred to the Grievance Committee.
 - e) If a resolution cannot be found through the Grievance Committee, the final course of action is the Tonga court system after the mandatory investigation of the use of an independent mediator.
40. All simple complaints and grievances must aim to be closed out within 1 month. Complex complaints

should aim to be closed out within 3 months or deferred to the Grievance Committee.

41. All complainants have the right to use the Tonga court system at any time to seek resolution.

42. The Project coordinator will adjust consultations, the GRM, community engagement, project implementation and other aspects as necessary to avoid future complaints and grievances.

43. **Reporting and Evaluation.** Complaints shall be reported in the regular project reporting to the World Bank. It should contain: i) total number of complaints / grievances received; ii) total number resolved; iii) total number under investigation / not yet resolved; iv) total number not yet resolved and exceeds the recommended close out time of 1 month or 3 months; and v) short paragraph on any significant grievances currently not yet resolved and any risks to project implementation.

44. If there are more than 30 complaints / grievances recorded, the Project coordinator may decide to investigate any patterns or repetition of issues that need addressing. The Project coordinator may decide to get an independent consultant to review and provide advice.

Monitoring and Evaluation

45. Proper planning, monitoring, and enforcement of the fisheries sector is important. Fishery management planning ideally requires knowledge of target and by catch species, current stock levels, location of fish stocks, fishing methods, and how much effort is sustainable relative to potential yields. Whilst communities can be delegated management responsibility for fisheries monitoring in small scale SMAs, comprehensive catch and effort monitoring needs to be a core requirement across all types of commercial scale fisheries.

46. Considering that there is currently no comprehensive catch and effort monitoring system for inshore commercial fishery management in Tonga, it will be a significant part of all components to create and implement an appropriate monitoring program. This will require significant capacity building across many government and SMA organizations. Having this information readily available would be a powerful tool in improving performance and outcomes of SMAs and commercial fisheries. This information would also be indispensable in designing creative and effective fishery management approaches in Component 3. The Monitoring and Evaluation Specialist mobilized under the PMU (Component 4) will be responsible for program monitoring, under the close supervision of the Project coordinator.

ANNEX 3: IMPLEMENTATION SUPPORT PLAN

Strategy and Approach for Implementation Support

1. The Implementation Support Plan for this Project will consist of continuous dialogue with the MOF and MF. This will include systematic joint reviews of program implementation, and regular oversight and support for Project fiduciary activities with emphasis to be placed on the risks surrounding institutional capacity identified. Regular dialogue and ongoing implementation support will enable early identification of problems and permit for provision of timely TA to correct any issues that arise.
2. As a part of the joint reviews, the lessons learned from implementing the POM will be sought. These will be incorporated into future revisions and further training will be offered for PMU staff and other relevant stakeholders where necessary.
3. As far as the fiduciary aspects of the operation, the World Bank will provide support in the areas of procurement and FM, as requested. This will include (a) providing training to the respective PMU staff; (b) assisting with the technical specifications for TORs; (c) examining procurement documents and providing feedback to the PMU; (d) monitoring progress that has been made against the detailed Procurement Plan; (e) reviewing Tonga's FM system and planned arrangements under the newly established CSU; (f) assisting with accounting, reporting, and internal controls; and (g) reviewing submitted reports and providing feedback to the PMU.

Implementation Support Plan and Resource Requirements

4. The lack of institutional capacity within the MOF for the implementation of World Bank Projects means that this operation will require ongoing implementation support. This will need to be relatively intensive during the first 12 months of the operation as the PMU becomes accustomed to the requirements of a World Bank operation. As such, three implementation support missions will take place during the initial 12 months of implementation. This will be reduced to two implementation support missions in subsequent years of the operation. These periodic support visits will be complemented by regular audio and video connections with the relevant counterparts.

Time	Focus	Skills Needed	Resource Estimate (Staff Weeks/Year)
First twelve months	Implementation Support Coordination	Task Team Leader	8
		Operations Officer	4
	Overall technical support	Fisheries Specialist	6
		Aquaculture Specialist	3
	Financial management	FM Specialist	2
	Procurement	Procurement Specialist	2
Safeguards	Environmental Safeguards Specialist	1	

		Social Safeguards Specialist	1
12-48 months	Implementation Support Coordination	Task Team Leader	6
	Overall technical support	Fisheries Specialist	3
		Aquaculture Specialist	2
	Financial management	FM Specialist	2
	Procurement	Procurement Specialist	2
	Safeguards	Environmental Safeguards Specialist	1
		Social Safeguards Specialist	1

ANNEX 4: ECONOMIC ANALYSIS

Introduction

1. The Kingdom of Tonga is an archipelagic nation in the southern Pacific Ocean distinguished by its diminutive land area and vulnerability to natural disasters. The Tongan fisheries sector is economically relevant and contributes to an average of 3 percent of the overall economy and an average of 10 percent of the annual value of exports (from 2009 to 2018). In 2018, the net annual value of fisheries was estimated at US\$ 5.4million with a wide variety of direct beneficiaries including local fishers, foreign businesses, and government. Overall fishery benefits are widely dispersed with approximately 24,156 people (representing 24 percent of the total population) regularly engaging in fishery activities.

2. The Project aims to strengthen sustainable management and development of Tonga’s offshore, inshore, and aquaculture fisheries. The corresponding economic analysis is broken down by component with associated benefits and cost streams for Components 1 and 2. The first component represents nearly 18 percent of the total resource allocation, while the second component represents the bulk of the budget – nearly 50 percent of the total resource allocation. Both components represent nearly 70 percent of the total budget. Component 3 (aiming to promote sustainable commercial fishery management) is not included in the cost-benefit analysis due to difficulties to attribute economic benefits. Component 4 is also not included because it refers to the Project management.

3. Component 1 focuses on improving fisheries compliance in Tonga’s offshore and inshore fisheries through a variety of strategies and interventions to reduce IUU fishing, including licensing and registration, and implementing fishing rights frameworks adopted under a management plan. Component 2 aims to improve fisheries science for informed management decision-making to underpin the offshore, inshore, and aquaculture fisheries by i) developing aquaculture technologies, and ii) strengthening SMAs.

4. Our conservative results show that the US\$ 10 million to be invested in the Project are expected to generate efficiency benefits with a net present value of US\$ 1.6 million using the 6 percent discount rate recently adopted by the World Bank for Project evaluation. The internal rate of return (IRR) to this investment is estimated to be 9 percent. Results are robust to adverse changes in the key parameters.

Analytical Approach

5. Most of the beneficiaries are fishermen. Systematic data at the at the community (or fishermen) level is scarce and not easily available. Therefore, additional or marginal benefits were calculated based on background reports or available studies from other international organizations.

6. In the case of **Component 1**, estimated benefit stream focuses on reduction of IUU fishing activities due to stronger monitoring control and compliance, as well as strengthening licensing and rights-based management system.

