



TONGA OCEAN FINANCE PROFILE

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Foreword

Tonga continues to stamp its mark as a leader in ocean governance in the Blue Pacific in producing this first ever national ocean finance profiling report. This development comes just months after the launch of Tonga's national ocean plan for the resources of its entire Exclusive Economic Zone.

I thank all the Partners involved, namely, the World Bank, the reviewers and the authors who have invested resources and time to produce this ocean finance profile.

Tonga is a regional pioneer in their internationally recognised whale watching excursions (in the context of marine tourism) as well as in the excellent demonstration of their special management areas (SMAs) for fisheries management.

The Pacific Islands Forum Leaders, during their 51st meeting in August 2021, collectively issued a proclamation that reaffirms the intent to maintain their maritime zones without reduction, notwithstanding any physical change connected to climate change-related sea level rise. These are premised upon preserving the rights and entitlements that stem from their maritime zones and the resources.

The potential of these individual maritime zones (EEZs) and the entire Pacific Ocean, to meet our sustainable development needs cannot be overemphasised. One of the underlying challenges to realising these visions and aspirations has been the lack of adequate finance targeting ocean-related objectives.

The scale and ability to mobilise adequate and dedicated **"finance"** smartly towards the ocean/blue economy investments in Tonga, as well as in the Blue Pacific Continent is therefore key, timely and indispensable.

This report, the first attempt to profile ocean finance in Tonga, reveals that approximately US\$20 million worth of ocean-related finance is generated annually. The report stated that the main source of this assessed ocean finance came mostly from Official Development Assistance. It also highlighted the current national investment landscape doesn't anchor on an ocean/blue economy trajectory. This opens the possibility for much more finance to be raised and mobilised under the frame of sustainable ocean/blue development agenda - maximising the most of what we have, which is our ocean.

This report sets the benchmark as well as many lessons, to venture deeper into the ocean finance discourse and its future role in accelerating a sustainable ocean/blue economy in Tonga and the Blue Pacific Continent.

Finally, I congratulate the Kingdom of Tonga for this milestone achievement as supported through the collaboration between the FFA and OPOC. I hope this pilot project will serve as an inspiration to our Pacific Islands Forum Members for subsequent ocean finance assessment work in the future.



Mr. Henry Puna
Pacific Ocean Commissioner



Executive Summary

The Tonga Ocean Finance Profile assesses the status and opportunities of the ocean finance landscape and its modalities on accessing, management and delivery of ocean governance priorities. This ocean finance national profiling used the following four key processes of the ocean finance framework: 1. generate 2. invest 3. align and 4. account for financial capital to achieve sustained ocean health and governance (see below).

These four pillars also form the essential and broad foundation for developing a resilient blue economy that promotes the conservation of aquatic and marine ecosystems and the sustainable use and management of associated resources in Tonga. This framework also builds on principles of equity, low carbon development, resource efficiency, and, social inclusion.

Tonga is a leader in ocean governance/planning and has a substantial ocean governance budget. However, much of this budget is from secondary sources. The size of the direct ocean finance available is an estimated US\$20 million. Tonga's ocean budget is heavily dependent on ODA and to a lesser degree, philanthropic donations. While traditional sources of funding remain necessary, it is recommended that Tonga generate, diversify and pursue additional revenue streams.

1

Generate

Tonga's direct annual ocean budget, calculated on the basis of the aggregated operational and capital expenditures for government and public enterprises, is approximately USD\$20 million. Existing finance mechanisms include overseas development assistance (ODA), foreign fishing licence fees and philanthropic grants. There is underdeveloped potential in the marine tourism sector to generate ocean finance through fees, fines and donations for tourists engaging in whale swimming, visiting Specially Managed Marine Areas (SMA) and through voluntourism. Communities need support to develop finance, likely in the form of user fee and philanthropic-funded trust funds, for SMA management. Foreign fishing licence fees continue to be an important revenue source but there is an opportunity to consider allocating a larger portion of this revenue towards coastal marine resource management. The aquaculture industry needs further development, which may reduce wild-caught fishing pressure as well as generate economic opportunities. To meet the scale of funding required, innovative and private sector investments should be considered which could include the opportunities for raising departure tax green fee for the non-Tongan to allocate to the Protected Areas Network Fund. There are sufficient levels of liquidity in the banking system and retirement fund schemes to finance large-scale loans for oceans-related work. However, the risk to repayment ability can potentially be magnified by external shocks such as the Covid-19 pandemic, which could reduce investor expectations and appetite for debt financing. Philanthropic capital can be catalytical to transforming longer term and larger scale ocean finance solutions.

2

Invest

Tonga is a leader in the Pacific region in ocean planning and legislation; the following key documents should serve as guides for both public and private ocean investments:

- Tonga Strategic Development Framework – a more progressive Tonga: 2015-2025
- National Biodiversity Strategy and Action Plan
- Tonga Fisheries Sector Plan (TFSP)
- Tonga National Tuna Fishery Management and Development Plan (2018 - 2022)
- Tonga National Strategy on Aquatic Biosecurity
- Tonga Ocean Planning and Management Bill 2019
- Marine Spatial Plan (Wendt 2018)
- Tonga - Pathways to Sustainable Oceans Project
- Tonga Ocean Plan and legislation package
- Maritime Pollution Prevention Act 2002
- Tonga Energy Road Map (TERM) 2010-2020 and Plus
- Tonga Energy Sector Bill 2020
- Rural Electrification Policy (REP)
- Tonga Energy Efficiency Master
- Energy Efficiency Measure (EE) for Power, Public and Transport Sector
- National Cultural Policy
- The Whale Watching and Swimming Act 2008
- The Whale Watching and Swimming Regulation 2013
- Tonga Tourism Road Map 2018-2023

There is an important and urgent opportunity to include an ocean finance facility or ocean finance mechanism(s) in the soon-to-be completed Tonga Ocean Plan and legislation package.

With the support of donors, government and public enterprises invested US\$264 million in various ocean-related infrastructure projects since the 2015/16 financial year.

However, the proposed investment for future funding in support of various ocean-related plans and legislation would be US\$381 million, over 90 percent of which is expected to be sourced via overseas development assistance. New sources of ocean finance are therefore required on top of the existing funding modality for these projects to be implemented within the next five years.

Tonga should also strategically consider investments in building capacity on youth and next generation in ocean-related areas (e.g., ocean engineering, biotechnology, ship building, ocean planners, etc.). These fields of training are incorporated in the capacity building section.

The focus areas suggested for the future development of ocean finance will be in coastal and marine tourism, marine transport, wild capture fisheries (coastal and ocean), aquaculture and mariculture, ocean-based renewable energy, marine conservations including marine protected areas (MPAs) and small management areas (SMAs), and, waste management.

3

Align

Tonga has several existing fiscal policies that relate with ocean health and governance and align with the National Strategic Development Framework and budgeting process. The cruise ship levy, waste levy on plastic bags and imported disposable plastics, import duties on manufactured plastic items and excises on imported carbonated drinks have indirect and small benefits for oceans. The super profit tax, aimed at potential deep-sea mining operators, is in place in the event that exploration turns into extraction. An import duty on shark fins does in theory align with ocean objectives, however there is no evidence to suggest that it is affecting shark finning and a policy instrument such as a ban may be a more effective lever. An import duty on certain aquatic invertebrates is aimed at social and economic benefits but may also incentivise aquaculture and reduce wild harvest pressure. Two subsidies support fisheries development and community-scale economic development, but have the potential to counter-align with ocean governance objectives. Whether or not tax exemptions for foreign donors and non-profits align with ocean objectives, is unclear. There are opportunities to consider a super yacht levy and to review if and how the fisheries subsidies could better align with the Tonga Sustainable Development Framework. Public and Private Partnership (PPP) has been implemented; independent power producers in partnership with Tonga Power Ltd are playing an emerging role in developing renewable energy systems such as harnessing solar and wind energy. The telecommunications sector has two service providers; the private firm Digicel is in competition with the public enterprise, Tonga Communications Corporation. The success of these business partnerships will provide the catalysts to attract further investors to financing the essential infrastructure for developing the blue economy. An investment of US\$381 million is needed to finance future ocean-related infrastructure projects including coastal protection, fisheries infrastructures such as wharves, fishing boats and boat ramps, upgrading mariner facilities, waste management infrastructure and general-purposes wharves.

The isolation of the Tonga archipelago and the exposure to potential external shocks (environment and economic) creates challenges to economic development. When combined with perceived private sector ocean investment risk, there are then very few large-scale opportunities that appear ready to receive external investment. Pipeline development and sustainable development capacity building are required before Tonga is ready for large-scale ocean impact investments. Small-scale opportunities for new ocean finance mechanisms do exist and they are well-matched to the scale of traditional and cultural governance structures. The whale-watching and super yacht industries provide unique opportunities for local communities to gain economic benefits from their well-managed marine resources.

There is an important and urgent opportunity to insert a finance facility or ocean finance mechanism(s) in the forthcoming Tonga Ocean Plan, to build towards a diversified portfolio of revenue streams to support this overarching ocean governance policy framework. Underlying all

ocean finance work is the need to better understand and strengthen Tonga's capacity to generate, invest, align and account for ocean investments. The ocean finance profile process is a start in identifying where Tonga can improve in ocean finance. It is an opportunity for the government, alongside development partners, civil society and the private sector, to articulate how Tonga can increase the amount and efficacy of financial resources to achieve sustained ocean health and governance that maximises benefits to Tonga.

4

Account

Tonga's last Public Expenditure and Financial Accountability assessment in 2010 suggested that two-thirds of Tonga's Public Financial Management (PFM) system was performing at average or above average ratings, while one-third required significant improvement. In 2014, Tonga endorsed a financial reform roadmap and since then, it has been performing consistently better than regional averages, but there are still areas requiring improvement. Not all ocean investments are channeled through the national PFM system and government has been exploring with donors the best way to share the data gaps, which could be 2 per cent of GDP. There is also some debate as to the benefits and risks of private ocean investments. More research is required to develop ecological, economic and social metrics for ocean investments, to integrate these metrics into both public and private systems in a coordinated manner, and to support the Ministry of Finance in coding ocean-related projects as they go through the PFM system, and which should include those ocean projects that donors disburse outside the government system. At the ecosystem level, Tonga's marine resources have been valued at a minimum of US\$4.4 million (<http://macbio-pacific.info/Resources/legal-review-for-marine-management-in-tonga>). This, however, is a likely underestimate that requires revision in a 5-yearly cycle by the Ministry of Fisheries.



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Workshop at Nuku'alofa 2019



Workshop at Ha'apai 2019

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Acronyms

ADB	Asian Development Bank
CT	Consumption Tax
FAD	Fish Aggregation Device
FAO	Food and Agriculture Organisation
FDI	Foreign Direct Investment
FFA	Pacific Islands Forum Fisheries Agency
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GRFB	Government Retirement Fund Board
ICT	Information and Communication Technology
IMF	International Monetary Fund
IUCN	International Union for the Conservation of Nature
MDA	Ministries, Departments and Agencies
MORC	Ministry of Revenue and Customs
MPA	Marine Protected Areas
NRFB	National Retirement Fund Board
ODA	Official Development Assistance
OPOC	Office of the Pacific Ocean Commissioner
PFM	Public Financial Management
PIFS	Pacific Islands Forum Secretariat
POFP	Pacific Ocean Finance Program
PPP	Public-Private Partnership
SDG	Sustainable Development Goal
SMA	Special Management Area
SPC	The Pacific Community
TSDF	Tonga Sustainable Development Framework II
VAT	Value Added Tax
VEPA	Vava'u Environmental Protection Association
WTO	World Trade Organization

Introduction

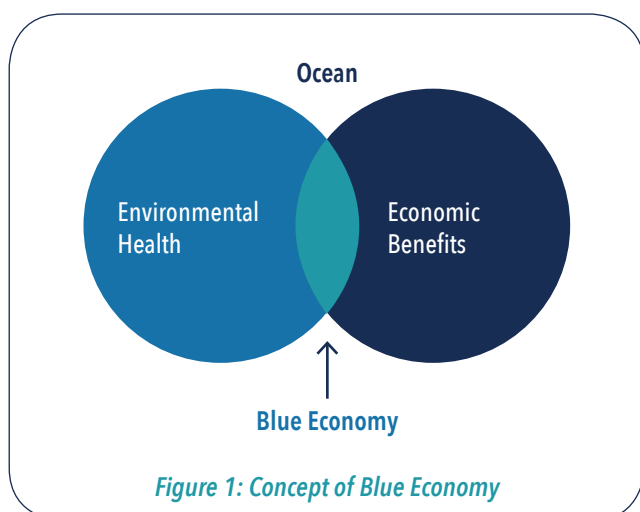
Pacific Ocean Finance Program

The Pacific Ocean Finance Program (POFP) is implemented through the Pacific Islands Forum Fisheries Agency (FFA) and the Office of the Pacific Ocean Commissioner (OPOC; affiliated with the Pacific Islands Forum Secretariat, PIFS). The program is funded by the World Bank and the Global Environment Facility as Component 3 of the FFA Pacific Islands Regional Oceanscape Program. The POFP is a three-year program with the aim to increase the amount and efficacy of financial investments into the Pacific's ocean governance initiative, focusing on eleven countries: Solomon Islands, Vanuatu, Fiji, Tonga, Samoa, Kiribati, Nauru, Palau, Marshall Islands, the Federated States of Micronesia and Tuvalu.

The POFP has three main objectives: 1) to develop novel ocean finance solutions for the Pacific region, 2) to develop ocean finance profiles for selected Pacific Island countries, and 3) to enhance regional capacity in ocean finance and governance. This document is part of objective 2 - developing ocean finance profiles. The objective of the ocean finance profiles is to assess the status and opportunities to improve ocean finance for selected Pacific Island countries. Ocean finance profiles are being developed using the ocean finance definition and framework developed by the POFP.

Ocean Finance Framework: A building block for Blue Economy

The POFP defines the goal of ocean finance as generating, investing, aligning and accounting for financial capital to achieve sustained ocean health and governance (Walsh 2018). The development of ocean finance is an essential means to developing the essential infrastructure for realising the concept of blue economy, which broadens the definition of ocean resources - to acknowledge the fundamental, life-supporting benefits and services that are provided by marine and coastal ecosystems. These include the ecosystem services that provide, regulate, support and enrich the cultural uses of coastal and marine ecosystems. These ecosystem services are inextricably linked with the sustainability and prosperity of key industries within the blue economy: fisheries and aquaculture, water resources, shipping and transport, tourism, marine energy and minerals, genetic resources and biotechnology, and, technologies and applications in pollution control. All of which therefore, deals effectively with key issues affecting the sustainability of marine ecosystem services and benefits, such as over-fishing, climate change, ocean acidification, loss of habitats and biodiversity, invasive species, pollution and waste.