7. We assume the estimated average illegal activities is nearly 33 percent of the legal fishing activities, according to Agnew et al. (2009)¹⁴ for the Western Central Pacific region (varying from 21 percent to 45 percent).

¹⁴ Agnew D.J., et al. (2009), “Estimating the Worldwide Extent of Illegal Fishing”, *PLoS ONE* 4(2): e4570. doi:10.1371/journal.pone.0004570, University of California San Diego, USA.

This percentage was applied to the 2017 annual fishing exports reported by MOF in their Fisheries Quarterly Report. Most of the fish exports are Tuna. Considering that, under this Project, it is expected to significantly increase the compliance inspections conducted on all fisheries sectors (based on result matrix), we conservatively assume that the illegal fishing activities will reduce by 7 percent.

8. In the case of **Component 2**, estimated benefit stream focuses on reduced fishermen costs, and improved income (for Mabé pearl farmers) and improved managements for newly created SMAs.

9. Our baseline analysis for Mabé pearl farmers was taken from the University of the Sunshine Coast¹⁵ and it is detailed in the table below. We assume that, due to the Project implementation, Project costs will reduce by 7 percent, as well as revenues (due to higher prices) will increase by 7 percent. These estimates were applied to the 12 Mabé pearl farmers receiving extension services, according to the result matrix.

Table 1: Typical Mabé Production (US\$/year)

Annual Production Mabé Pearls	1,620
Average price	30.31
Total Revenue	49,102
Average cost per pearl	11.18
Total Cost	18,112
Total Profit	30,991

10. With respect to SMAs, we assume two types of SMAs: small (nearly 50 fishermen) and large (nearly 100 fishermen). Based on the economic estimates for Tongan artisanal fishermen, from Kronen (2004),¹⁶ we assume that the median revenue for vary from US\$ 368/year (simple inshore fishery system) to US\$ 2,289/year (spear artisanal fishermen). These two types of activities are considered low productivity thus our assumptions are conservative. We also assume that, due to the Project implementation, SMAs will increase their revenue by 7 percent due to better management. These estimates were applied to the 5 SMAs with management plans to be developed by the Project, according to the result matrix.

11. Finally, the economic analysis considers a time horizon of 30 years, to account for the long-term benefits of the Project. The analysis uses a baseline discount rate of 6 percent, as suggested by the World Bank,¹⁷ and uses an annual growth rate of 2.6 percent (from 2014, the economy has varied from 2.5 percent to 2.6 percent (provisional of 2017), and 0.5 percent (nearly US\$ 50,000) as annual maintenance cost for the investments that the Project needs to preserve. Of course, other Project benefits are expected, but the full set of identified benefits cannot be measure due to data constraints, hence the benefits are under estimated.

Conclusions

12. 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 Tongan society. Overall, the NPV is Projected to reach US\$ 1.6 million (using a 6 percent discount rate). The investments evaluated for

¹⁵ University of the Sunshine Coast, "Tongan Mabé Pearl Farming Economic Decision Tool", prepared by Bill Johnston and Damian Hine.

¹⁶ Kronen, Mecki (2004). Fishing for fortunes? A socio-economic assessment of Tonga's artisanal fisheries. *Fisheries Research* 70 (2004): 121–134.

¹⁷ World Bank, "Technical Note on Discounting Costs and Benefits in Economic Analysis of World." *Bank Projects*".

the economic analysis will generate an internal rate of return of 9 percent (see Table 2). The economic analysis shows that if Project implementation is effective and efficient, Project-supported investments will bring substantial economic benefits to the beneficiaries. Results are robust to adverse changes in the key parameters. Increasing Project costs by 10 percent, reducing Project benefits by 10 percent, and varying the default discount factor by 2 percentage units do not change our conclusions (see Table 3).

13. It is important to keep in mind that relevant data is scarce and not easily available. Therefore, this economic analysis, and its results, should be interpreted with caution. More data collection at the fisher level is essential to have a better picture of the associated benefits.

Table 2: Measures of Project worth – Total Benefits, Costs, and Net benefits (US\$)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	...	Year 30
Benefits										
Component 1:										
- Strengthening Fisheries to Combat IUU Fishing		131,413	134,961	138,605	142,348	146,191	150,138	154,192	...	284,566
Component 2:										
- Improving Aquaculture Sector (Mabé pearls)		84,689	86,976	89,324	91,736	94,213	96,757	99,369	...	183,388
- Strengthening SMAs		259,677	266,688	273,889	281,284	288,878	296,678	304,688	...	562,310
Costs										
- Project Costs	34,400	447,200	679,400	1,075,000	1,840,400	2,537,000	1,978,000			
- Maintenance Costs								49,950	...	49,950
Total Benefits	0	475,779	488,625	501,818	515,367	529,282	543,573	558,249	...	1,030,264
Total Costs	34,400	447,200	679,400	1,075,000	1,840,400	2,537,000	1,978,000	49,950	...	49,950
Net Benefits	-34,400	28,579	-190,775	-573,182	-1,325,033	-2,007,718	-1,434,427	508,299	...	980,314
Discount Factor		6%								
NPV - IR (6%)		1,586,419								
IRR		9%								
B/C Ratio		1.2								

Table 3: Sensitivity Analysis

Sensitivity Analysis	Change	NPV (million US\$)	IRR	B/C Ratio
Baseline	6%	1.6	9%	1.2
Decrease in Discount rate	4%	3.5	9%	1.5
Increase in Discount rate	8%	0.5	9%	1.1
Increase in Project costs	10%	0.9	7%	1.1
Decrease in Project benefits	10%	0.8	7%	1.1

Regional Sectoral Context

Note: The Kiribati PROP Project in Phase II is at a very early stage of design. As such, the context presented herein focuses exclusively on the Tonga and Samoa projects as these are fully designed.

- 1. Management of Tonga and Samoa's fisheries affects neighboring Pacific Island Countries' (PIC) fisheries.** Fish resources are transboundary by nature and both Projects generate tangible benefits that cross-national boundaries. In terms of the level of interconnectivity within and between Central Pacific marine ecosystems, it is known that migratory pelagic species (e.g., tuna) move extensively between Central Pacific states. In addition, the homogenous nature of PIC fish populations, at the species level, suggests connectivity for most species of importance to coastal fisheries. For some species, such as spiny lobsters, there is genetic evidence that single stocks exist between certain states. And, for some deepwater snappers, there is evidence of connectivity, for example between Tonga's seamounts and Fiji's Lauan seamounts. In addition, tagging studies show that mahi-mahi and trevallies undergo long distance migration which is likely to extend to other pelagic species. Effective management of these stocks in both Samoa and Tonga contribute to the sustainability of regionally shared stocks. In addition, the Tongan inshore commercial fishery and the Samoan community coastal fishery rely on regional larval recruitment of snappers and spiny lobsters, and larval export from both countries that contribute to the commercial fisheries of other PICs.
- 2. All of Samoa and Tonga's fisheries activities are conducted in accordance with agreed regional approaches to fisheries management.** Tonga and Samoa are signatory to the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, they are also both members of the WCPFC, FFA and SPC. In addition, both are also signatory of the Tokelau Arrangement (TKA), a regional agreement to promote optimal utilization, conservation and management of South Pacific Albacore Tuna fishery. The TKA is a complementary regional fisheries management agreement to the Parties of the Nauru Agreement that targets skipjack, big eye and yellowfin tuna. The original cohort of PROP SOP Projects are all members of the Parties to the PNA, the Phase II cohort are members of the TKA. Both the TKA and PNA are sister agreements on regional management of shared tuna fisheries in the Pacific. Phase II of PROP permits inclusion of TKA member states. In addition, both Projects are also designed in line with the "Future of Fisheries: A Regional Roadmap for Sustainable Pacific Fisheries", endorsed by Pacific leaders in 2015.
- 3. In addition, both Tonga and Samoa are signatory to the regional approach to inshore fisheries management, the Noumea Strategy: "A New Song for Inshore Fisheries, Pathways to Change".** The Noumea Strategy has been endorsed by PICs and Territories in recognition of the interconnectedness of Pacific fisheries, fish stocks, fishing communities and fishing industries. The Noumea Strategy specifically recognizes that the challenges faced in inshore fisheries management are common to every Pacific Island, and that a regional management approach is necessary. Samoa and Tonga's inshore commercial and community fisheries management activities are closely aligned with the Noumea Strategy. The Noumea Strategy notes that inshore fisheries provide the primary or secondary source of income for up to fifty per cent of households in the Pacific region, but that coastal fisheries resources are declining. Some key challenges identified for the Pacific region include an inadequate focus on coastal fisheries management by

fisheries agencies compared to the offshore tuna sector; outdated management policy, legislation and planning, with little or no monitoring of effectiveness or sustainability; poor stakeholder collaboration/connection at the national and regional levels, and; inadequate compliance with fisheries rules and variable/inadequate sanctions. The activities to be financed under both Projects contribute directly to the regional obligations and aspirations of these arrangements.

4. **As such, the expected Pacific regional benefits generated by the Samoa and Tonga Projects include:**

- a. Targeted support for improved management and compliance in the yellowfin, big eye and albacore tuna fishery will support Samoa and Tonga's commitments with the WCPFC and regionally-aligned and informed collaborative programs led by FFA. Both projects will support enhanced management of shared fish resources such as tuna and associated species, through better engagement in regional processes and improved MCS at sea and in ports. This regional benefit will be formally monitored through PDO and/or Intermediate Results Indicators presented in the Results Framework of both Projects.
- b. Targeted support for improved science and management of the deepwater snapper fishery will elicit key lessons on stock assessment, larval exchange and regional biological connectivity that will inform parallel work in neighboring PICs and will be incorporated into the SPC's regional work on this important fishery on improved fishery management measures.
- c. Targeted support for improved management and compliance in the Samoa coastal community fishery and the Tonga inshore commercial fishery reflects Tonga and Samoa's commitments and obligations to the regional approach to coastal fisheries management, the Noumea Strategy. This work will also support Samoa and Tonga's regionally-aligned and informed collaborative programs led by SPC.

5. In both Projects, offshore and coastal (inshore) fisheries activities contribute to Tonga and Samoa's regional commitments and obligations to aforementioned regional agreements: Noumea Strategy and Tokelau Arrangement. Taking a coordinated approach to fisheries management permits Tonga, Samoa and other PICs to share knowledge and resources and tackle collective challenges, such as the growing impacts of climate change on fish stocks and their environment. While Samoa's community-based fisheries management plans (and SMAs in Tonga) will allow local flexibility and tailoring, to achieve regional results, they will be combined with the development and resourcing of relevant and effective MCS mechanisms, which both Project's will support.

Pacific Islands Regional Oceanscape Program Series of Projects

6. **The original Pacific Islands Regional Oceanscape Program (PROP) was developed in 2013 as a Series of Projects (SOP) to be implemented in three phases, each six-years in duration.** Phase 1 began in 2014 and is under implementation in four countries (Federated States of Micronesia, Republic of Marshall Islands, Solomon Islands, Tuvalu) and one regional institution, FFA. Phase I national Projects share the same PDO and Results Framework. They also reflect the same component design drawing on a pre-set menu of agreed investment activities (Table 1). All four countries are members of the Parties of the Nauru Agreement (PNA) and operate the Vessel Day Scheme for their tuna purse seine fisheries and two long line tuna fisheries. The main tuna species targeted in the Phase I cohort are skipjack, bigeye and yellowfin. Table 1 lists the menu of activities supported by PROP from which participating Phase I countries can select; all of which have a

strong regional dimension with respect to the shared tuna resources (Component 1) and shared coastal sea cucumber (beche-de-mer) fishery (Component 2) in the Pacific region.

Table 1: PROP Menu of Activities

Component
1: Sustainable Management of Oceanic Fisheries
Capacity building and institutional strengthening at both national and regional levels in the Vessel Day Scheme
Increased monitoring, control and surveillance to enforce tuna access rights regimes
Increased local value added to tuna products
2: Sustainable Management of Inshore Fisheries
Management of export and high-value fisheries
Rights for Stakeholder-Managed Fisheries
Linkages to Markets and Local Entrepreneurship and Skills Development
3: Habitat Conservation
Support to Marine Protected Areas and Marine Management Areas
4: Regional Coordination, Learning, and Monitoring and Evaluation

7. **Phase II include new fisheries projects in Kiribati, Tonga and Samoa.** The new Projects represent an evolution from the original architecture of the PROP SOP in Phase I by applying the myriad lessons learned from implementation of Phase I and reflecting: (i) the Noumea Strategy on regionally shared coastal fisheries resources, and, (ii) the specific regional context of TKA members countries that complements the context of the members of PNA represented in the Phase I cohort.
8. **Phase II Projects are aligned with the overarching, regional objectives of the original PROP SOP, and contribute to the regional goals of sustainable offshore (oceanic) and inshore (coastal) fisheries management.** Note the regional work on the coastal sea cucumber fishery in the original PROP SOP was not tagged to leverage Regional IDA, rather, at the time, only the tuna fisheries were tagged for Regional IDA funding. Whereas, the Phase II PROP cohort expands on the coastal fisheries investments embedded in the original Phase I Projects and emphasizes the inherent regional nature and benefits to be generated by the Phase II Projects complementing the regional benefits generated by the PROP Phase I Project's investments in the regional coastal sea cucumber fishery (Component 2) and regional coastal fisheries habitats (Component 3).

Lessons Learned from PROP SOP Phase I

9. **Phase I projects are midway through their project cycle, however, are all undergoing moderate to comprehensive restructuring** to i) adjust design issues related to the original DLI modality; and (ii) to incorporate strategic opportunities in both oceanic and inshore fisheries given advancements made during the first stage of these Projects. The World Bank has gained considerable experience in strengthening Pacific fisheries management through the PROP. The Project design benefits from the World Bank's engagement in the fisheries sector in the Pacific through PROP and globally through programs in West Africa and the Indian Ocean and builds upon key lessons learned.