Thus, Blue Economy provides a framework that promotes resilient sustainable development, poverty alleviation and climate change mitigation. It also conceptualises oceans as “Development Spaces” where spatial planning integrates conservation, sustainable use, oil and mineral wealth extraction, bio-prospecting, sustainable energy production and marine transport (OECD 2016). Tonga stands to benefit tremendously from approaching inclusive and sustainable national development through the perspective of blue economy.

In the context of this study, ocean finance is defined and quantified by four actions:

1. Generate public and private financial capital through traditional and innovative finance mechanisms to create a diversified portfolio
2. Invest financial capital effectively, efficiently and strategically against appropriate policy frameworks and multi-sector strategies
3. Align taxes, subsidies, and economic incentives related to the long-term ocean health and governance with the Tonga Strategic Development Framework, and
4. Account for environmental, social, and economic impacts of ocean investments, and account for economic values over time, of marine ecosystems (Figure 1; revised based on Walsh 2018).

The order and sequencing of these four actions would be based on the country context and may not necessarily follow such order of actions of ocean finance that are set out in figure 1. These four process elements are linked to each other and must be read broadly.

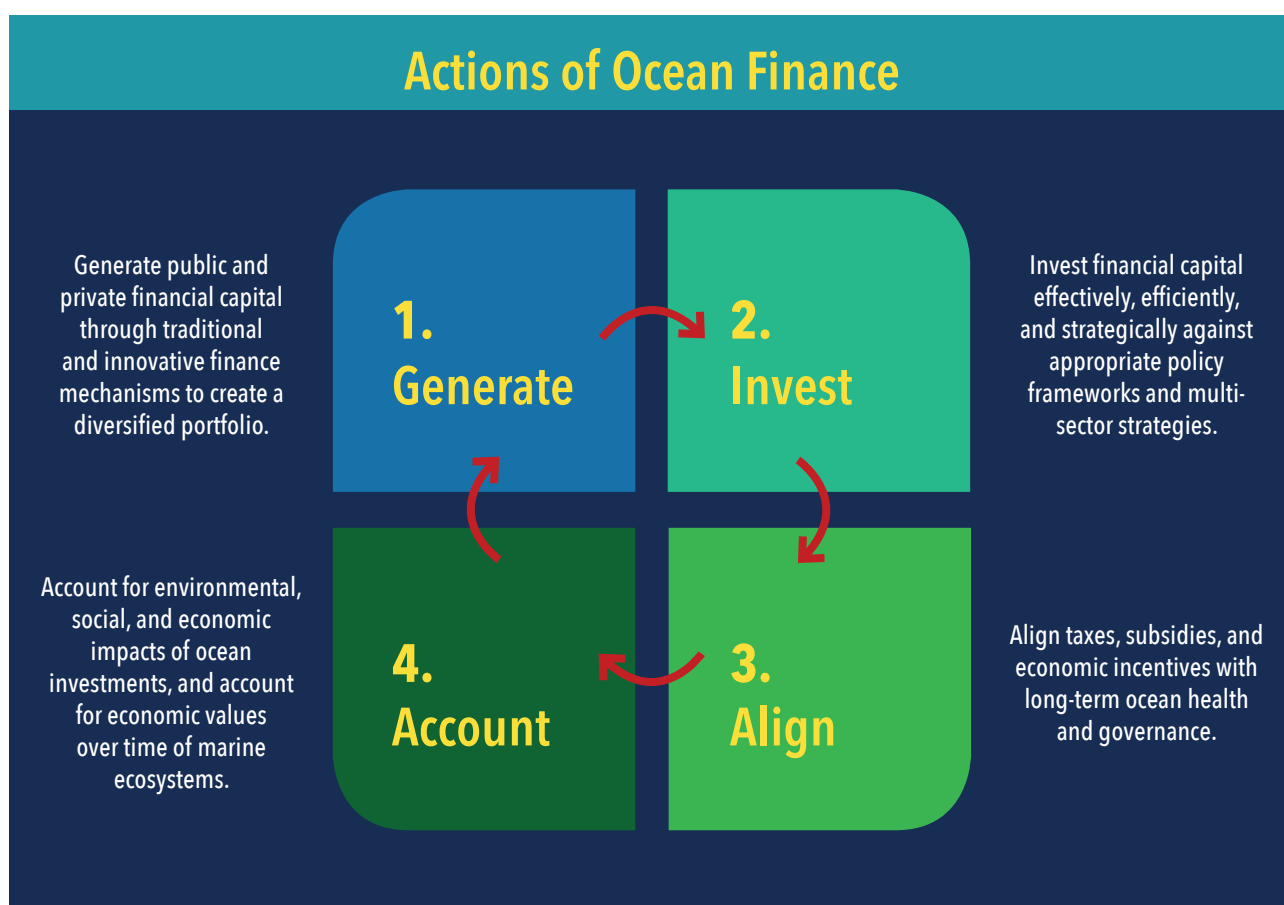


Figure 2: Ocean Finance Framework

This ocean finance profile will help better assess the status and opportunities in ocean finance at the national and sub-national scales through the lens of these four ocean finance actions. The structure of the profile begins with a summary of the country context, followed by an assessment organised around the four actions and concludes with summary recommendations. Each action analysis is wrapped up with discussion of opportunities for consideration by government to be implemented with the assistance of stakeholders, where necessary, to progress the work on increasing ocean finance going forward.

Ocean finance profiles are developed with the engagement of multi-sector stakeholders. The profiles aim to align with ongoing ocean governance and finance initiatives in the region and in each Pacific Island country, and obtain the government’s consideration of the analysis and recommendations for advancing the blue economy agenda, which maximises the economic benefits to the public and private sectors as well as communities whilst conserving the ocean health.

Profile Timeline

The timeline below summarises the steps taken to develop the Ocean Finance Profile and the subsequent steps before the finalisation of the profile.





Country Context



Country Context

Geography and Demography

Tonga is a remote large ocean state in the South Pacific Ocean, located approximately 750 km east of Fiji and 2,000 km north of New Zealand. With a total land area of 747km² and an exclusive economic zone of 640,050 km², the Kingdom of Tonga is 98 percent ocean.



Figure 3: Tonga Coat of Arms

There are 170 islands in the archipelago, of which 36 are populated. The population of Tonga is 100,651. Approximately 74 percent of the population reside on the largest island of Tongatapu, where the capital, Nuku'alofa, is located (Tonga 2016), up from 68 percent in 1996. Emigration has been high over the past 30 years, at a rate of about 2.0 percent annually; this has lowered the rate of population growth to an average of 0.4 percent annually.

Steady migration from the outer islands to the rural areas and urban centre on Tongatapu continues, mainly due to the limited opportunities in small communities on the outer islands. Migration drives the decisions on where to create new infrastructure to meet changing population pressures. While the population of Tongatapu grew by approximately 7,600 persons between 1996 and 2016, the population of Vava'u declined by approximately 2,000. Ha'apai's population also declined by approximately 2,000 and the population of Ongo Niua declined by approximately 800. The population of 'Eua was stable over the period.

Because of the widely scattered island groups and the multiplicity of small communities in them, the demand for improved transportation infrastructure especially ports, jetties, wharfs and airports for access by sea and air to the main islands remains significant. It is a challenge to deliver at an affordable cost, infrastructure that can promote inclusive and sustainable growth.

Technological change in particular ICT infrastructure, is opening opportunities to support smaller communities in more cost-effective ways that enhance inclusion and participation. Examples include the provision of distance education and health services through new communications technology and the development of smaller scale alternative energy systems.

Tonga is particularly vulnerable to natural disasters and climate change. Tropical cyclones Ian (2014), Gita (2018) and Harold (2020) seriously impacted Tonga in recent years. The World Risk Index 2020¹ ranks Tonga as the world's second most vulnerable country to natural disasters. The Global Climate Risk Index for 2020 ranked Tonga first in the world in 2018 and fourth over the period 1999-2018 in losses per unit of GDP from extreme weather events.

By contrast, its remoteness has provided Tonga with a degree of protection from the epidemiological impact of the COVID-19 pandemic. However, the subsequent shutdown of tourism has seriously affected the economy. The global economic downturn has impacted trade and labour mobility, alongside potential impacts on remittances and development assistance. Prior to the pandemic, visitor arrivals had grown to a peak of 62,000 in 2017 (with an estimated 40 percent visiting for leisure and 45 percent visiting friends and relatives). Visitors on cruise ships had grown to more than 20,000 per annum by 2018.

¹ A statistical model for assessing the global risk of disasters that arise directly from extreme natural events such as earthquakes, storms, floods, droughts, or sea-level rise, and assessing risk in terms of exposure, vulnerability, susceptibility, coping capacities and adaptive capacities.

Key features of the Economy

Tonga's economy is primarily based on agriculture, fisheries and tourism, supported by remittances and high levels of development assistance. Regional labour schemes offering agricultural work in Australia and New Zealand for over one thousand workers also support household incomes, although social problems and difficulties for domestic employers are also on the rise with workers being away for long periods. The economy is remote from larger markets in Asia and the rest of the world. Most goods are imported from Australia, NZ, USA and increasingly from Asia.

Macroeconomic indicators

Table 1 provides selected macroeconomic indicators for Tonga with estimates from 2016/17 to 2019/20 and projections from 2020/21 to 2022/23.

Table 1: Tonga - Macroeconomic Indicators

Item	2016/17 est.	2017/18 est.	2018/19 est.	2019/20 est.	2020/21 proj.	2021/22 proj.	2022/23 proj.
Real GDP (annual percentage change) *	5.4	0.2	3.0	(2.3)	(3.6)	2.6	2.3
Consumer prices (annual percentage change - period average)	7.2	7.0	4.1	1.3	2.2	1.3	1.2
Public debt - external plus domestic (percent of GDP)	46.0	45.6	41.6	39.7	37.7	36.0	38.7
External debt (percent of GDP)	39.1	37.7	34.1	30.7	27.6	25.0	28.0
Debt servicing (percent of GDP)	1.3	1.1	2.1	2.0	1.9	1.8	1.7
Exports fob (percent of GDP)	4.6	2.9	3.4	4.6	4.8	4.9	5.0
Imports fob (percent of GDP)	45.2	44.9	49.9	52.5	52.9	53.6	54.1
Remittances (percent of GDP)	27.4	29.4	30.0	28.5	29.5	28.1	27.8
Gross official foreign reserves (USD million)	192.2	214.9	212.8	212.3	205.2	179.5	158.3
Gross official foreign reserves (in months of imports)	7.2	6.9	6.2	5.8	5.2	4.3	3.7

Source: Ministry of Finance and Staff Concluding Statement IMF 2020 Article IV Consultation Mission, February 2020.

Note: As these estimates and projections were prepared in early 2020, they do not account fully for the impact of the pandemic.

* The GDP growth estimate for 2019/20 and the projection for 2020/21 have been taken from the Budget Strategy and Funding Envelope 2021/22, released in November 2020, which better accounts for the impact of the pandemic.

Growth in Tonga's real Gross Domestic Product (GDP) has been characterised by a series of declines associated with natural disasters (and the current pandemic), followed by periods of recovery supported by increases in development assistance associated with emergency relief. The average rate of growth has been very modest. However, with a stable, even declining population, GDP/capita has improved.

Other features characterising Tonga's macroeconomic position in recent years have been:

- a. A downward trend in inflation, probably associated with a period of weakness in world prices.
- b. The relatively high level of public debt, particularly external debt.
- c. A significant trade imbalance, with exports averaging less than 10 percent of imports and the large inflows of remittances and aid sustaining that gap.
- d. Apart from a drop associated with the GFC, consistently high levels of remittances from the Tongan diaspora in New Zealand, Australia and the United States.
- e. A high level of foreign reserves, though the IMF is projecting a downward trend in both dollar terms and in terms of months of import cover.

Tonga's remoteness from metropolitan countries is a logistical reality, creating high transportation, communication and information costs that not only impede international factor mobility but also hamper the flow of commercial and technical knowledge. This inherent characteristic, compounded by the frequency of natural disasters, have not only constrained the country's rate of development but they also limit the development options available to primary commodities, such as squash and fish that are sensitive to variations of nature (weather, disasters) and to the vagaries of world markets.

In recent years, the government has taken important steps to strengthen domestic revenue mobilisation and prudentially manage expenditure by way of reforming its public financial management (PFM) systems and processes. Business environment reforms are needed to lower the cost and risk of doing business and encourage private sector activity to expand the formal economy and create employment. Measures have been taken to simplify and improve the tax system and strengthen public financial management through introducing a medium-term budget framework that links prioritised plans with annual budgets and public procurement reforms.



Figure 4: Whale watching in Tonga

Coastal and marine resources provide the people of Tonga with many real and measurable benefits. The country's largest stock of natural wealth lies within the ocean and the role that natural ecosystems, especially marine ecosystems, play in human wellbeing is very important to the country's economic and social development. Recognising the importance of the ocean for economic and social development, the government has taken the initiative to develop its marine spatial planning process by establishing the "Oceans 7" working group to prepare ocean plans, including climate change resilience, collated spatial data, identified seven types of ocean zones, and, described priority marine places. These works will provide the government key strategic guidance to support its implementation of the sustainable development goal (SDG) 14 - Life Below Water.



Figure 5: Culture is connected to Ocean. Source: Oregon Metro News

The Oceans 7 group includes the Ministry of Environment, Ministry of Fisheries, Ministry of Natural Resources, Ministry of Finance and National Planning, Ministry of Internal Affairs, Ministry of Tourism, Ministry of Infrastructure (Marine Division) and also the Tonga Ports Authority. Marine spatial planning and the development of the Tonga Ocean Plan by the Oceans 7 group is being supported by the Vava'u Environmental Protection Association (VEPA) with funding by the Waitt Foundation, International Union for the Conservation of Nature (IUCN) and Oceans 5. There are currently five government-managed marine protected areas (MPAs) and 46 community-managed special management areas (SMA) and efforts are underway to increase these to 10 MPA and 100 SMA in the next few years. The expansion of MPAs and SMAs is regarded as an important means to achieve the two targets of preventing any permanent loss of land to rising sea levels on Tonga's four main islands and maintaining existing stocks of fish and other marine species. In that context, the Government of Tonga aims to expand the area covered by MPAs and SMAs to 30 percent of Tonga's EEZ. In order to be effective, the expansion of MPAs will require a clear definition of MPAs – including if and how they differ from SMAs – as well as strengthened enforcement². Both strategies are managed by Government; MPAs are managed under the Ministry of MEIDECC (Department of Environment) and SMAs under the Department of Fisheries. The information on the current areas covered under the MPAs and SMAs within Tonga EEZ is not available.