10. Specific lessons learned during the implementation of PROP Phase I, which have informed the design of the Phase II Tonga and Samoa Projects include the following:

- a) Stand-alone Project. PROP was originally envisaged as a SOP which included separate, but complementary, national Projects and a regional Project implemented by FFA in collaboration with other regional agencies. FFA was to provide a regional program support function to the national Projects. PROP Projects also shared the same core documents including the Project Appraisal Document and POM. However, the intended efficiencies did not materialize as this arrangement led to significant confusion during implementation in part due to the size and complexity of the founding documents, and a lack of specificity on each Project. The structure also added significant complexity to the later Project restructuring. For these reasons, these Projects are standalone IPFs designed to generate joint regional fisheries benefits alongside the original Phase I PROP Projects.
- b) Building on national strategies. In some countries, PROP was not closely aligned with national priorities, leading to limited Government buy-in. This Tonga Project is founded on the TFSP which presents the strategic direction and guides investment planning for Tonga's commercial and community fisheries and has strong government ownership. The components of the Tonga Project contribute to the three long-term goals for the sector outlined in the TFSP and the structure of the components match the core functions of the respective divisions of the MOF. Both Projects generate and are linked with Regional fisheries agreements and operating frameworks such as WCPFC, FFA, SPC and TKA, among others.
- c) Investment in Project management. There was high turnover and extended absence of PROP Phase I key counterparts, which contributed to lengthy delays in implementation. The Project management support arrangements deployed at the beginning of PROP (i.e., FFA regional support for procurement, financial management, safeguards and M&E) did not eventuate and as a result there was a need to adjust these arrangements through the addition of technical experts to ensure gaps in expertise were filled and to build the capacity of counterpart staff. Both Projects will invest significantly in Project management to ensure sufficient staffing, reduce administrative burden on the implementing agency and minimize the risk of delays. Both will benefit from the additional support from national CSUs.
- d) Programmatic Preparation Advance. PROP implementing agencies faced significant delays in recruiting Project management staff and establishing initial Project activities. Both Projects received a programmatic preparation advance that will address this key bottleneck prior to Project commencement and help to reduce delays in Project implementation.
- e) Safeguards. The original cohort of PROP Projects suffered from a lack of safeguards staff within the implementing agencies. In addition, environmental and resettlement safeguard requirements were sometimes outside the Government's normal mandate and experience. As such, core arrangements such as GRM and Environment, Health and Safety Incident reporting forms were not in place and safeguards were not proactively managed. A dedicated safeguards PMU member will be in place within the both Project teams and CSUs to allow for the effective coordination of tasks and to help the timely preparation and implementation of safeguard instruments in a consistent manner.
- f) Monitoring and evaluation. The original PROP cohort shared a highly complex results framework that was difficult for personnel without highly specific skills in both M&E and fisheries to implement. This combined with a lack of M&E staff led to little monitoring being carried out by the implementing

agencies. Both Phase II Projects have entirely new, standalone, clear results frameworks and will have dedicated M&E PMU members in addition to M&E support from the national CSUs.

- g) Disbursement Linked Indicators. The DLI modality used in PROP was expected to strengthen the PNA vessel day scheme through incentivizing transparency and compliance, improving trust and cooperation between countries, and providing flexible funding to national fisheries agencies. Neither of the Phase II Projects include DLIs as 1) they are both TKA members, not PNA members, and 2) DLIs proved to be largely ineffective in improving transparency and compliance and therefore would be unlikely to encourage TKA compliance.

ANNEX 6: Gender Assessment

Introduction

1. The Project includes several strategies to strengthen sustainable management and development of Tonga's commercial, aquaculture and community fisheries. Impacts on gender and social inclusion are explored in the following assessment which is structured as follows: i) current situation; ii) opportunities and risks; and iii) recommendations.
2. This assessment was formulated based on in-country consultations in Nuku'alofa with 12 organizations representing the interests of women and youth, a review of the relevant literature and meetings with the Project team, fisheries and aquaculture staff.
3. Gender specific dimensions in fisheries can impact Project development objectives and are important considerations in line with the WB's Consolidated Gender Action Plan (CGAP) which supports actions to address: (i) low female labor force participation and limited access to markets (Focus Area 1); (ii) high prevalence of gender-based violence (Focus Area 2); (iii) low participation in public decision making (Pathway 2); (iv) disproportionately high degree of women affected by non-communicable diseases (Focus Area 2); and (v) women's vulnerability to emerging risks (Focus Area 3). The first three of these priorities are of direct relevance to the implementation of Project activities.
4. Tonga has key policy documents formulated following nationwide consultations that point to the need for social inclusion in the design of development projects and the desire of women and youth to participate more fisheries and aquaculture. Women identified women's economic empowerment as a priority area in the upcoming National Women's Policy, and youth involvement in fisheries and aquaculture is identified as a priority for youth participation in the upcoming National Youth Policy.
5. The TFSP notes from previous experience disadvantage can include certain areas and communities and that "particular attention is needed to ensure that the voice of disadvantaged stakeholders is heard". The TongaFish Pathways Gender Assessment intends to provide further details of these considerations and suggest actions that are acceptable to local stakeholders and can increase inclusion of women and youth into Project decisions and activities.

Current Situation

6. While Tongan women have traditionally held high status in local culture, legislative, economic and social changes over the years have entrenched exclusion of women from certain realms. This exclusion requires an attentive response, particularly to get women in the rooms where decisions are made, and to reduce barriers for livelihoods and work.
7. Nationally, Tonga enjoys gender parity on access of women to health and education services. The population's literacy rate is high (99%) and equal for men and women, which has contributed to women's active participation in committees and other decision-making fora where they are currently included.
8. At the family level, in Tongan culture, women and men eat together and elder sisters have more status than brothers in family decision-making. Tonga has previously been ruled by a female monarch, has two female

Members of Parliament, and high-status women enjoy considerable influence. While these cultural norms and historical experience have contributed to voice and agency of women being at higher levels than some other Pacific countries, in general, the proportion of women in formal governance roles remains low.¹⁸ Participation of women in the labor force has increased over the past two decades, however 43% of women are economically inactive compared to 29% of men aged 15 years and above. In 2017, the LFPR for men in Tonga was 74.2% while for women LFPR was 45.2%.¹⁹

9. Norms of women being responsible for childcare and domestic work and certain fields of work (such as offshore fisheries) being classified as “men’s work”, are contributing factors. Tonga was the world’s second highest recipient of remittances relative to the size of its economy in 2009, and older women are often recipients (although remittances and their distribution are hard to measure) which also may account for some inactivity in the labor market. While a significant number of educated women migrate overseas for education and employment, women are not as likely to migrate as seasonal workers, with some studies indicating the proportion of women seasonal workers may be around 10%.²⁰

10. Women in Tonga are more likely to be doing lower paid work than men for work at similar skill levels. There is significant salary and income gap under which Tongan women earn on average only 47% of what men earn.²¹ In 2010, men working in agriculture or fisheries earned about TOP 5 per hour, while women working in handicrafts and service industries made about TOP 2 per hour.²² And, while in 2013 women comprised 41% of those counted as “employed” in the fisheries sector, women comprised only 4% of the skilled agricultural and fishery workers²³ – indicating that sectoral participation does not translate into higher skills nor income.