² This is part of the targets under the adaptation measures set out in the Government of Tonga National Determined Commitment Report 2020.

Tonga Voluntary Commitments to UN Ocean Conference in 2017

As a large ocean state, Tonga holds the SDG14 Goal very dear to its heart. The livelihood, culture, conservation efforts and the overall sustainable development of Tonga is dependent on a healthy and resilient ocean due to the essential ecosystem services it provides, including the provision of oceanic resources, and importantly, its role as a climate regulator (Statement of Hon. Semisi T Fakahau, Minister of Agriculture and Food, Forestry and Fisheries during the 2017 UNOC). This statement reinforces the pivotal role of the ocean to Tonga's people and their future development aspirations, further cemented by eight key Voluntary Commitments that Tonga submitted to the 2017 UN Ocean Conference (see Table 2). Furthermore, Tonga has made progress in implementing its SDG14 goals particularly SDG14.5 as per the recent Pacific SDG Progress Wheels (see Figure 7).

Table 2: Summary of Tonga's UN Ocean Conference Voluntary Commitments (Solofa 2018)

Number of Voluntary Commitments	Title of Voluntary Commitments	Links	Lead Entity
Tonga (8)	Ongoing support for Pacific regional fishery organisations	(#OceanAction19321)	Ministry of Fisheries, Kingdom of Tonga
	Tonga develops a marine spatial plan	(#OceanAction21256)	Ministry of Fisheries, Kingdom of Tonga
	Tonga advances science to inform decision-making	(#OceanAction21392)	Ministry of Fisheries, Kingdom of Tonga
	Implementation of Port State Measures Agreement (PSMA) to prevent, deter and eliminate IUU fishing which support Target 14.4 and 14.6	(#OceanAction21404)	Ministry of Fisheries, Kingdom of Tonga
	Whale sanctuary within Tongan waters	(#OceanAction21420)	Ministry of Fisheries, Kingdom of Tonga
	Tonga will progressively implement its 2016-2024 Tonga Fisheries Sector Plan in pursuit of targets 14.4; 14.7; 14.b;	(#OceanAction21464)	MEIDECC, Kingdom of Tonga
	30% MPAs within Tongan waters	(#OceanAction21468)	MEIDECC, Kingdom of Tonga
	Implementation of the Niue Treaty Subsidiary Agreement (NTSA) for monitoring, control and surveillance of fishing in the region, supporting Target 14.4 and 14.6	(#OceanAction21508)	Ministry of Fisheries, Kingdom of Tonga

Tonga is currently developing a LT-LEDS which will be submitted to the UNFCCC in 2021. This NDC is aligned with the upcoming LT-LEDS and stakeholder dialogue for the development of the LT-LEDS has been fed into the development of the 2020 NDC. The Tongan Government also intends to develop a NDC Roadmap and Investment Plan in 2021. Tonga is a SIDS and its GHG emissions are negligible on a global scale. Due to its geography and economy, Tonga is highly affected by the adverse impact of climate change. Tonga is classified as one of the most at-risk countries in the world in terms of its exposure to the unfolding effects of climate change. The ongoing need for Tonga to invest large portions of its public finance and service capacity in the ambitious quest to achieve its climate resilience objectives is a consequence of the emissions of other large countries over many generations as they developed and became wealthy. Achieving the targets set out in Tonga's 2020 NDC will require considerable support for financing, capacity and technology investment. Accounting for these circumstances, Tonga considers its NDC as fair and ambitious.

In the lead-up to the Paris Agreement, governments initially developed Intended Nationally Determined Contributions (INDCs) and submitted these to the secretariat of United Nations Framework Convention on Climate Change (UNFCCC) in Bonn, Germany. With the ratification of the Paris Agreement, those INDCs became Nationally Determined Contributions (Fransen et al., 2017). These NDCs represent a five-year cycle of pledges and reviews of governments' actions to mitigate their countries' contributions to climate change. Each party to the Paris Agreement is required to prepare and submit revised NDC at five-yearly intervals to the UNFCCC secretariat (UNFCCC, 2015). This NDC review process was designed to provide a framework within which governments would increase the ambition of their actions against climate change while reducing their GHG emission over time, so that each successive NDC would represent a progression beyond a country's current NDC and ultimately allow it to meet the aims of the Paris Agreement goal.

This report has two principal purposes. First, it reviews the 2015 INDC, determining the progress made to date towards achieving the identified targets. Second, it puts forward recommendations for the formulation of the 2020 NDC³. The Government of Tonga submitted its second NDC report in December 2020. The next report will be due in 2025.

Tonga's second NDC in December 2020 targeted a 13percent (16 Gg) reduction in GHG emissions by 2030 compared to 2006 baseline, as well as a transition to 70percent renewable electricity and energy efficiency measures. The establishment of a forest inventory was prerequisite to identifying a GHG emission target for the 2025 NDC, with the target of planting one million trees by 2023. The expansion of the formal waste collection system was also prerequisite to identifying the GHG emission target for the 2025 NDC. On "Adaptation" the targets:

- ▶ are 30 percent of land in Tonga to be utilised for agro-forestry or forestry by 2025;
- ▶ preventing any permanent loss of land to rising sea levels on Tonga's four main islands (Tongatapu, Ha'apai, Vava'u and 'Eua); and
- ▶ maintaining the existing stocks of fish and other marine species through a commitment to expanding the Marine Protected Areas (MPAs) and Special Management Areas (SMAs) to cover 30percent of Tonga's Exclusive Economic Zone (EEZ).

In addition, Tonga is currently developing a Long-Term Low Emission Development Strategy (LT-LEDS) for submission to the UNFCCC in 2021. As part of the strategy, Tonga wants to reduce GHG emissions from the combustion of fossil fuels by 13 percent (16 Gg) by 2030 compared to 2006 baseline, through the following measures:

- ▶ attaining 70 percent electricity generation from renewable sources;
- ▶ 2 percent efficiency gains per year for newly purchased light duty vehicles; and,
- ▶ limiting growth in grid-connected residential electricity end-use to 1 percent per year on average for the period 2021-2030 by adopting minimum energy performance standards for appliances, lighting, and electrical equipment.

Achieving the annual 2 percent efficiency gains for newly purchased light duty vehicles requires either establishing mandatory vehicle standards and/or taxes, fees or import tariffs incentives for purchasing more energy efficient vehicles. While price incentives would likely directly affect consumer choices, mandatory standards need to be aligned with consumer pricing preferences to be effective.

³ Tonga's Second Nationally Determined Commitment Report, December 2020

Ocean Transport

Considering the rapid development of oceanic logistics, maritime traffic is one of the worst offenders for air and water pollution. Presently, the shipping industry is entirely dependent on a single energy source: oil. The key to going forward is to eliminate the dependency on this source of energy. The development of energy storage techniques will enable this transformation. It is not yet clear which type of energy storage techniques will become the most efficient. Multiple contenders are available, such as batteries and fuel cells. In extremely simplistic (but highly impractical) terms, ships could be equipped with hydrogen tanks to burn the hydrogen for fuel. It does not matter where the energy comes from but having the energy will allow splitting water to obtain hydrogen⁴. When we burn the hydrogen on the ship, energy and water get back. Having the ability to store the energy makes the shipping lines 100 percent independent of the energy source – at any point in time, they can choose to procure the cheapest energy irrespective of whether this is oil, gas, nuclear, wind, solar, or any other source. At this point in time, any carrier that has not shifted their fleet profile to one that is independent from the energy source is bound to lose financially, unless they are so lucky that oil just happens to be the cheapest form of energy. Predicting long-term energy prices is a dicey affair at best, but consider the following: Oil is a finite resource and hence will ultimately have to face increasing prices. On the other hand, the amount of renewable energy being produced is increasing significantly. The International Energy Agency predicts the share of renewables in meeting global energy demand should reach 12.4 percent by 2023⁵.

However, there is no GHG emission target set under Tonga NDC 2020 for ocean transport.

Economic Valuation of Marine Ecosystem Services

An economic valuation exercise of Tonga's marine ecosystem services was conducted in 2015 to support the sustainable management of marine and coastal biodiversity (Salcone et al 2015). Despite the data limitations, the study valued Tonga's marine ecosystem services (based on the available data) at US\$21 million per year. About 44 percent of this amount was from regulating services such as coastal protection and carbon sequestration while 36 percent were from fisheries activities and 19 percent were from tourism activities.



"A minimum estimate of the annual economic value of Tonga's inshore subsistence and domestic commercial fisheries is US\$4.4 million (US\$2.4 million in subsistence fisheries and US\$1.9 million in domestic commercial fisheries)."

Figure 6: Tonga total economic value of its marine ecosystem services

⁴ https://afdc.energy.gov/fuels/hydrogen_production.html

⁵ https://www.joc.com/maritime-news/container-lines/green-shipping-can-make-economic-sense_20190805.html

These figures provide a baseline estimate. However, there are known data limitations. There is a high degree of leakage in the Tongan tourism sector due to offshore actors selling whale-watching tours and therefore the tourism sector estimate is likely a gross underestimate. While the estimates should be used with caution, they do provide a starting point for discussions with policy and decision makers on how to balance the sustainable development needs of the country.



Figure 7: Tonga Sustainable Development Goals since 2020 (PIFS 2018)

1. GENERATE

Generate public and private financial capital through traditional and innovative finance mechanisms to create a diversified portfolio.

Status of Tonga's Ocean Finance

An analysis of Tonga's national ocean finance took into account the aggregate expenditure of government and public enterprises for the financial year 2019/2020⁶ from their own resources and donor assistance, while applying a weighting system for determining ocean relevance (see Appendix 1). These methods build on the Pacific Climate Change Finance Assessment Framework (PIFS 2013) but require further refinement and validation and that all estimates within this report should be treated with caution.

The weighting system for estimation of the expenditures allocated to government ministries and public enterprises in the financial year 2019/2020 related to ocean activities is described below, with 12 per cent of the estimation attributed to direct ocean finance:

- a) 5 percent marginal relevance - refers to activities that have indirect links to the ocean⁷.
- b) 25 percent low relevance - refers to activities that show attributes relevant to the ocean⁸.
- c) 50 percent medium relevance - refers to activities that at least have a relevant mix to the ocean⁹.
- d) 80 percent high relevance - refers to clear activities relevant to the ocean¹⁰.

The public enterprises use 80 percent of the weighting that applied to the Ministry of Public Enterprises with 12 percent of the estimation for direct ocean finance. Based on the adopted methodology, Tonga has an estimated annual direct ocean budget of USD\$20 million for both government and public enterprises' operational and capital expenditures. Taken together, the total USD20 million for ocean-related finance comprises USD\$13.1 million from government and public enterprises operational expenditures and USD\$6.4 million from their capital expenditures with over 80 percent finances from overseas development assistance.

National operational expenditures

The national operational expenditure constitutes government and public enterprises operational expenditures. The inclusion of the public enterprises is essential for consideration of the aggregated expenditures for the government or public sector.

Government operational expenditure

According to these estimates, the government operational expenditures stood at USD\$147.2 million in 2019/20, of which USD\$7.3 million (or 5%) is benefiting ocean governance and health (see Table 3). Of this figure, the Ministry of Finance had the highest share of US\$3.58 million (or 49% of the total), which accounts for loan repayment on ports infrastructure development and subsidy for sea transportation to the northernmost islands. The Ministry of Infrastructure contributes US\$0.63 million from funding of the ports and marine program with US\$0.32 million from the climate change program under MEIDECCC.

⁶ The expenditure figures for 2019/20 for both government and public enterprises are provisional actual.

⁷ There are 10 government ministries under 5% which include Palace Office, Auditor General Office, Ombudsman, Justice and Prison, Attorney General's Office, Health, Education and Training, Internal Affairs, Public Service Commission, and Statistics.

⁸ The two ministries under 25% are Foreign Affairs and Trade and Economic Development.

⁹ The seven ministries under 50% are Legislative Assembly, Armed Forces, Prime Minister's Office, Police and Fire Services, Agriculture and Forest, Infrastructure, and Tourism.

¹⁰ The six ministries under 80% are Finance, Revenue and Custom, Public Enterprises, Land and Natural Resources, MEIDECCC, and Fisheries

**Table 3: Tonga Government Finance Weighted for Ocean Relevance
(Ministry of Finance Budget 2019/2020)**

National Budget by Ministries, Departments and Agencies	Government-funded Expenditure 2019/20 US\$ Millions	Government-funded Expenditure Weighted Ocean Budget \$US Millions
Palace Office	1.9	0.01
Legislative Assembly	4.9	0.29
Tonga Office of the Auditor General	0.7	-
Ombudsman	0.6	-
Ministry of Foreign Affairs	4.3	0.13
His Majesty's Armed Forces	4.4	0.27
Prime Minister's Office	1.6	0.10
Ministry of Finance	37.3	3.58
Ministry of Revenue and Customs	3.8	0.36
Ministry of Public Enterprises	0.5	0.05
Ministry of Commerce and Economic Development	2.4	0.07
Ministry of Justice and Prisons	4.6	0.03
Attorney General's Office	1.2	0.01
Ministry of Police and Fire	6.0	0.36
Ministry of Health	19.2	0.11
Ministry of Education and Training	24.9	0.15
Ministry of Internal Affairs	3.2	0.02
Ministry of Agriculture, Food and Forestry	4.1	0.24
Ministry of Infrastructure	10.5	0.63
Ministry of Land, Survey and Natural Resources	2.1	0.2
Public Service Commission	0.8	-
Statistics Department	1.3	0.01
MEIDECC	3.3	0.32
Ministry of Fisheries	1.9	0.18
Ministry of Tourism	1.8	0.11
Total	147.2	7.25

National resources are mobilised through taxes, fines, and fees. An analysis of taxes that are relevant to oceans is included in the ALIGN section of this profile; in brief, only a minor portion of taxes are raised from ocean-related activities.

The largest contribution from marine resources to the national budget is in the form of foreign fishing licence fees. For albacore tuna, foreign licence fees were US\$14,000 plus 5 percent resource rent (based on the value of fish caught, whereas domestic licence fees are US\$537 for a 10-meter vessel to US\$2,238 for a 20-meter vessel. Tuna licence fees provide approximately USD\$500,000 to government revenues. Deepwater snapper fishery licence fees contribute an additional USD\$600,000 annually. The fishing licence fees are collected by the government into its general revenue and then allocated to ministries, departments and agencies according to the annual national budget.

Other minor fees and fines relevant to oceans include fisheries enforcement court cases, coral reef damage mitigation from shipwrecks, cost-recovery fees for environmental impact assessments, and, whale watching vessel permit fees. It is necessary to consider additional revenue streams from imposing waste charges and water charges for the release of treated and untreated water.

Public Enterprises' operational expenditure

The total operational expenditure for public enterprises was USD\$60.5 million in 2019/20, of which USD\$5.81 million constitutes direct ocean finance. (see Table 4). Tonga Power Ltd had the highest expenditure of US\$2.53 million from several activities including environmental safety measures for power generation cooling systems drained into the sea. The Tonga Communication Corporation stood at second place with US\$1.31 million spent on various activities including communication system infrastructure for sea transportation.

**Table 4: Public Enterprises Finance Weighted for Ocean Relevance
(Source: Public Enterprises Annual Reports 2019/2020)**

Public Enterprises	Public Enterprises operation expenditure 2019/20 US\$ Millions	Public Enterprises operation Expenditure Weighted Ocean relevance US\$ Millions
Tonga Power Ltd	26.4	2.53
Tonga Water Board	4.0	0.38
Waste Authority Ltd	1.6	0.15
Tonga Communication Corporation	13.7	1.31
Tonga Cable Ltd	2.8	0.27
Tonga Broadcasting Commission	0.9	0.09
Tonga Airport Ltd	5.5	0.52
Tonga Post Ltd	0.4	0.04
Ports Authority Tonga Ltd	4.0	0.39
Talamahu Market Corporation Ltd	0.7	0.06
Tonga Asset Management Authority	0.6	0.06
Total	60.5	5.81

Public enterprises manage 41 percent of GDP or USD\$284 million of government assets. Most of the Ports Authority's ocean-related activities are through providing ports infrastructure in the capital, Nuku'alofa, for berthing of international shipping lines, while 80 per cent of its overall revenue comes from fees on wharfage, berthing and handling of cargo. The Waste Authority collects an environmental levy from cruise ships passenger of US\$5 per head generating 10 per cent (US\$202,000 annually) of its total revenue in 2019/20. COVID-19 has significantly affected the levy collection with cancellation of cruise ships schedules. The other public enterprises provide indirect benefits for ocean activities.



Source: Dr Salome Taufa

Overseas Development Assistance

The government and public enterprises capital expenditures under the development budget funded by ODA assistance are presented separately below.

Government development expenditure

The Government development expenditure was USD\$58.4 million in 2019/2020, of which USD\$4 million (or 7%) is for direct ocean finance (see Table 5). The main contribution of US\$2.4 million comes from the climate change programs of the MEIDECCC that provide funding for coastal protection throughout the country.

Table 5: Tonga Government ODA Weighted for Ocean Relevance (Ministry of Finance 2019/2020)

National Budget by Ministries, Departments and Agencies	Development Expenditure Finance 2019/20 US\$ Millions	Development Expenditure Finance Weighted Ocean Budget 2019/20 US\$ Millions
Palace Office	-	-
Legislative Assembly	-	-
Tonga Office of the Auditor General	-	-
Ombudsman	-	-
Ministry of Foreign Affairs	-	-
His Majesty's Armed Forces	-	-
Prime Minister's Office	-	-
Ministry of Finance	6.9	0.7
Ministry of Revenue and Customs	-	-
Ministry of Public Enterprises	-	-
Ministry of Commerce and Economic Development	0.8	-
Ministry of Justice and Prisons	0.4	-
Attorney General's Office	-	-
Ministry of Police and Fire	1.8	0.1
Ministry of Health	3.9	-
Ministry of Education and Training	3.7	-
Ministry of Internal Affairs	3.2	-
Ministry of Agriculture, Food and Forestry	1.3	0.1
Ministry of Infrastructure	9.4	0.6
Ministry of Land, Survey and Natural Resources	0.7	0.1
Public Service Commission	0.6	-
Statistics Department	0.1	-
MEIDECC	24.8	2.4
Ministry of Fisheries	0.7	0.1
Ministry of Tourism	0.1	0
Total	58.4	4.0

Public Enterprises development expenditure

The Public Enterprises development expenditure was US\$25.3 million in 2019/2020, of which USD\$2.43million (or 10%) was for direct ocean finance (see Table 6). The highest contribution was from Tonga Airport Ltd with US\$1.12 million, for maintenance of the airfields on the outer islands' coastal sides.

Table 6: Public Enterprises ODA Weighted for Ocean Relevance
(Source: Public Enterprises Annual Report 2019/2020)

Public Enterprises	Public Enterprises ODA development expenditure 2019/20 US\$ Millions	Public Enterprises ODA development Expenditure Weighted Ocean relevance US\$ Millions
Tonga Power Ltd	0.91	0.09
Tonga Water Board	4.36	0.42
Waste Authority Ltd	0.62	0.06
Tonga Communication Corporation	3.10	0.30
Tonga Cable Ltd	2.12	0.20
Tonga Broadcasting Commission	0.44	0.04
Tonga Airport Ltd	11.66	1.12
Tonga Post Ltd	0.06	0.01
Ports Authority Tonga Ltd	1.97	0.19
Talamahu Market Corporation Ltd	0.04	0
Tonga Asset Management Authority	0	0
Total	25.28	2.43

It is noteworthy that most of the ODA projects do not directly target ocean outcomes; ocean benefits are secondary and therefore these numbers do not represent strategic ocean ODA. The direct ocean finance component is estimated at US\$6.4 million (12%). However, assistance is expected to increase in the medium term through several projects in the pipeline including the ocean floating photovoltaic (FPV) technology for Tonga Power Ltd, which is well placed to tap Tonga's enormous water surface and solar resource potential. FPV addresses their unique challenges and vulnerabilities while limiting climate impacts. While FPV requires stricter standards than land-based PV given its exposure to water, it has added advantages in that it: (i) frees up land for other use and saves on land acquisition and preparation costs; (ii) allows higher yields due to the cooling effect of water; (iii) conserves water through reduced evaporation; (iv) has readily available water for module cleaning; (v) is quick to install; and (vi) addresses the energy-water-food-climate nexus. The cost for the floating, anchoring and mooring system is offset by both the reduced land acquisition and preparation costs and the higher energy yield. FPV includes PV panels built on stilts above water. This project will be financed through public and private partnership.

Foreign Direct Investment

Foreign Direct Investment (FDI) in Tonga is approximately US\$15 million annually, which is low in comparison to regional averages and variable, year to year (World Bank 2018). The FDI for ocean projects is limited to small-scale aquaculture including Mabel Pearl farming and seaweed farming.

Philanthropy

Collection of data on financial resources that do not go through the public system is challenging because data is not readily available or reported in a consistent format. Arrangements that donors share data with government on their financial assistance to the country will address these data gaps. Several foundations and non-profit organisations are providing financial support to Tonga to improve ocean health and governance including Waitt Foundation, Oceans 5, Vava'u Environmental Protection Association, MACBIO and the International Union for the Conservation of Nature. Anecdotal evidence suggests that donations from these organisations may increase in the next five years. About US\$100,000 is received annually from these sources.

Of note, UNEP conducted a detailed study of "International Funding for the Sustainable Management of Coral Reefs and Associated Coastal Ecosystems" and found \$1.9 Billion USD had been committed from 2010-2016; however, this study did not find any specific funding for Tonga (UNEP 2018; <https://coralfunders.com>).

SMA and Community Funds

Some village councils charge a small fee for the use of mooring buoys (between US\$2.2 – US\$4.4¹¹ per use) or homestay experiences to financially support SMA management, in particular, fisheries enforcement. At least four resorts help to manage SMAs including Fafa Island (off Nuku'alofa), Tongan Beach Resort (Vava'u), Matafonua Resort and Sandy Beach Resort (Ha'apai). As part of the development of this ocean finance profile, four village councils came together to create a new trust fund that is based on voluntary user fees.

Loans

Tonga has three commercial banks providing banking services, alongside the Tonga Development Bank, which was established by Government to promote Tonga's economic and social advancement while operating profitably as a financially sound banking institution. In 2020, commercial banks had total assets approaching US\$330 million and total loans and advances outstanding to government and public enterprises amounting to US\$26.4 million¹². Commercial banks are limited in how much they can lend to any one borrower. This places limits on what they can lend to public enterprises and private entities. However, there is still ample liquidity in the banking system for lending to ocean-related activities given that only 68 per cent of the total deposit is being lent, when 80 per cent is allowed for loans. Lending for the fishing sector has been encouraged.

The pension funds comprising the Government Retirement Fund Board (GRFB) and the National Retirement Fund Board (NRFB) have maintained a solid financial position with a combined asset base of US\$96 million in 2019/20. They have started lending to public enterprises, including loans to the Tonga Water Board for a smart meter project and a solar farm project. They have each acquired 15 percent shareholdings in the Tonga Development Bank. Both GRFB and NRFB have moved strategically to diversify their investment portfolios from concentrating on low risk financial instruments to investing in other areas including public enterprises. The pension funds have the financial capacity to lend to viable projects in the public enterprises and private sector on more favourable terms than the commercial banks.

11 Exchange rate used is T\$1 to US\$0.44

12 National Reserve Bank of Tonga, Quarterly Bulletin, September 2020.

Further, government is providing concessional loans to agriculture, fishing, and SMA through the Tonga Development Bank at 1 percent interest but it is very challenging for small businesses to find sufficient collateral to qualify for the loans (note: it is very risky to offer land as collateral, as it may be repossessed). The program was reviewed¹³ with government deciding to resume it starting in September 2020, with an increase in the total fund by T\$5million to US\$8 million. The collateral requirement was revised to encourage lending. The International Finance Corporation and the South Pacific Business Development network provide micro-finance loans to women for subsistence fishing, subsistence farming and handicrafts.

The Tonga Development Bank commercial interest rate¹⁴ for lending to fisheries, tourism and other businesses is at 8.5 per cent excluding fees and other charges. With fees and charges, the effective interest rate could be at 15 percent, which might be prohibitive to encourage expansion and new business investment. This high interest rate is the reason that the government has provided concessionary development loans to various businesses and community development programs at 3 percent interest rate without fees to stimulate growth. The benchmark for return on equity prescribed by the Ministry of Public Enterprises for the bank is 10 percent. However, the actual return on equity for the past five years has been at around 5 percent. TDB has indicated its intention to provide competitive rates, flexible terms and high loan amount to any business interested to consider the bank's products and services. It offers its services to both existing and new clients to grow its balance sheet at a sustainable level.

Government has adopted a policy not to borrow externally except on highly concessional terms and to maintain the ratio of external debt-to-GDP, at below 50 percent. This will ensure stable debt dynamics over the long-term and build fiscal buffers for debt repayment and emergency funds for climate-related shocks. It will also require higher fiscal surpluses averaging some 4 percent of GDP for the foreseeable future. The International Monetary Fund (IMF) has indicated that substantial additional donor funding in the form of grants will be needed, but that a more sustainable solution to Tonga's fiscal, development and growth challenges is to grow the private sector¹⁵.

Status of Taxes Relevant to Oceans

The taxes presented in Table 7 have been identified to have a connection to ocean health as defined in the *Analysis of taxes and subsidies relevant to Pacific Ocean health* report (Wyatt et al in review). As a matter of policy, these taxes and subsidies should be reviewed to consider their dead weight loss on the suppliers and demands and the general welfare of society at large. The actual experience to date would be an invaluable input for evaluating the outcomes achieved for the target sectors compared to the original intention and to inform consideration of future fiscal instruments applied to any sector policy.

13 Ministry of Finance 2020, Independent Review of the Government Development Loan Scheme Administered by the Tonga Development Bank.

14 Tonga Development Bank website.

15 Ibid., paragraph 13 and summary.

Table 7: Tonga Taxes Relevant to Ocean (Source: Wyatt et al in review).

Name	Tax or subsidy classification	Economic sectors affected	Primary policy objective of the tax or subsidy	Top line impact on Pacific ocean finance and governance
Cruise ship levy	Levy	Tourism; Waste Management	Hypothecated revenue - Waste Management.	ALIGN Possible opportunity
Waste levy on plastic bags and imported disposable plastics (10%)	Levy	Consumer imports	Hypothecated revenue - Waste Management.	ALIGN Possible opportunity
Excises on imported carbonated drinks (Health excises)	Customs and import duties	Consumer imports	Health - to disincentivise consumption of high-sugar beverages.	ALIGN
Excises on imported cigarettes (Health excises)	Customs and import duties	Consumer imports	Health - to disincentivise smoking.	ALIGN
Import duties on manufactured plastic items (15%)	Customs and import duties	Consumer imports	Environmental - to disincentivise plastic imports. This tax historically had a revenue objective.	ALIGN
Import duties (15%) on shark fin	Customs and import duties	Fisheries	Environmental - to disincentivise shark fin imports. This tax historically had a revenue objective.	ALIGN
Import duties on certain aquatic invertebrates (20%)	Customs and import duties	Fisheries	Economic - to support the sea cucumber industry in Tonga and encourage its growth. Tonga is trying to encourage land-based aquaculture which could take the pressure off the sea resource.	ALIGN
Super-profit tax on extractive industries / deep sea mining (25% on profit (net income) in addition to 20% income tax)	Resource rental taxation	Extractive industry	Revenue - to ensure that the state as resource owner receives an appropriate share of the economic rent generated from the natural resources.	ACCOUNT; GENERATE Possible opportunity
Shipping/carriage tax for non-residents (3% on gross value of goods or passengers carried, and tax on resource amount generated in Tonga)	Tax	Tourism; Consumer Imports	Revenue - general government revenue.	ACCOUNT; GENERATE Possible opportunity
Tonnage fees for purse seine tuna fishing	Levy	Fishing	Revenue and fisheries management.	ALIGN, ACCOUNT

Cruise Ship Levy

This is a waste management levy of US\$5 per person for tourists visiting Tonga by cruise ship. Cabinet approved it in May 2015 but it was implemented in April 2016 (Carnival Cruises). Funds go into the Waste Management Authority general pool to improve environmental services such as emptying of public bins, cleaning and maintenance of public toilets and supporting community clean up initiatives - so the funds are used on more than just cruise ship waste. Rubbish clean-up helps the ocean environment.

Revenue is collected and spent by the Tonga Waste Management Authority, under supervision from the Ministry of Public Enterprises.

Revenue from the cruise ship levy in 2017 stood at US\$20,432 but 2019/20 recorded zero collections due to the Covid-19 pandemic, since all cruise ships were diverted to other countries.

There is potential to suggest/support a Fishing for Litter scheme or better landfilling or recycling facilities using the funds generated by this Levy. The Waste Management Authority is supportive of directing more waste management attention to ocean health but at present, is focused on land-based waste, landfill capacity and management.