11. In government, while women form the bulk of the public service, this mass is in health and education service workers, and there are few women at executive levels. In the private sector and the informal sector, lack of access to land, resources, training and support are major obstacles to women’s participation in business and industry. The legal system around land tenure means that only men can own land (estates and allotments), and divorce law also tends to favor men, meaning that men predominantly control land and productive assets. Women however are more likely than men to lease land, but only formally employed women have access to financial services such as loans from banks. Schemes such as by Tonga Development Bank have provided finance to women in the informal sector, however to date these have had limited reach.

12. Currently, 50% of registered sole traders are women, and reform is needed to make it easier for women to register businesses, while in rural areas most women’s businesses are informal and outside of regulation or support. Men owned 65% of registered businesses in Tonga in 2010²⁴ however, there is an interest in developing more participation and formalization of women in business and industry as part of national policy for women’s

¹⁸ Following the 2016 elections there were only 2 local government officers, 1 female district officer and one female town officer and 354 males occupying these positions for example¹⁸

¹⁹ UNDP (2018) Human Development Indicators and Indices 2018 Statistical Update.

²⁰ FAO/ Pita Taufatofua (April 2011) Migration, Remittance and Development in Tonga.

²¹ UNDAF Country Assessment/UN Women: http://asiapacific.unwomen.org/en/countries/fiji/co/tonga#b_anc

²² Hedditch, Sonali, and Clare Manuel. Tonga Gender and Investment Climate Reform Assessment. Washington DC: International Finance Corporation, 2010

²³ Ibid.

²⁴ Ibid.

economic empowerment.

13. In the last census, the most common occupations for women are in craft and related trades (37% of all females in listed occupations) and professionals (17%). Common informal employment for women include handicrafts, food marketing and services. Of cultural and economic significance to women is the crafting of pandanus mats and tapa. These are stored as women's "koloa" or "treasure" which can increase status or be traded and provide cash income for many families. Mats are in demand from both local and expat Tongans and this demand has meant prices per product increase, particularly for those able to trade with Tongans overseas. The women's work of making mats is often of critical importance for household income - for instance in disaster affected areas of Ha'apai after Cyclone Ian in 2014, mats weaved from pandanus was the primary cash income for 37% of the population.²⁵ However, as much of the handicrafts sector is "informal" its contribution to the economy and strategies to increase makers and sellers incomes have not had much attention from government and development partners to date.

14. While women may enjoy elevated status with their siblings in the family setting, in marriage husbands are expected to "head" the household. Women's refuges and services have observed that gender norms of men controlling household finances contribute to discord about earnings and spending and gender-based violence. Gender-based violence is a concern, with 40% of ever-partnered Tongan women having experienced sexual or physical violence. Women who are financially dependent on their husbands have less resources to leave abusive relationships and education is a factor in this dependence. The percentage of economic abuse among women with a primary/secondary education is almost twice those with a higher education (13% and 7%, respectively).²⁶ A range of services are available to support women experiencing violence including refuges or support for legal action (provided by Center for Women and Children and the Women and Children Crisis Centre) and counselling (provided by Centre for Women and Children, Women and Children Crisis Center, Catholic Women's League, Salvation Army Drug and Alcohol Centre and the Free Wesleyan Church's Langikapo 'a Hevani & Counselling Service).²⁷

15. Over half (56%) the population of Tonga is aged 24 years or younger. To date there is no report on the status of youth in Tonga, and age-segregated data is difficult to obtain, however consultations have identified specific situations and needs related to youth. Adolescents and youth in lower income households are more likely to leave of secondary school: only 8.7 percent of those in the poorest decile have completed secondary school, and for these youth transition to work is difficult.²⁸

16. Given previous experience of social unrest in Tonga in 2006, there have been programs aimed at diverting male youth from crime and increasing youth employment. Young people running small businesses is rare in Tonga, however Tonga Youth Employment and Entrepreneurship have recently been providing support for young people starting businesses and have noted the need to target youth with lower education levels (particularly those who did not complete secondary education) to support them into formal work or small business. To date 90% of those registered in this program have been young women, typically those that did not finish school and

²⁵ FAO (January 2014), Rapid Damage Assessment to the Agriculture and Fisheries Sectors Report.

²⁶ Ma'a Fafine mo e Famili. 2012. National Study on Domestic Violence Against Women in Tonga (2009).

²⁷ World Bank (October 2016). *Gender Based Violence in Timor Leste, Papua New Guinea and the Pacific Islands: Country Overviews*. Sydney: World Bank.

²⁸ World Bank (August 2018). *Project Appraisal Document: Skills and Employment for Tongans*. East Asia and Pacific Region/World Bank.

lack confidence and skills to enter work.

17. For outreach and education provided through media, the source of information for most Tongans is radio, with services available in all the islands. Preferences for content have some gender differences, with men more likely to participate in talkback programs, and women more likely to participate in targeted women's programs such as around food gardens, small business and livelihoods and crafts. Youth are more likely to use social media as a source of information, even in outer areas, and online streaming of content (including radio) is being developed specifically to target youth. Youth were also more likely to engage with content that was developed by youth and involving young women and men. The Ministry of Fisheries has a regular radio program specifically aimed at women (on 87.7FM), with another radio station (88.6FM) being targeted at youth and those interested in music.

Social inclusion in fisheries and aquaculture

18. Most agriculture and fisheries work of women is at the family level and done for their own consumption, informal sales (e.g. at the roadside) and exchange or gifting. Particularly common practice is the harvesting of species by hand from rocks and reefs, a practice known as "gleaning", as differentiated from "fishing" which requires gear, although women are also involved in most types of fishing using gear such as nets, spears and lines in inshore areas. Women's harvesting and fishing it is often not counted in official statistics and other research and can be rendered invisible in policy and planning.