Waste Levy on Imported Plastics

The Waste Management (Plastic Levy) Regulation 2013 was developed to create a levy for various plastic packaging items such as plastic takeaway containers and plastic bags. The levy revenue helps fund the large costs associated with plastic waste, in particular, the Waste Authority Ltd's delivery of waste management services. The levy aims to change peoples' buying behaviours through increased prices. Plastics in the environment create marine pollution, exacerbate poor drainage and impact the beauty of Tonga and hence, its potential as a tourist destination. The levy is 10 percent of the landed value of the imported plastics. The published Regulations refer to plastic bags - but Customs officials have informed the authors of this report that in practice, the levy applies to disposable nappies and imported single use disposable plastics. We have noted this tax as aligning with ocean finance and governance goals. In practice, this levy is unlikely to provide a very strong deterrent against importing plastic- given that it is very cheap to make and import. Increased costs are seldom passed on to retailers and Customs officials tell us that the levy has not had any impact on import behaviour in relation to plastics. However, it is a moderate generator of funds for waste management. Those funds are not hypothecated to ocean waste or clean-up but are directed to clean-ups for mangrove areas from time to time. The funds are used for rubbish management. In the future, an opportunity might be to direct levy funds toward ocean health.

Revenue is collected and spent by the Tonga Waste Management Authority, under supervision from the Ministry of Public Enterprises.

The revenue from the Waste Levy in 2019/20 stood at US\$1,669,525.

Health excises on imported carbonated drinks

Tonga imposes a US\$0.44 per liter excise on imported carbonated drinks, as a disincentive to import plastic-packaged drinks and single-use plastics. This excise is administered at the border by Customs.

The value of excises collected in 2019/20 was US\$1.8 million.

A 2015 SPC discussion paper on sugary beverages in the Pacific did not evaluate the impact of the excise on Tongan imports.

Ocean Finance Opportunity: Beverage taxes may be a subject for discussion in other PICTs. In a 2015 paper on sugar taxes, the author noted; “There is evidence of high levels of imported sugary beverage consumption in the majority of PICTs (16/20, no data for PNG and Pitcairn) with particularly strong evidence of this in the Cook Islands, Niue, Palau, French Polynesia and Tonga.” (McDonald, 2015) As the majority of sugary beverages are imported to PICTs in plastic, single-use containers, there is alignment with waste management goals.

Health excises on imported cigarettes

This tax disincentivises the import and consumption of cigarettes, reducing the proliferation of waste cigarette filters in the ocean. This excise is administered at the border by Customs. The value of excises collected in 2019/20 was US\$3.1 million.

Ocean Finance Opportunity: Excises on cigarettes, along with health promotion, have had a demonstrable impact on reducing rates of smoking (and therefore littering behavior from cigarette butts).

Import duties on manufactured plastic items

A 15 percent duty is imposed on plastic items in addition to the Waste Levy mentioned above. The combination of these two instruments has the potential to slightly disincentivise imports of manufactured plastics (which become waste), but in practice Customs officers tell us that plastic import behaviour is not changing. Note the impact of a duty on plastic on its own is likely to be small as most consumer items imported to Tonga, whichever material they are manufactured from, have an import duty imposed. So, in total, this duty provides only a weak alignment with ocean finance and governance goals. Whilst the duty (especially in combination with the waste levy described above) may slightly disincentivise imports of plastics, which become waste, the incentive only works if economic alternatives are available. Plastic items tend to be very cheap to make and import, relative to alternatives.

This excise is administered at the border by Customs. The value of excises collected in 2019/20 was US\$14,085.

Ocean Finance Opportunity: According to Customs officials, Tonga aims to review its import duties, with a view to removing duties that are not working as intended. There may be an opportunity to replace duties with alternatives such as a higher levy or bans on some types of imported plastics.

Import duties on shark fin

There is a 15 percent duty on imports of shark fin. The duty operates as a tax differential, i.e. relative to other kinds of fish, the duties on shark fin are higher. This has potential to disincentivise landing of shark fin by foreign vessels in Tonga. There is no ban on shark finning in Tonga, unlike in other jurisdictions such as Fiji. However, Customs officials tell us that in practice, the volume of shark fish and shark products imported is small. The value of duties collected is negligible.

Ocean Finance Opportunity: According to Customs officials, Tonga aims to review its import duties, with a view to removing duties that are not having the desired effect. There may be an opportunity to replace duties with alternative tools such as a ban on landing shark fin.

Import duties on aquatic invertebrates

Imports of aquatic invertebrates carry a 20 percent import duty. Again, as a tax differential, it is a higher duty relative to those on other fish and shellfish. It aims to protect (primarily) Tongan producers of abalone and sea cucumber. In theory, it might disincentivise the import of abalone

and sea cucumbers by foreign fishing vessels into Tonga, but there is no evidence to suggest such an impact. Overall, the impact of this duty on ocean finance and governance is small.

This excise is administered at the border by Customs. There was no revenue collected in 2019/20 on excise duties.

Super profit tax on extractive industries

This is a resource rental/royalty tax of 25 percent on profit (net income) in addition to the standard 20 percent income tax. The Seabed Minerals Act has been enacted but has not yet been used. The legislation is a “just in case” as there have been exploration activities in Tonga in the past. The royalty payment is hypothecated to a Seabed Minerals Fund in accordance with the Seabed Minerals Act 2014, Section 94. According to the Seabed Minerals Act, “The Seabed Minerals Fund is established with the objective to ensure the wise management of the Seabed Minerals resources for the benefit of both current and future generations.”

This tax is administered by Tonga’s Revenue administration. There is no quantitative information available as the tax is currently not in use.

Ocean Finance Opportunity: Generation of funds for the Seabed Minerals Fund.

Tonnage fees for purse seine tuna fishing

The Treaty on Fisheries between the Governments of certain Pacific Island States and the Government of the United States of America (2016) provides that the governments of Fiji, Niue, Samoa, Tonga and Vanuatu can negotiate from 2019, the payment of tonnage fees for tuna. These governments are not parties to the Nauru agreement, whereby payments are made under a “vessel days” scheme for certain fishing rights. We understand that some countries are collecting tonnage fees under the 2016 agreement. However, few details are available at this point in time given that this year (2019) would be the first under which tonnage fees can be negotiated and applied.

Opportunities

Traditional and existing finance mechanisms continue to be required for Tonga’s ocean health and governance program. This section describes additional opportunities to increase the amount of funding available through new and innovative mechanisms. Stakeholder consultations in Tonga have considered the following opportunities:

Fiscal Transfer of Foreign Fishing Licence Fees

Like most Pacific Island Countries, Tonga receives considerable revenue from oceanic fisheries access fees, yet only a small and variable amount of this revenue is allocated towards fisheries management and other ocean-related benefits. There is opportunity to investigate whether and how oceanic economic benefits can be more strategically used to fund coastal and ocean health and governance initiatives. This will likely require careful economic analysis to avoid risks to other national priorities that are currently funded by foreign fishing licence fees, and also a political champion to lead this change (earmarking of fisheries fees towards the management of the fishery). It is crucial for government to consider allocating all revenue raised from ocean finance for the development of fisheries infrastructure, conservation measures and other social and economic projects rather than going to the consolidated fund for general purposes.

Tourism

Tourism is steadily growing in Tonga and there is underdeveloped potential in generating revenue from 1) whale swimming, 2) private marine protected areas - lodges managing SMAs in partnership with villages, and 3) super yachts.

It should be noted that there is some tension in the country with regard to tourism development, particularly relating to the influence of foreign governments and foreign businesses in the Kingdom. Australia and the Government of China have been promoting tourism development and this has been accepted by some government ministries. One of the issues surrounding foreign-owned tourism operators is that for some businesses, payments are accepted in offshore accounts and the profits do not directly benefit Tonga. The Tourism Corporate Plan does have a sustainability mandate which aligns with some of the opportunities presented below.

Whale Watching / Swimming

Whale swimming is a unique experience that is not offered in other countries in the Pacific region. The Ministry of Tourism is working to understand the science and best management practices around tourist-whale interactions and has instituted regulations to reflect the science, including 4 meters minimum distance and 7-hour maximum boat hours/day rule. Whale swim guides must go through annual training (subsidised by government). Data being collected on the whale watching industry is not sufficient and more information is needed regarding the number of whale interactions, distances, behaviour changes, etc. Collection of data could be made a mandatory part of the licences.

There is an opportunity to create a user fee system for whale watching/whale swimming tourists. To address concerns about the risk of deterring tourists, a willingness to pay (WTP) study would be a good start. The Ministry of Tourism has indicated preliminary support of this idea. User fees could either be voluntary or mandatory. A mandatory system could include regulations that require operators to charge tourists fees that go into a central fund, following the example of the Environmental Management Charge in the Great Barrier Reef Marine Park. However, private sector operators have expressed concerns about government management of funds. Concerns include corruption - specifically that the funds would not go to their intended purpose due to the actions of a few government officials - and the redirection of funds to other government objectives (health, education, etc.) that do not have any direct connection to the management of marine resources. Therefore, a private-public partnership model is recommended where the money is held in a third-party fund with a governing body representative of government, civil society, the private sector and academia.

SMA Finance - Ecotourism Driven

There is an opportunity to expand, replicate and improve private sector-driven marine protected areas, known as entrepreneurial marine protected areas (eMPAs) in the literature and known as special management areas (SMAs) in Tonga. There are a few examples in Tonga including Fafa Island (off Nuku'alofa), Tongan Beach Resort (Vava'u) and Matafonua Lodge/Sandy Beach Resort (Ha'apai). In most of these examples, compliance with the SMA regulations is not yet happening. There is an opportunity to develop Public and Private Partnership trusts with ecotourism lodges working in partnership with village councils and the Ministry of Tourism to set up trust funds for SMAs, similar to the Blue Finance model in the Caribbean.

There is an opportunity also to develop coral restoration, mangrove restoration, baby clam planting and baby coral naming ecotourism opportunities where tourists pay for these experiences and a portion of the profits goes back into managing the SMA. This is often referred to as “volume-tourism.”

It should be noted that ecotourism-generated revenues will only work for a few SMAs, in places where there is snorkeling, diving, whale watching, or some other unique feature that sufficiently interests the tourist market. Most SMAs will require other sources of revenue, especially external grants from governments and philanthropic sources. Most of these communities do not have sufficient revenue sources to repay debts, making grants necessary. Some communities may have small-sized livelihood projects (aquaculture, small-scale fishing, handicrafts, etc.) to generate some level of revenue that realistically, are matching contributions given their small size rather than a source of loan repayment. Compounding these issues, many communities are losing their labour force to overseas seasonal workers, especially fruit pickers who stay in Australia or New Zealand for 6-9 months, and therefore many communities have only elderly and children, leaving many SMA tasks hard to complete.

Super Yachts

Consider the Super Yacht Levy (which in Fiji, is part of the country’s Environment and Climate Adaption Levy). In Fiji, this 10 percent levy applies on the stated gross charter fee as disclosed in the charter contract. To apply this tax, policy analysts would need to consider: the application/ intersection with the non-resident vessel charges and the practical application of the levy to the whale-watching and tourist yacht industry, including the enforcement and collection of these charges. It would be sensible to consider hypothecation of these charges to an ocean fund and/ or trust.

Debt and Public and Private Partnership (PPP)

There are opportunities for debt financing to generate revenue for oceans. However, these opportunities require careful consideration. Debt financing can be sourced from multilateral banks or international impact investment funds and is available for Tonga. Debt can be channeled through many mechanisms including bonds and loan funds. For example, a specific opportunity arose in which an international ocean impact investor indicated interest in providing debt financing to Tonga in return for measurable ocean outcomes and a concessional financial rate of return. A draft conceptual model of a PPP to use these funds was developed for consultation at the May 2019 stakeholder workshop (Figure 9).

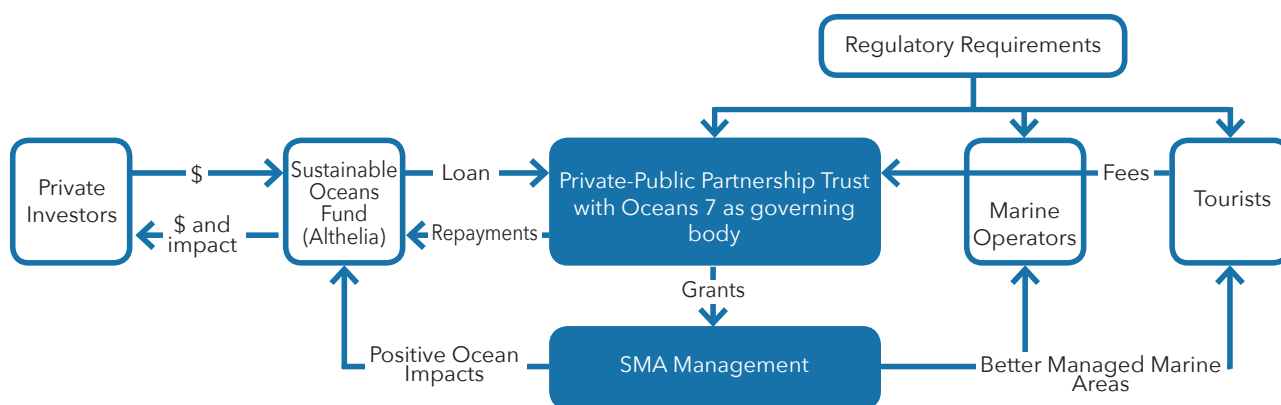


Figure 8: Draft Concept for a Private-Public-Partnership Model for Tonga

At the workshop and in subsequent consultations, several concerns with this specific model and with taking on ocean impact investing debt in general have been raised. First, there is a fear of taking on new foreign debt and becoming beholden to foreign interests. This fear stems from the fact that Tonga is heavily indebted to China (27% of GDP) and Tonga is the only country in the Pacific region whose debt to China accounts for more than half of its total outstanding debt (Lowy Institute 2019). Tonga has a “moderate” risk of debt distress (IMF 2016). Given the perceived risks of falling into a “debt trap,” Tonga is reluctant to take on additional debt from an external party. Enhanced awareness and capacity building around impact investing may or may not alleviate these fears. Developing rigorous governance models in which Tonga remains firmly in control of the outcomes may also help to get these innovative models over the line.

Secondly, there is a real concern about serviceability. Given the size of Tonga’s economy and in particular the size and trajectory of Tonga’s tourism and domestic fishing industries, many of the innovative models from around the world using ocean impact investing debt may not work in Tonga. Analysis is required to understand if there is sufficient deal flow, even at concessional interest rates, to warrant a bond or loan fund. Pipeline development may assist, but there are natural limitations to the size in which deal flow may grow, and therefore bilateral or regional models may also require consideration.

The Ministry of Public Enterprises is developing a policy framework for public-private partnerships. However, independent power producers are playing an emerging role in the energy sector in partnership with Tonga Power Ltd, particularly in relation to renewable energy systems harnessing solar and wind energy. In the telecommunications sector, the two service providers are the private firm Digicel operating in competition with the public enterprise Tonga Communications Corporation.