19. Many women and youth rely on harvesting marine resources for subsistence, and some sell fish and other marine species, so they can be adversely affected by overfishing, disasters and other risks to inshore fisheries. Giant clam, octopus and cockles are generally harvested by women, with the TFSP stating in some areas of the country women account for over 75% of invertebrate harvests.²⁹ Women's fishing and gleaning is vital to food security and nutrition as fish and invertebrates are a main source of protein for many Tongan villages, although consumption varies widely - annual fish consumption was 20.3 kg per capita nationally but 84.6 kg per capita in inshore areas.³⁰

20. Women's involvement in subsistence, rather than commercial fisheries, appears to be due to gender norms, access to transport and fishing gear. There is a gender norm that offshore and commercial fishing is "men's work", whereas women are seen to be more suited to gleaning closer to home where they are expected to spend the most time. Subsistence fishers also point out the flexible timing and proximity of inshore fishing makes it "easier" for women to engage while fulfilling family and communal responsibilities. Another factor, as noted above, is that women are not as likely as men to own assets, including transport. Women are rarely involved in the transport sector, and so have a lack of skills and familiarity with boats and some types of fishing gear. In recent livelihood and training interventions coordinated by the Tonga Skills Project, one of the skills

²⁹ One study in 2002 of villages in Ha'apai and Vava'u found women did 72% to 92% of gleaning fish from reefs and in Ha'apai 50% of women also finfished. 80% of women in more urbanized areas gleaned, mostly for shellfish, and significant numbers in some villages used cast nets and spears to fish. Participation of children, boys and girls, was also high with 0% of boys and 4% of girls reporting they "never" fished.

³⁰ KE Charlton, J Russell, E Gorman, Q Hanich, A Delisle, B Campbell, Fish, food security and health in Pacific Island countries and territories: a systematic literature review BMC public health 16 (1), 285.

requested by women in the outer islands was outboard motor maintenance. This suggests that, given opportunities, women are interested and able to take on more roles in traditionally male-dominated sectors of transport and commercial fishing. The large numbers of men migrating for seasonal work or permanently has also created opportunities for women to take up “men’s” roles in work such as fishing and transport in some villages.

21. Of those counted as “employed” in the fisheries sector (9240 people, or 9% of the population) in 2013, 41% were women. Women are participating in sales of commercial fish onshore, for example sale of snapper, and administration roles related to tuna exports, but not roles on offshore vessels. Opportunities to do so are limited as tuna fishing is mostly done by foreign vessels licensed to fish in Tongan waters and there are only 10-15 licensed deepwater snapper vessels. Consultations indicated a reason why women do not work on offshore vessels (in fisheries or transport) is that they would likely face sexual harassment from male workers and employers and may be put in situations that would not be safe. Young unmarried women were most likely to be available to commit to time away from family to fulfil commercial fishing occupations, but also most likely to face sexual harassment. Most government staff interacting with commercial tuna and snapper fishers for regulation, compliance and enforcement are also male, despite significant numbers of women in fisheries management roles in government. This stands in contrast to other Pacific countries where more women are participating in fisheries monitoring, compliance and enforcement roles, however these roles are also more numerous in countries with greater exports.

22. There are a number of gaps in data which limit knowledge about women’s involvement in fisheries and aquaculture, many of these are not specific to Tonga, but common gaps in research, such as narrow definitions of fishers which mask women’s subsistence use and level of engagement (which is less than a “full time” occupation), the assumption that fishing is done by men, and the lack of inclusion of common activities for women such as gleaning as “fishing”.³¹ Another oversight is the lack of data gathered about activities which are not part of the formal economy, as is the case with women’s fishing and sale in the Tongan Census.

23. There is also a lack of data on women and youth participation in value chains for fisheries and aquaculture products, and therefore understanding of how to increase their participation. While a report on gender in mabè pearl production is forthcoming from ACIAR, little information is available about men and women’s involvement in value chains for other marine exports such as beche de mer, seaweed and coral.

Opportunities and Risks

24. Consultations indicated keen interest in participation of women and youth in Project components and activities regarding SMAs (inshore marine areas managed by local communities) and aquaculture, and a desire for the Project to also promote more women’s employment in commercial fisheries and related roles (such as observers).

25. TongaFish Pathways was viewed as a useful intervention to promote and solidify women and youth involvement in decision-making, implementation and monitoring and compliance of SMAs and to increase opportunities for livelihoods and economic advancement of women and youth. SMAs are viewed as a low risk for women’s subsistence and small-scale fisheries use, as women were already part of decision making in the

³¹ See Kleiber, D.L, L.M. Harris & A.C.J. Vincent. (2014) Gender and small-scale fisheries: a case for counting women and beyond. Fish and Fisheries, February 2014.

SMA committees, were confident in participating and contributing to these decisions, and could address any risks to changes imposed by SMAs in their inclusion in committee decisions.

26. There are currently (as of December 2018) 38 SMAs in Tonga, managed by local committees (3 are managed by MOF as they are on uninhabited islands and do not have SMA community led committees). 30.5% of committee members across all SMAs are women, and there are opportunities to increase this through encouraging existing committees with lower levels of women's participation to select more female representatives and encourage new SMA committees to be established under the Project to have greater numbers of women representatives. Women representatives in communities currently not under SMA management were keen to establish SMAs to stop overfishing and harvesting and exercise more local control. It is desirable to solidify women's participation in decision-making in current and future SMAs to ensure their inclusion.

27. International studies indicate women are often found at the lowest level of fish and aquaculture value chains – and women traders generally have less access to resources, markets and high value fish.³² There was a risk women and youth could not access opportunities under the aquaculture activities, due to usual barriers to their economic advancement – including remoteness and transport, lack of access to financial skills and small business training and support, less control than adult men over land and productive assets, gender norms of male control of finances in households and difficulties establishing security over land or sea areas (with problems arising such as theft for female aquaculture operators).

28. There is a risk that women engaging in the Project may also be subject to gender-based violence or by their partners or by other men that they interact with as part of conducting livelihood and business activities. However, there is also an opportunity for women involved in Project activities to be given information about services available for counselling, legal advice, health and other services provided by service providers working on gender-based violence, and for Project staff to provide referrals to these services.

29. Youth who have been unable to complete secondary or tertiary education are at a disadvantage for employment and entrepreneurship unless targeted with assistance to build skills and confidence. It has been noted in other aquaculture Projects, while opportunity exists for women to participate in these “new” economic activities, their participation often remains in low value products, and as production intensifies and economic returns increase, typically women's participation often drops.³³ A risk for TongaFish Pathways is that women's involvement in aquaculture is relegated to the lowest levels of skills and income. Tongan women traders of marine products such as beche-de-mer reported having faced barriers to increase their returns due to lower social status with expatriates and foreigners involved in the trade, limited knowledge of international industry and ability to bargain collectively, and the lack of common standards and minimum conditions for exports. In one case, prices paid for beche de mer sold by women was as low as 6% of the price paid in other Pacific countries. Further research is required to examine the value chains of beche de mer, clams, coral and other marine species being traded and exported to assess these dynamics. Such research could identify opportunities for better returns from the sector and more participation of women in the value chain, including as traders and exporters.

30. Another opportunity arising from the Project's activities to increase the value of fisheries and aquaculture

³² Fröcklin S, de la Torre-Castro M, Lindstrom L, Jiddawi NS. Fish traders as key actors in fisheries: Gender and adaptive management. *Ambio*. 2013; 42:951–962.