The diaspora is a source of funding for some infrastructure, through old-student networks for school buildings and facilities, as well as community facilities such as churches, and, private housing. Some churches fund and build facilities that meet a high cyclone rating and provide an important addition to available shelter in times of extreme weather events.

Deep Sea Mining Tax

There is some controversy around deep sea mining rights and royalties. Tonga does have a super profit tax in place, in case exploration turns into extraction (see ALIGN). The government estimates that extraction may begin in 2025. While this may generate revenue, it should be carefully considered whether building dependence on this revenue undermines ocean health and governance.

Environmental Impact Assessment Fees / Biodiversity Offsets

There are presently no biodiversity offsets under the environmental impact assessment framework. These could be considered but would need to be carefully designed in order to avoid the many risks associated with marine offsets (Bos et al 2015). Tonga does have a clause that if a “major” project is approved, then the proponent should pay 1% of the total cost of the project to cover biodiversity offsets. Furthermore, if the project cost is in excess of US\$4,400.00 then the proponent can ask for a discount on the biodiversity offset. These fees are largely cost recovery-based and do not generate substantial revenue. There is an opportunity to investigate if and how to generate additional revenue from planned and approved damage under EIA, and also unplanned damage (compensation claims).

Opportunities Suggested by Workshop Participants (May 2019)

Noting that these were not based on feasibility criteria but rather areas of interest to investigate further:

- ▶ Business licence fees (all sectors) - 3 recommendations
- ▶ Corporate Social Responsibility - 3 recommendations
- ▶ Trust Fund SMAs - 2 recommendations
- ▶ Plastic/plastic bags levy - 2 recommendations
- ▶ Sea pollution fines - 2 recommendations
- ▶ Fines for commercial and non-commercial vessels (non-compliance) - 2 recommendations
- ▶ Cruise ship fee
- ▶ Entrance fee
- ▶ Ocean grant
- ▶ PPP Trust (Figure 4)
- ▶ Deep sea mining fees/royalties

Figure 9: Proposed opportunity taxes relevant to Ocean suggested during 2019 workshop

Disaster risk finance and insurance instruments

It is crucial that government and the private sector have access to disaster risk finance and insurance instruments as an integral part of disaster and climate risk management to mitigate the risk for the country's vulnerability to extreme weather conditions such as cyclones. Government has realised the benefits of having sovereign disaster risk financed under the Pacific Catastrophe Risk Insurance, which is a parametric insurance as part of the Pacific Disaster Risk Financing and Insurance (DRFI) program that is designed to increase the financial resilience of Pacific Island countries against natural disasters by improving their capacity to meet post-disaster funding needs. Government has received payouts from this insurance program on several cyclones such as Ian and Gita, which has helped with financing the post-cyclone reconstruction activities. On the other hand, businesses including operators in the tourism industry have insurance covers purchased from the market. Some of these businesses are located along the coastal areas and are therefore exposed to the serious risk of sea surges and destructive waves in the event of a cyclone and have been served well by their cover. The recent Cyclone Harold had wiped out the tourist resorts standing along the coast on the western site of the main island but were fortunately insured. Investors' confidence in blue economy projects lies in the availability of insurance mechanisms to shield capital providers from potential losses.

Carbon Tax

The government has not yet considered establishing a framework for the pricing of carbon and instituting a carbon tax as a source of revenue for blue economy. Carbon taxes - levied on oil products and natural gas in proportion to their carbon content - can be collected from fuel suppliers. They in turn will pass on the tax in the form of higher prices for electricity, gasoline, heating oil, and so on, as well as for the products and services that depend on them. This provides incentives for producers and consumers alike to reduce energy use and shift to lower-carbon fuels or renewable energy sources through investment or behaviour. However, this may not be politically easy to implement. Carbon taxes should therefore be introduced gradually, with targeted assistance for low-income households, trade-dependent industries and vulnerable workers. Other instruments may be needed to reinforce carbon pricing, or substitute for it. One potentially promising approach avoids a politically difficult increase in fuel prices by implementing revenue-neutral tax subsidies to promote incentives for cleaner power generation, shifting to cleaner vehicles, and, improvements in energy efficiency.

Equity instruments

There are several equity instruments that are crucial to consider applying to the promotion of SMEs in the blue economy in Tonga such as crowdfunding, venture capital and private equity. Their use in various parts of the world can hold lessons in how to successfully employ them locally. Crowdfunding could be tailored to encourage the Tongan diaspora (who send annual remittances of around 26 per of GDP) to invest some of their funds in a blue economy industry either through buying shares or providing loans. This is an investment option for which private remittance can be targeted to help develop the export sector instead of fueling import consumption that only widens the trade deficit.

Debt Swap

Government loans from China for the reconstruction of the central business district in Nukualofa and roads upgrading are being considered under the Debt Service Suspension Initiative (DSSI) taken by G20 Finance Ministers and Central Bank Governors in April 2020 and extended in November 2020. If this initiative is successful, then that debt could be converted into a grant to assist the development of the blue economy sectors. This initiative is currently being delayed pending further consideration.

Green/Blue Bond

Financing of ocean infrastructure investments through the issuing of public and corporate green bonds has been in use in various countries. The government has been the main player in the issuance of national public bonds for financing of capital projects in various sectors and for bridging the budget operational deficit. In 2019/20, the total stock of government local bonds was US\$32.4m or 7 percent of GDP. Government issued a new bond of US\$6.6m for the financing of 25 percent of the overall budget deficit. In the private sector, it is only the Tonga Development Bank that has used this means of finance with government guaranteed. There is substantial liquidity available in the economy's financial and non-financial sectors, especially the retirement funds. This presents a great opportunity for funding projects for blue economy development through the issuing of government, public enterprise and corporate green/blue bonds.

Blue Carbon

Blue Carbon has become crucial to the natural health and social prosperity of certain coastal vegetated ecosystems, such as mangrove forests, sea grass meadows and salt marshes. These natural ecosystems provide a variety of clear benefits to local communities and societies at large, including (amongst many others) food from fisheries, medicines, construction material and protection from storm surges and coastal erosion. These habitats have been recognised as a significant natural store of carbon, a critical function with respect to climate change mitigation. This has led to an increase in innovative efforts to conserve these habitats and to ensure the integrity of the carbon they store by avoiding conversion or destruction by incentivising communities and countries. In the western, central and southern regions of coastal Africa, the large, intact mangrove areas have attracted particular attention. From the southern border of Mauritania down to the northern border of Angola, extensive mangrove forests have been providing valuable physical and cultural benefits for generations. These benefits have been difficult to incorporate into conventional decision-making processes, leading to policies that have resulted in habitat loss and increased vulnerability of both the human and natural systems. The more easily quantified economic benefits of converting mangroves to utilitarian applications such as deforestation for agriculture, firewood provision or building of coastal infrastructure, have in the past overshadowed the less obvious, yet more valuable qualitative benefits inherent in these natural systems¹⁶.

In Tonga, Tongatapu and Vava'u are the two main islands where mangrove forests grow. Communities on Tongatapu have been involved with mangrove replanting programmes over the years, especially in the areas around the Fanga'uta Lagoon, during the Tonga Ridge-to-Reef project period from 2015 to March 2018. There have been studies of the different ecosystems in the two areas visited, as well as potting of new mangrove seedlings at the Kolovai site and planting of young plants at Nukuhetulu. Communities on Tongatapu have been involved with mangrove replanting programmes over the years, especially in the areas around the Fanga'uta Lagoon, during the Tonga Ridge-to-Reef project period from 2015 to March 2018. Also, the Climate Change Department was working with the GIZ on mangroves replanting in the Western Division¹⁷.

Innovative blue financing measures are crucial to be considered based on international experiences going forward.

16 UNEP 2016. Blue Carbon Financing of Mangrove Conservation in the Abidjan Convention Region: A Feasibility Study. United Nations Environment Program, Abidjan Convention Secretariat and GRID-Arendal, Nairobi, Abidjan and Arendal.

17 Department of Environment, Government of Tonga 2018, A Ridge to Reef approach in working with communities, Tonga Works on National Mangroves Plan.



2. INVEST

Invest financial capital effectively, efficiently, and strategically against appropriate policy frameworks and multi-sector strategies.



Ocean Frameworks, Policies and Plans

Regardless of the capital generated, budget allocated, innovative finance methods or the finance mechanism, monies for ocean finance should be invested into national and regional frameworks for ocean governance in order to achieve strategic and effective change.

Tonga is a leader in the Pacific region in ocean planning and legislation and these documents should serve as guides for both public and private ocean investments. Key documents are highlighted below, with additional documents listed in Table 3.

Tonga Strategic Development Framework - a more progressive Tonga: 2015-2025-This document sets out a high-level integrated vision of the direction Tonga seeks to pursue over the next 10 years, including a vision for the management and development of ocean-related activities. Tonga is at high risk of natural hazards, therefore building greater resilience to existing extreme natural events and threats of climate change is essential to achieving sustainable progress. Climate resilience and fisheries are part of one of the seven national outcomes for oceans-related activities, making the outcomes a more inclusive approach that involves sustainable and effective land administration, environment management and resilience to climate and risk. In support of the national outcomes, there are organisational outcomes which are grouped into five pillars, including Pillar 5: Natural Resource and Environmental Inputs. This pillar sets the framework for the management and development of the country's natural resources and its environment.

National Biodiversity Strategy and Action Plan - As a party to the Convention on Biological Diversity (CBD), Tonga has commitments to implement actions at the national level to conserve, sustainably use and protect its biological diversity as its contribution to the conservation and protection of global biodiversity. This plan provides a framework for the sustainable use and protection of the country's biological diversity with an emphasis on ecosystems approach and species focus.

Tonga Fisheries Sector Plan (TFSP) - The TFSP provides a framework for increasing the sustainable shared benefits from the optimal use of living marine resources. The TFSP identifies priority areas for investment that will maximise the sustainable contribution of the fisheries sector to food security and economic growth. It is designed to provide a basis for dialogue on priorities, programs and implementation modalities. The plan has four key components:

1. Sustainable community fisheries
2. Profitable commercial fisheries and aquaculture
3. Public and private investment
4. Good governance and capacity building

Tonga National Tuna Fishery Management and Development Plan (2018 - 2022) - this plan is aimed at managing tuna resources through an ecosystem-based, precautionary and rights-based approach to maximise the benefits to the economy and population, while ensuring the biological and economic sustainability of the fisheries sector. This plan is guided by the principles stipulated in the Fisheries Management Act 2002.

Tonga National Strategy on Aquatic Biosecurity - In order to safeguard human health, the environment and national economies, it is important to develop aquatic biosecurity. There is an urgent need to address gaps related to aquaculture activities. These gaps include animal health

management, import and export requirement guidelines, laboratory and quarantine facilities and capacity building. This strategy has been developed to address these existing gaps and promote better aquatic biosecurity practices and governance. Addressing these gaps will ensure food safety, food security and income generation.

Tonga Ocean Planning and Management Bill 2019 - This Bill is an outcome of the marine spatial planning process launched in Tonga with Cabinet endorsement in 2015 to initiate a project for a holistic spatial plan for Tonga's ocean with a vision of "ecologically sustainable social and economic development of Tonga's ocean for the benefit of all Tongans". The Guiding Principles are:

1. Ensure sustainable socio-economic development and use
2. Ensure food security
3. Conserve biodiversity
4. Utilise best available science
5. Minimise conflicts between users
6. Build climate change resilience and adaptation
7. Protect and rehabilitate the environment
8. Ensure good governance.

The Cabinet decided that cross-sectoral planning and coordination for integrated ocean management was needed, which led to the establishment of the marine spatial planning technical working group known as Oceans 7. The Bill is still being finalised by government and not available for analysis as to how it links to institutional and policy environment,

Marine Spatial Plan (Wendt 2018) - Marine bioregions and a marine spatial plan were developed by scientific analysis and expert input in 2019. This plan is foundational to both the Tonga Ocean Planning and Management Bill 2019 and the Tonga Ocean Plan.

Tonga - Pathways to Sustainable Oceans Project (World Bank 2019) - In partnership with the World Bank, Tonga has developed the "Pathways to Sustainable Oceans" project to improve the management of selected fisheries and aquaculture. The project has four components:

1. Strengthening Fisheries Governance
2. Strengthening Knowledge Base for Fisheries and Aquaculture
3. Investing in Sustainable Fisheries Management and Development
4. Supporting Effective Project Management

While it is not a national policy or plan, this project document does provide a relevant and recent framework for investing in sustainable fisheries in Tonga.

Tonga Ocean Plan and legislation package - Tonga's Ocean 7 group is developing the Tonga Ocean Plan and related legislation package, to be completed during 2021. This plan builds on the plans, policies and Bills listed above and will provide a comprehensive vision and strategy for Tonga's ocean management. The additional ocean legislations and policies are shown in Table 8.

Table 8: Additional Ocean Legislations and Policies relevant to Ocean in Tonga

National Climate Change Policy 2006	Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management 2010-2015
Water Resources Bill 2012	Environment Corporate Plan
Tonga Agriculture Sector Plan	National Infrastructure Investment Plan
National Oil Spill Response Plan	Ha'apai Development Master Plan
Vava'u Development Master Plan	'Eua Master Development Plan
Aquaculture Plan	Special Management Area Management Plans
Waste Management Strategy	Environment Impact Assessment Regulations 2010
Fisheries Management Act 2002	Ports Master Plan
National Plan of Action for Sharks	Tonga National Fisheries Policy
Tonga Foreign Investment Policy on Fisheries and Related Industries	Tonga National Aquaculture Management and Development Plan
Tonga National Sea Cucumber Fishery Management and Development Plan	Bareboat Charter Policy Framework
Tonga Deepwater Fishery Management Plan	Seabed Minerals Act 2014
Tonga Marine Aquarium Fishery Management and Development Plan 2017 - 2019	Tonga National Strategy on Aquatic Biosecurity
Environment Management Act 2010	Tonga Tourism Sector Roadmap

Government Investments being funded with Overseas Development Assistance

Table 9 below summarises development partner contributions in recent years in providing support for infrastructure investments across sectors including fisheries, covering a range of assistance measures including support for infrastructure. The Government Development Budget for 2020/21 at US\$92million represents 36 percent of the total budgeted expenditure including recurrent for the year, of US\$259 million combining both cash and in-kind.

Table 9: Development Budget Summary by Development Partners (in US\$ Millions). Source: Ministry of Finance Budget 2017-2020.

	2016/17 actual	2017/18 actual	2018/19 actual	2019/20 est. out-turn	2020/21 budget	2021/22 proj.	2022/23 proj.
World Bank	6	12	19	11	15	15	15
Asian Development Bank	12	14	17	7	21	14	19
Australia	10	10	9	10	18	10	16
New Zealand	9	10	9	10	11	7	6
European Union	0.5	1	0.3	3	0.3	0.2	0
People's Republic of China	9	1	7	8	10	14	15
Japan	16	13	7	10	1	1	5
United Nations	4	4	4	4	6	6	6
Green Climate Fund	0	0.1	0	0	3	6	6
Other	6	6	8	4	7	3	3
Total	73	72	78	66	92	75	90

The World Bank provided the highest level of assistance in 2019/20 (16 percent of the aggregate fund), followed by Australia, New Zealand and Japan (15 percent), China (12 percent), Asian Development Bank (11 percent), United Nation agencies (6 percent), the European Union (4 percent) supporting the energy sector and the Green Climate Fund providing 0.2 per cent of the funds for environmental disaster resilience related projects.

For the **World Bank**, the funding envelope for the immediate past triennium (IDA18: 2017/18 - 2019/20) of US\$67.8 million focused on the following sectors: transport (USD\$27.8 million), fisheries (USD\$5 million), E-government (USD\$5 million), youth employability (USD\$15.0 million) and budget support (USD\$15 million). Comparatively, this is a significant increase from a total of USD\$19.2 million provided by World Bank in the previous triennium (IDA17: 2014/15 - 16/17).

Similarly, **the Asian Development Bank's** (ADB) immediate past funding envelope commencing 2018-2020 covered the areas of Integrated Urban Resilience (USD\$12 million), GCF & Renewable Energy (USD\$6.5 million) and Transport Evacuation Bridge (USD\$20 million). Budget support (USD\$15.0 million) represented an increase from USD\$44.9 million to an average of USD\$60 million.

The **Government of Australia's** (DFAT) bilateral assistance is led by their Aid Investment Plan (AIP) 2015/16 - 2018/19 of approximately AUD\$60.0 million with support in four strategic areas namely: (i) economic, governance and private sector development reforms; (ii) promoting a more effective, efficient and equitable health system; (iii) improving economic opportunities for Tongan workers through investments in skills development; and (iv) cross-cutting issues (Gender, Climate Change, Disability). DFAT is currently designing their next aid investment plan which is likely to focus in the same areas.

The **Government of New Zealand** (MFAT) provided assistance through their Joint Country Program 2015/16 to 2017/18 of NZD\$74.0 million in the areas of: (i) energy; (ii) economic development; (iii) education/skills development; and (iv) law and justice. MFAT and the Government of Tonga have agreed upon similar areas for further investment which include energy, law and justice, police and education.

The European Union (EU) 11th European Development Fund (EDF) 2014-2020 is €11.1 million with €10 million towards the focal sector of energy in the form of budget support and €1.1 million towards the Technical Cooperation Facility (Support to the NAO office and Civil Society). It should be noted that the construction of the new Likamonū Hospital was commissioned in late 2018.

The People's Republic of China (PRC) provides technical cooperation across various sectors, the most recent grant signed was for RMB 100 million additional to funds for the King's State Visit in February 2018. Funding in previous years included RMB 150 million in 2016 and RMB 200 million in 2017 respectively. These investments are in various areas of education, transport and agriculture. Recent projects funded include the Agricultural Technical Cooperation Phase V (RMB 27m), X-ray machines for the wharf and airport to arrive in August 2019 (RMB 65m) together with ongoing assistance to Vaiola Hospital from visiting medical teams. There have also been recent donations of both medical equipment and tractors to the Kingdom from Dongguan City in Guangdong Province in China.

Japan's Economic Cooperation with Tonga focuses on 5 main areas: (i) General Grant Aid: aims at constructing clinics, hospitals, vocational school facilities, roads, bridges and any related equipment; (ii) Grant Assistance for Grass Roots Human Security Projects (GGP): provides financial assistance to NGOs, hospitals, primary schools and other non-profit organisations to help

implement development projects that have a direct impact on the well-being of grassroots and communities; (iii) Non-Project Grant Aid (NPGA): intended to provide rapid support to developing countries facing growing accumulated debt or a rising international balance of payments deficit, as part of assistance to improve the national economic structure; and (iv) Technical Cooperation, a program of various inputs that achieve project purposes. Major projects moving forward include a Wind Power Generation System of approximately \$20 million and the Nationwide Early Warning System of approximately \$19 million.

The **United Nation (UN)** assistance organised its program support worth approximately US\$104.4 million to Tonga through the UN Development Assistance Framework 2018-2022. There are five thematic areas of support: (i) Climate Change, Disaster Resilience and Environmental Protection; (ii) Gender Equality; (iii) Sustainable and Inclusive Economic Empowerment; (iv) Equitable Basic Services (Health, Education, Social Protection); and (v) Human Rights.

The Global Environment Facility under the Green Climate Fund has provided US\$3.43 million over the period 2010 to 2014 to fund environmental policy and the administration management program controlled by the Department of Environment.

There are several programs that donors have implemented over the years that are relevant to consider for application in Tonga. These include MESCAL (Mangroves Ecosystems for Climate Change Adaptation and Livelihoods), Green Climate Fund programs that provide support for coastal livelihoods in Small Island Development States (SIDS) such as Cuba, the Seychelles Debt for Nature Swap, the ADB Healthy Ocean and Sustainable Blue Economy Initiative, the IUCN Blue Natural Capital Financing Facility, as well as insurance opportunities that protect reefs and communities from the effects of climate change and disaster risk.

As an example of an ocean-related ODA project, the Asian Development Bank (ADB) funded the installation of eight coastal fish aggregation devices (FADs) to help support communities to catch tuna and decrease pressure on inshore fish stocks. ADB also funded the Climate Resilience Sector Project that supported the establishment of seven SMAs in Vava'u.

ODA also comes in the form of technical assistance. For example, development partners New Zealand, Australia and Japan have provided technical assistance towards the fisheries sector plan. FAO is providing ongoing technical support to SMAs (US\$180,000 over two years). As another example, FFA and SPC are providing ongoing Technical Assistance in the form of policy development, legislative reform, training and capacity development, and fisheries monitoring, control and surveillance at the regional and national level. FFA and SPC operate under bilateral service level agreements to provide support to the Ministry of Fisheries.

These donors' financial assistance also supported investment projects in various public enterprises.

Over a longer period, between 1997-2017, Hills et al (2019) estimated that Tonga's ODA for ocean projects stood at roughly US\$40 million, but data is not available for individual years due to the multi-year nature of many large projects.

Current Government and Public Enterprises Ocean-related Investments

The current government and public enterprises investments being implemented since the 2015/16 financial year that are related to ocean activities and reaching the threshold of at least T\$1 million or US\$0.44 million, is shown in Table 10 (a total of US\$264 million). These investments are for sea transportation infrastructure such as:

- ▶ wharves (US\$82 million - being implemented by the Ministry of Infrastructure and Port Authority);
- ▶ renewable energy projects for electricity generation (US\$108 million - under Tonga Power Ltd);
- ▶ telecommunications such as a submarine cable for Ha'apai and Vava'u (US\$13 million under the Tonga Communication Corporation and Tonga Cable Ltd); and,
- ▶ climate change resilience and disaster management (US\$61 million under the MEIDECC).

The Climate Resilience Sector Project (CRSP) is the Government's first large scale climate resilience project, funded through a US\$19.25 million grant from the Asian Development Bank's Strategic Climate Fund, with an additional US\$2.5 million contribution from the Tongan Government. The project was designed to increase resilience in economic, social and natural eco-systems to climate variability and change and disaster risk in Tonga. The overall outcome of the project was to strengthen the enabling environment for climate adaptation and disaster risk reduction at national and local levels. The main outputs include (i) ensuring climate resilience mainstreamed into the development planning of key vulnerable sectors, (ii) improving capacity to monitor and manage Tonga climate data and information, (iii) establishing a sustainable financing mechanism to support community-based climate change adaptation responsive investments, (iv) increasing eco-system resilience and climate infrastructure investments.

The specific project components consist of meteorological equipment, coastal monitoring systems and the installation of the Automatic Weather Station (AWS) which increases the capacity of the Tonga MET Service in providing improved weather and marine forecasts, as well as meteorological and coastal data to assist and inform planning for adaptation to climate change. The project also provides scholarships, short-term professional training and courses on climate change offered by CRSP in collaboration with the University of the South Pacific, improvements of water resources inventories and for drafting of the integrated water resources management (IWRM) and coastal zoning monitoring throughout the whole of Tonga. There's also the establishment of SMAs in Vava'u to make it to 44 SMAs in Tonga in 2017, as well as designing and monitoring the community vulnerability and disaster risk management assessments and plans and raising community awareness of the risks of Climate Change. In addition to completing the construction of Government Primary Schools, Ha'apai Hospital, foreshores and evacuation roads on the eastern side and the completion of construction and the upgrading of five classrooms schools to be more climate-proofing.

The Pacific Regional Resilience Program (PREP) has helped Tonga to: (i) strengthen early warning and preparedness; (ii) create a framework for stronger and prioritised investments in resilience and retrofitting of key public buildings to meet international standards; and (iii) improve post-disaster response capacity of the countries through strengthened financial resilience to disaster events¹⁸.

18 Pacific Islands Forum Secretariat and South Pacific Community May 2018 Pacific Resilience Program (PREP): Regional Environmental and Social Management Framework (ESMF) - Updated for PREP Additional Financing Tonga.

Table 10: Current Government & Public Enterprises Ocean-related Investments.
(Source: National Infrastructure Investment Plan 2020-2025)

Project Name MOI Land and Sea Transportation	Managing Agency	Dev. Partner	Total cost in million US\$	Project duration
Tonga Climate Resilience Transport Project (TCRTP)				
Upgrade of Vava'u port (terminal, storage, forklift etc.)	MOI	WB	0.7	2015-2017
Nafanua ('Eua) Port Upgrade (now under TSCP2)	MOI	WB	1.3	2019-2020
TSCP2 (Nav Aids, Vessels, Ports Repairs) Niuas, Eu'a & Ha'apai	MOI	WB	0.9	2016-2018
Nav Aids Spares	MOI	WB	0.2	2016-2018
PAT (Marine)				
Barge for Deep Water Dredging	PAT	ADB	2.2	2016-2017
Tug boat (second hand)	PAT	ADB	7.5	2016-2019
Inter-island port/ domestic terminal (Climate Change Resilience upgrades)	PAT	JICA	24.6	2017-2019
QSW Upgrade	PAT	ADB	39.6	2020-2025
Tonga Climate Resilience Transport Project (TCRTP Aviation)	MOI	WB	5.1	2019-2014
TPL (Power, Energy)				
Tongatapu Wind (1.3 MW)	TPL	JICA + NZ	18.9	2016-2018
Ha'apai Micro-Wind Project (11KW)	TPL		0.1	2015
Cyclone Gita Recovery Project, Nuku'alofa Network Upgrade - Area 1	TPL	NZ	8.1	2018-2020
Cyclone Gita Recovery Project, Nuku'alofa Network Upgrade - Area 2	TPL	ADB	8.3	2019-2020
Outer Islands On-Grid Energy Efficiency Project (OIREP)	TPL	ADB, Aus, EU, SDCF, GEF	19.4	2014-2023
Outer Island Renewable Energy Project (OIREP) Additional Funding	TPL	DFAT	1.7	2020-2023
Tonga Renewable Energy Project (TREP)	TPL	Aus, ADB, GCF	46.6	2019-2022
China wind power	TPL	PRC	5.3.	2021-2022
TCC (Telecommunication)				
Expanding Services to Small Islands (After Sea line Access T9)	TCC	TCC	1.8	2016-2018
TCL (Tonga Cable Limited)				
Fibre-Optic Cable to Ha'apai, Vava'u etc.	TCL	WB	11	2015-2016
MEIDECC (Disaster Risks Management)				
Climate Resilience Sector Project (CRSP)	MEIDECC	ADB	19.8	2015-2019
Pacific (Regional) Resilience Program (PREP)	MEIDECC	WB/ IDA	13.2	2015-2021

Government and Public Enterprises future proposed ocean-related investments

A sum of US\$380.82 million is needed to finance the ocean-related infrastructure projects identified by government and public enterprises as shown in Table 10 as priority for funding from overseas development assistance. The cost of these projects would be shared between government ministries (US\$267 million/70 percent) and public enterprises (US\$114 million/30 percent). The projects cover coastal protection, fisheries infrastructures such as wharves, fishing boats and boat ramps, upgrading mariner facilities, waste management infrastructure and wharves.

The traditional donor financing mechanism will take several years to meet the required funding of US\$380.82 million for these ocean-related investment projects based on the annual actual development funding of US\$66 million in 2019/20. Both government and public enterprises do not have the financial space to accommodate such a significant financial commitment. It is therefore crucial to generate novice financing to contribute toward financing these ocean-related priority projects.



Table 11: Government & Public Enterprises Future Proposed Investment for Funding
(Source: Tonga National Infrastructure Investment Plan 2020-2025)

Organisation	Project	Cost US\$ Million	Total by Ministry/ Entity US\$ Million
His Majesty's Armed Force	Upgrade Touliki coastal protection structure	1.3	1.3
Ministry of Fisheries	New maintenance workshop and boat ramp upgrade (Ha'apai and Vava'u)	1.3	
	Fisheries export refrigerator storage - Fua'amotu airport	0.7	
	Fisheries wharf and market - Sopus	4.4	
	New aquaculture hatchery (Vava'u and Ha'apai)	2.2	8.6
Ministry of Environment, Information, Disaster and Environment, Communication	Eastern Tongatapu coastal area protection	9.7	
	Ha'apai coastal area protection	4.8	
	Hihifo coastal area protection	16.7	
	Upgrade of the Tonga National Centre and sea wall structure	4.4	35.6
Ministry of Tourism	Upgrade of the Vava'u Mariner facilities	0.4	0.4
Ministry of Infrastructure	Fanga'uta Evacuation Bridge and roads	6.6	
	Upgrade of Foa Causeway to climate resilience	2.2	
	Upgrade wharf jetties affected by Cyclone Harold	3.5	
	Bridges in Tongatapu, 'Eua, Ha'apai and Vava'u	4.4	
	New bridge in 'Eua (Ohonua to Ta'anga)	4.4	
	New bridge in Tongatapu from Patangata to Makaunga	132	
	Vava'u upgrade causeway for climate resilience	6.6	
	Ha'afeva Wharf Rehabilitation (relocation)	1.8	220.9
Government Total		266.9	
Waste Authority	Conversion dump sites into new structured landfill, Ha'apai (Foa), and 'Eua (Angaha)	3.5	
	Extension of waste management to remote islands	2.2	5.7
Port Authority Tonga	Two new tug boats	17.6	
	New international cruise wharf, Vavau	23.8	
	New wharves for small outer islands	7	
	Relocation and rebuild of Nafanua harbor - 'Eua	11.4	
	Vuna Wharf (stage 2 Marina and onshore facilities)	8.8	
	Yellow Pier Upgrade and super yacht berth	6.6	
	New Sopus wharf (slipway, maintenance, fisheries, packing facilities)	33	108.3
	Public Enterprises Total		114
	Overall Total for Government and Public Enterprises		380.8

Waste management

Waste management is critical for promoting the blue economy so that it can preserve ocean resources, build resilience and generate growth. The Waste Authority Limited (WAL) is responsible for the oversight of the collection of septage sludge from individual septic tanks and the treatment and disposal of those sludges at dedicated septage treatment plant sites nationwide. There is currently no centralised sewage collection and treatment system in any part of the country. There are two priority investments that WAL has indicated for future funding, which are the conversion of the existing dump sites into a new structured landfill in the islands of Ha'apai and 'Eua for US\$8 million, and the extension of waste management to remote islands costing US\$5 million. A plastic levy discourages the usage of non-biodegradable materials - a serious pollution source to land and marine ecosystems, resulting in coral reef degradation and loss of fisheries revenue. The fisheries industry is especially critical for various islands in the country, which depend on fishing for food security and income. Marine pollution can negatively impact human health by creating vulnerability to gastrointestinal diseases related to untreated waste and other sources of contamination and disease. The Waste Authority is developing the necessary infrastructure throughout the country to help reduce the threat of waste and pollution to the blue economy.