³³ See for example <https://www.genderaquafish.org/discover-gaf/gaf-networks-and-resources/women-in-aquaculture/>

is to partner with other training providers to increase the financial literacy and business skills of women and youth, so they can maximize the benefits of technical training about production, fishing or harvesting. Many women currently involved in the sale of commercial fisheries (snapper) have benefited from financial training and have been able to increase their incomes and savings. However, it is likely that few women and young people in the SMA areas may have had access to this sort of training, which could be provided through stakeholder liaison and coordination.

31. Actions to address these risks include Project indicators for women’s participation in SMA and aquaculture activities. The officer responsible for stakeholder relations will be responsible for liaising with national and local level civil society organizations to ensure cooperation between agencies to promote women’s’ economic advancement. This action could also bring together financial literacy and small business training providers and connect them with Project beneficiaries.

32. A further risk is that women be excluded from employment opportunities regarding offshore fisheries, as this is gendered work currently with no women participating in work on vessels. As an entry point to promotion of women working in the offshore fishing industry, an examination of the risks and opportunities for women working as observers will be part of the Project observer program review. This review could include a list of recommendations on how to ensure the industry provides safe working environments for women. MOF can provide awareness to young women of roles available in commercial fisheries and fisheries MCS to encourage more women to enter these fields.

Recommendations

33. A summary of opportunities and risks and therefore recommended actions and indicators is provided below.

Table 1: Summary of Gender Assessment

Component or Subcomponent Intent	Risk	Opportunity	Recommendations	Indicators
SMAs	SMAs are deemed low risk for women’s subsistence and small-scale fisheries use, as women were already part of decision making in the SMA committees and could address any risks to changes imposed by SMAs in their inclusion in decision-making committees	Cement women and youth involvement in SMA committee through quotas, and model inclusive decision-making at local level	Minimum quotas be set for women and youth representation on SMA committees	Proportion of SMA Committee members that are women Number of SMA Committees that have a youth representative Qualitative reports on satisfaction of women and youth regarding participation in SMAs
Aquaculture	Lack of	Providing ‘bundled’	Linking Project	Number of financial

	participation of women and youth due to less access to productive resources, training and finance	support through partnerships to provide financial as well as technical training and support Responding to youth unemployment through Project activities to support their entry into industry	beneficiaries with organizations (e.g. Tonga Skills, Tonga Development Bank) providing finance and financial training to informal workers Targeting women and youth for technical training and support	literacy and small business trainings provided to Project recipients Proportion of training recipients that are male and female Proportion of training recipients that are aged 15-30
	Participation affected by women's experience of gender-based violence	Project can provide information about other organizations providing GBV services	Providing referrals to available counselling, legal and support services for GBV	Preparation and use of referrals sheet or document by Project staff
	Participation of women and youth only at lowest level of value chain	Providing equal access to training and support for men and women in this "new" industry, where gendered differences in roles have not yet been entrenched	Male/female quotas for training and support Analysis of value chains, gender and participation	Proportion of training recipients that are male and female Proportion of training recipients that are aged 15-30 Indicators to be developed following further value chain analysis Proportion of women participating in skilled fishery and aquaculture
Commercial fisheries	Continued exclusion of women from commercial fisheries	Supporting shifts in gender norms, and women entering previously male-dominated fields	Outreach to students to increase interest in commercial fisheries Observer review has recommendations to include women in MCS roles such as observers	Indicators to be developed following observer review

ANNEX 7: Special Management Areas Program Description

- 1. To improve conservation and management of inshore fishery resources in Tonga, in 2002, communities were formally granted the right to establish Special Management Areas to control fishing activities in the coastal areas adjacent to their community.** Traditionally, coastal communities in Tonga had no preferential access to adjacent coastal marine resources, and beginning in the early 1990s, the open-access nature of Tonga's coastal marine resources began to increasingly collide with commercial pressure and the carrying capacity of inshore fisheries resources. As a result, Government, through the Fisheries Management Act (2002), formally granted communities the right to establish SMAs to control fishing activities in the coastal areas adjacent to their community. Since then, 41 SMAs have been established in Eua, Vava'u, Ha'apai, and Tongatapu (see Table 1).³⁴ Key features of SMAs include: (i) only registered persons and fishing vessels are authorized to fish in an SMA; (ii) no harvesting of any marine organisms for the aquarium industry (e.g., coral, small invertebrates, fish); (iii) no-take zones; and (iv) prohibition of destructive fishing methods.
- 2. Establishing an SMA requires coastal communities to submit a request to MOF for their community, and prepare a management plan outlining the SMA's vision, objectives, status of fisheries and associated challenges, management strategies and monitoring.** MOF facilitates establishment of SMAs and supports their implementation through technical assistance, capacity building, equipment (see Table 1 for a list of equipment/assets by SMA, and status of associated operations and maintenance), training and monitoring. The process is informed by scientific baseline surveys as well as stakeholder consultations. Once ministerial approval is obtained, and the management plan has been translated into legally enforceable regulations, the community establishes its SMA Committee and starts managing its assets based on its management plan. Compliance with provisions of SMA management plans is achieved through a combination of advisory and enforcement activities. Information concerning the rules that apply in SMAs are provided in brochures and information signage adjacent to each SMA, as well as marker buoys deployed to indicate the boundaries of each SMA. Where practical, commercial fishers from adjacent coastal communities (who are not permitted to fish in the SMA) are contacted directly to advise them of the SMA boundaries and regulations.
- 3. The Fisheries Regulations 2009 (as amended 2014 and 2016) provides for establishment and operation of community committees for SMAs.** Each SMA committee is required to have 11 members.³⁵ Of the eleven members, seven are community representatives, with at least two being representatives of women's interests. Committee members are provided with statutory powers and authorities under Section 12 of the Fisheries Management Regulation 2009, specifically to: (i) assist authorized officers in implementation and enforcement of the Plan; (ii) stop, board and search any vessel within the SMA; (iii) require the master or any person aboard to provide information regarding call sign and registration of the vessel and the names of all persons aboard; (iv) question the master or any person aboard about the cargo, contents of holds and storage spaces, voyage and activities of the vessel; (v) where they have reasonable grounds to believe that an offence has been committed under these Regulations, with a warrant, enter and search any vessel or premises in which they believe the

³⁴ Gillett, R. 2017. *A Review of Special Management Areas in Tonga*. FAO Fisheries and Aquaculture Circular No. 1137

³⁵ SMA Committees consists of 11 members including: i) chairperson elected by the coastal community; ii) town officer of the coastal community; iii) district officer of the district within which the coastal community is situated; iv) representative of the Ministry of Fisheries, nominated by the CEO; v) two members representing the interests of fishermen elected by the community; vi) two members representing the interests of women elected by the community; and v) three representatives of the coastal community to be nominated by the Chairperson.

offence has been committed; (vi) seize anything which they have reasonable grounds to believe might be used as an exhibit in any proceedings under this Regulations; and (vii) issue a written receipt for any article seized and the ground for such seizure shall be stated in the receipt.

4. **While the SMA approach is based on sound principles, its effectiveness in preventing further deterioration of the community's fisheries resources, has been limited.** Key SMA features such as fostering a sense of stewardship in the community, excluding fishing practices of outsiders and preventing introduction or increase in the use of destructive fishing methods most notably the transferred management and user rights, are appreciated by the respective communities.³⁶ However, overfishing is prevalent within SMAs affecting all species groups including finfish, invertebrates and particularly high value sessile invertebrates such as beche-de-mer and giant clams (two species already depleted). The depletion of fish stocks might be exacerbated when SMAs are established, as fishers move to less harvested areas, with long-term benefits accruing only after areas have built up standing populations of large, spawning fish. In addition, changes in fish biomass are not always predictable and the impact of no-take reserves on fish stocks can be limited by large-scale chronic impacts such as habitat degradation, pollution, and climate change.³⁷

5. **Key challenges hampering effectiveness of SMAs are associated with limited resources and low capacity.** At the national level, scarce resources are affecting enforcement activities, efficient facilitation of establishing SMAs, and monitoring activities. At the community level, key challenges include inadequate SMA fishing rules for rebuilding fish stocks as communities' market increasing proportions of their catch to generate income, and limited capacity to control illegal fishing both by outsiders.³⁸ The Project will employ the SEP to support comprehensive stakeholder consultations to mitigate such impacts, including specifically with landlocked and/or neighboring communities outside the SMA but who have traditionally had open access to the resources in the SMA area. This effort will aim to ensure the traditional access to resources to these non-SMA communities is addressed in a manner acceptable to all parties. Specific approaches may include the following:

- a) Non-SMA communities can be allowed to fish in the SMA but will be charged for the privilege. This approach is how the Felemea SMA community is addressing this issue.
- b) Non-SMA communities can carry out subsistence fishing but not commercial fishing. This method works well in Fiji. In Samoa, coastal communities cannot exclude outsiders from traditional fishing areas, but they can make rules that are applicable to both residents and outsiders. The same approach could be applied in Tonga's SMA program.
- c) MOF could consider establishing a "District SMA" in which several communities (including landlocked and non-SMA communities neighboring SMA community areas) have access to an extended SMA areas managed directly by MOF. Precedent has already been set with three existing SMAs that are on uninhabited islands and are not managed by a coastal community SMA Committee, rather they are managed directly by MOF.

³⁶ Webster, Cohen, Malimali, Tauati, Vidler, Mailau, Vaipuna, Fatongiatau, 2017. *Detecting fisheries trends in a co-managed area in the Kingdom of Tonga*. Fisheries Research, 186(P1), 168-176.

³⁷ Smallhorn-West PF, Bridge TCL, Malimali S, Pressey RL, Jones GP. 2018. *Predicting impact to assess the efficacy of community-based marine reserve design*. Conservation Letters. 2018; e12602.

³⁸ The Kingdom of Tonga: *Fisheries Sector Plan 2016-2024*.

6. **The Project is designed to address these challenges and strengthen SMAs toward improved and more sustainable management of inshore fisheries.** The Project will support MOF in strengthening all 41 existing SMAs through technical assistance, training, capacity building, and provision of equipment, toward improved and more effective implementation of SMA management plans. Specifically, this includes:

- a) Carrying out training programs (including on leadership, governance, planning, compliance, monitoring, and women and youth participation in value chains) for SMA communities to support higher standards of SMA management including addressing access to resources by landlocked and/or neighboring communities who may have traditionally fished in areas that are now formal SMAs; and capacity building activities including provision of a kit of equipment to 20 selected SMAs (e.g., small outboard powered vessels to support monitoring and compliance programs, buoys and fish aggregating devices) to strengthen enforcement activities and improve compliance with provisions of SMA management plans. Selection will be based on a needs assessment across SMAs.
- b) Reviewing and updating, SMA management plans to ensure they are based on latest knowledge and data and outline effective and efficient management measures identified in consultation with stakeholders, including landlocked and/or neighboring communities that traditionally had open access to the resources in the SMA that are now no longer readily available to them for subsistence purposes. And, ensure that they reflect the core principles of the *“Future of Fisheries: A Regional Roadmap for Sustainable Pacific Fisheries”*, endorsed by Pacific leaders in 2015.
- c) Developing and implementing a community-based monitoring program for SMAs, including collection of catch and effort data to support community involvement and engagement and encourage informed decision making at the community level. Communities have expressed strong interest in becoming more involved in monitoring but do currently not have the resources or capacity.

7. **The Project will support Government’s efforts to expand the SMA program more effectively and efficiently.** Specifically, the Project will support MOF in reviewing and streamlining the process of establishing new SMAs, in an effort reduce the required cost and time. Consequently, the Project will support the establishment of an additional five SMAs by applying a streamlined and more efficient process informed by adequate biological/ecological and socio-economic information. This will include extensive consultations with landlocked and/or neighboring communities that traditionally had access to the resources in the areas that are now to become newly formed SMAs.

Table 1: List of Existing SMAs

Island Group	Existing SMAs	With Vessel	Comment
Vava’u	Ovaka (2008)	X	Vessel allocated by MOF is well maintained by the community
	Taunga (2013)		
	Hunga (2017)		
	’Utungake (2017)		
	Falevai (2017)		
	Talihau (2017)		

	Lape (2017)		
	Útulei (2017)		
	Ofu (2017)		
	Eueiki (2017)		No committee – uninhabited island
	Koloa (2017)		
	Noapapu		
	Kapa		
	Holeva		
Sub-Total	14		
Ha'apai	'O'ua (2006)		
	Felemea (2008)		
	Ha'afeva (2007)	X	Vessel issued by MOF is currently under repair by the community
	Nomuka 1 (2011)		
	Nomuka 2 (2016)		
	Kotu (2015)		
	Mango (2017)		
	Fonoi (2017)		
	Matuku (2017)		
	Lofanga		
	Mo'unga'one		
	'Uiha		
	Ha'ano		
	Muitoa		
	Fakakai		
	Faleloa		
	Pukotala		
Sub-Total	16		
Tongatapu	'Atata (2008)		
	'Eueiki (2008)		
	Fafa Island (2014)		No Committee – uninhabited island
	Kolonga (2015)		
	Lapaha (2016)	X	Vessel delivered to SMA December 2018, so brand new at this stage.
	Nukuleka (2016)	X	Vessel delivered to SMA December 2018, so brand new at this stage.
	Ha'atafu (2017)		
	Pangaimotu (2017)		No Committee – uninhabited island
	Holonga (2017)		
Sub-Total	9		
Eua			
	Houma		
	Tufu		
Sub-Total	2		
Total	41	4	
Note #1: 38 SMAs involve communities and have established formal, each with 2 female committee members for a total cohort of 76 female committee members for all existing community-based SMAs.			
Note #2: three SMAs are located on uninhabited islands and do not involve community management nor do they have formal SMA committees. These are managed directly by the MOF and are considered special marine protected areas but classified as SMAs.			

Map 3 - Tongatapu SMAs



Map 4 - Vava'u SMAs