Renewable Energy

Tonga Power Ltd has been embarking on a national commitment to generate 50 percent electricity from renewable sources such as solar and wind farms by 2025, to reduce reliance on fossil fuels and the emission of carbon dioxide. One such major renewable energy project costing US\$105.9 million is being implemented from 2019 to 2022 with overseas development assistance. There have been experiments with ocean waves, although unsuccessfully. There is potential for developing offshore renewable energy through solar and wind technologies in order to save the limited land areas available for agricultural production, but the vulnerability of the country to extreme weather conditions such as cyclones may affect the technical feasibility of this option. Global experience on these initiatives would be valuable for future success. Thus, the ocean holds tremendous value to contribute to the blue economy sustainably with important implications for a wide range of societal and environmental benefits. However, there is a project in the pipeline now involving ocean floating photovoltaic (FPV) technology for Tonga Power Ltd, that is well-placed to tap Tonga's enormous water surface and solar resource potential.

Opportunities


The following opportunities have been considered by stakeholders' consultations in Tonga:

- a) Based on the analysis in Appendix 1, 55 percent (US\$162.5 million) of Tonga's ODA benefits the ocean, but 12 percent of ODA is directly and strategically targeting ocean objectives. There is a substantial opportunity to improve the strategic effectiveness of aid money towards Tonga's Ocean Plan.
- b) Tonga has an important and urgent opportunity to highlight ocean finance in the soon-to-be completed Tonga Ocean Plan and related legislation package. The Oceans 7 group is aware that implementing the Tonga Ocean Plan will require additional financial resources and diversified streams of revenue and has included a placeholder for ocean finance in the draft legislation package. There is an opportunity to shape this placeholder into a finance facility or finance mechanism(s) that will ensure that the Tonga Ocean Plan has sufficient financial resources.
- c) There is US\$380.82 million needed to finance the ocean-related infrastructure projects identified by government and public enterprises as priority for future funding from overseas development assistance. These projects are crucial to support the development of the blue economy through coastal protection, improved fisheries infrastructures such as wharves, building fishing boats, upgrading boat ramps and mariner facilities, and, improved waste management infrastructures.
- d) There is a potential for developing offshore renewable energy through solar and wind farm technologies in order to save the limited land areas available for agricultural production in Tonga, with a mitigation strategy to address the vulnerability of the country to extreme weather conditions such as cyclone.
- e) The focus areas on ocean finance for future priority developments include coastal and marine tourism, marine transport, wild capture fisheries (coastal and ocean), aquaculture and mariculture, ocean-based renewable energy, marine conservations including marine protected areas (MPSs) and small management areas (SMAs) and waste management.
- f) It is crucial to analyse each sector of the blue economy such as investment opportunities, demand for finance (equity and debt), supply of finance (equity and debt) and possible instruments to bridge the gap between the internal rate of returns generated by projects and the expected internal rate of returns by private investors, commensurate with their perceived risk.
- g) As a matter of policy, the benefits from providing tax incentives or exemption need to be considered in the wider range of costs or deadweight loss to community and government revenue or tax expenditure and this analysis should be applied to the tax exemption to the fisheries sector.



3. ALIGN

Align taxes, subsidies and economic incentives with long-term ocean health and governance.



Generating and investing new monies will always be necessary, but unless fiscal policies and economic incentives are aligned with ocean health and governance, ocean finance will never be sufficient, and the funding gap will continue to grow. Taxes, subsidies and other fiscal policies relevant to oceans are discussed below, followed by proposed opportunities for consideration by stakeholders in Tonga.

Taxes & Subsidies

Tonga has already aligned some of its existing tax policies to ocean governance as listed in Table 7. However, new, ocean-related taxes being implemented in other countries are worth exploring to introduce in the near future. One example is the green tax in Palau levied on non-nationals - and paid through departure tax.

For a broader overview of the capacity of the tax system, the estimated domestic revenue for 2019/20 was US\$137.7 million¹⁹. This domestic revenue comes from a combination of customs duties, excises, Consumption Tax and income taxes, administrative fees and charges. Total budget revenue (which includes transfers, revolving funds and budget support) for the same period was US\$154 million.

Income Taxes: The personal income tax (PIT) has a progressive rate structure as follows:

- ▶ \$0-US\$4,400 \$ NIL
- ▶ US\$4,400 - US\$13,200 - 10%
- ▶ US\$13,200 - US\$26,400 - 20%
- ▶ Over US\$26,400

The company income tax (CIT) rate is 25 percent (taxed on a worldwide basis). Tax losses can be carried forward indefinitely, except if there is substantial change in ownership. There are four depreciation categories with straight-line rates of 5, 12.5, 20 and 25 percent (diminishing value rates are 160 percent of the straight-line rates). Dividends paid to resident shareholders are exempt. Interest paid to residents is subject to a withholding tax of 10 percent, while rent is subject to withholding tax of 3 percent. Payments of dividends, interest and royalties to non-residents are subject to a 15 percent withholding tax.

There is a presumptive tax arrangement for small businesses (not companies) with an annual turnover of less than US\$4,400. The regime introduces presumptive tax amounts for turnover less than US\$22,000 and a 2 percent rate for turnover between US\$22,000 - US\$44,000. Small businesses will not need to file detailed tax returns.

Consumption Tax: CT is imposed at a rate of 15 percent. The threshold for CT registration is an annual turnover of T\$100,000. The range of exempt and zero-rated supplies is small and consistent with international practice, with exemptions for financial services and donated goods, and, zero-rating for exports.

Trade Taxes: Import duties are imposed on a range of goods with four rates: 3 (for capital goods), 10, 15 and 20 percent. Excises are imposed on alcohol, tobacco, fuel and motor vehicles.

¹⁹ Provisional actual in 2019/20 from Ministry of Finance

Tax policy context

Tonga is a member of the World Trade Organization (WTO). Membership of the WTO has required duties of 20 percent, 15 percent or 10 percent and accession to international shipping treaties.

Tax history: Tonga underwent a reform program between 2002 and 2012 to strengthen its management of public finances. It implemented the Consumption Tax in 2005 and followed this with income tax modernisation in 2008 with a rationalisation of exemptions and concessions. Customs tariffs were also reviewed and reduced in 2008 as part of the WTO accession and excises were increased.

More recent additions to tax legislation in Tonga include tax on extractive industries; small business taxation (presumptive tax); penalties. Policy makers are currently reviewing the Consumption Tax legislation, tax exemptions and the ability to carry forward losses. There were amendments to the Excise Tax and Customs Duty Order effective July 2017 to increase tax on sugary and /or flavoured drinks, alcohol and tobacco. There was a recent Bill providing for a tax exemption to attract tourism investment in Tonga, as government prepared to host the 2019 Pacific Games. However, since the games have been cancelled, the Bill has been repealed.

Administrative strengthening at the Ministry of Revenue and Customs (MORC) and its departmental predecessor (the Revenue Services Department at the Ministry of Finance) began in earnest in 2003 and was largely completed in 2012. Tonga has since received budget support from international donors to assist with administrative strengthening (ending 2016). The administrative strengthening has focused on structural changes, system and process changes and the adoption of modern risk assessment and self-assessment administration principles.

Exemptions are an issue that has been identified by the Inland Revenue Division and a review of exemptions for duties and CT is currently being undertaken as part of the CT rewrite. This review recognises that while incentives may be justified to encourage the production or consumption of a good that provides a benefit that the market does not fully take into account (i.e., positive externalities), there are a number of problems with tax exemptions. First, tax exemptions create economic distortions, including the inefficient allocation of resources. Second, exemptions complicate the tax system making it difficult for Inland Revenue and Customs to monitor. Third, exemptions open opportunities for abuse. Fourth, tax exemptions narrow the tax base and hence cost revenue, which usually means increased taxes for those not fortunate enough to be able to access the concessions. This makes the tax system less fair, especially for those taxpayers who do not receive the concession.

Despite these wide-ranging improvements, the Tongan tax system remains fragile. This fragility is largely due to difficulties monitoring and enforcing existing taxes and limited capacity for diagnosing, prioritising and implementing future improvements. As a matter of policy, the deadweight loss incurred to relevant parties of suppliers and customers and to the welfare of society at large in all tax measures should be considered, for informed decisions on the suitable course of action and the fiscal instruments that should be undertaken.

Subsidies

The subsidies presented in Table 12 have been identified to have a connection to ocean health as defined in the *Analysis of taxes and subsidies relevant to Pacific Ocean health* report (Wyatt et al in review).

Table 12: Tonga Subsidies Relevant to Ocean (Source: Wyatt et al, in review)

Subsidy/Tax	Tax or subsidy classification	Economic sectors affected	Primary policy objective of the tax or subsidy	Top line impact on Pacific ocean finance and governance
Excise and duty exemptions on fuel and specialist fishing equipment	Other foregone government revenue	Fisheries	Economic - to promote the development of a fishing industry in Tonga	Counter ALIGN
Fisheries subsidies for small-scale inshore fishers	Subsidy through goods in kind	Fisheries	Economic - To support community-scale economic development	Counter ALIGN

Excise and duty exemptions on fuel and specialist fishing equipment

Exemptions operate as a subsidy when a fishing entity imports fishing equipment and boats. The exemptions are for large, licensed vessels that apply in advance. There are currently only 5-6 companies who have used this exemption, so its application is small-scale. The application for a subsidy will be approved conditional on whether the licence conditions have been met and logbooks filled in, etc. This applies equally to foreign and local vessels, however all fishing boats with Tongan licences must land 100 percent of their catch in Tonga. An application for an excise exemption requires an investigation of the applicant's compliance history by the Ministry of Fisheries. This is administered by the Ministry of Fisheries and Customs jointly.

Excise and Duty have been exempted on 5 or 6 imports of equipment but the value of these exemptions is unquantified. The government does not collect data on all tax expenditures as the compliance and administration costs of collecting additional data exceed the value that data might provide.

Ocean Finance Opportunity: Tonga is a member of the WTO and has considered its position in relation to these subsidies. It wishes to retain them to develop Tonga's local tuna fishing capacity.

Fisheries subsidies for small-scale inshore fishers

Tonga provides occasional direct subsidies to small-scale inshore fishers. Low-cost boats and other goods are from time to time provided to communities who are establishing Special Management Areas (SMAs) but this appears to be rare. Most of the expense of establishing SMAs is not covered by the regular budget of the Ministry of Fisheries, but rather by multilateral development institutions, bilateral donors, philanthropic foundations, NGOs and others (FAO, 2015). Practical support for SMAs can sometimes extend to provision of monitoring services. It is not clear how these goods and services are accounted for in the Ministry of Fisheries' reporting.

Other Fiscal Policies

The following fiscal policies in Table 12 have weak or unclear connections to ocean health and governance.

Table 13: Tonga's Fiscal Policies with Weak or Unclear Connections to Ocean
(Source: Carriage tax for non-residents)

Tax/Subsidy	Tax or subsidy classification	Economic sectors affected	Primary policy objective of the tax or subsidy	Top line impact on Pacific ocean finance and governance
Carriage and shipping tax for non-residents (3%)	Tax	Tourism; Shipping	Revenue	Weak connection Possible opportunity
Tax exemption for all income derived from investment in Government of Tonga issued securities	Tax expenditure (foregone revenue)	Financial services	Economic - to develop Tonga's financial services industry	Weak connection Possible opportunity
Consumption Tax exemption for fishing companies	Tax expenditure (foregone revenue)	Fisheries	Economic - To promote the development of a fishing industry in Tonga, and to ensure that exporters of fish are not disadvantaged by slow or poor administration of CT refunds.	Unclear
Duty free import of fish	Other foregone government revenue	Fisheries	Health (primary) - To encourage Tongans to eat more fish. Economic (secondary) - To promote the development of a fishing industry in Tonga, by encouraging foreign vessels to land fish.	Unclear
Marine spatial planning budget	Not a tax or subsidy	Government	Environment	ALIGN
Tax rules for non-profits	Subsidy	Government	Environment	Weak connection
Tax rules for foreign donors	Subsidy	Government		Weak connection

There is a carriage tax (3%) on the gross value of goods or passengers carried by a non-resident person who operates a ship or aircraft, including charter boats and private whale watching boats. The tax is worked out by applying the rate of tax (3%) to the gross amount derived by the non-resident for the carriage of passengers, livestock, mail, merchandise, or goods embarked in Tonga, whether for carriage outside or within Tonga. No deductions are allowed for expenditure incurred by the non-resident person in deriving the income. No loss can be claimed nor any tax payable reduced by any tax credits allowed to the non-resident person. However, no tax is imposed on any exempt income. According to Revenue and Customs officials, there is some difficulty in applying this tax in practice. One official noted, "We don't have the means to catch, prosecute, apply this tax or other taxes (like Tongan income taxes) to illegal whale-watchers and other vessels. Further, the enforcement of other laws like the Whale Watch and Swim Regulations (2013) is weak." This tax is administered by the Ministry of Revenue and Customs.

Ocean Finance opportunity: With better enforcement, this tax has potential to: generate funds (which could in future be hypothecated to ocean projects); account (because this tax may be a way to track and monitor the number and value of passengers and goods on vessels in Tonga); align (because fees and charges, combined with enforcement of regulations and licenses might disincentivise harmful whale-watching practices).

Tax exemption for all income derived from investment in Government of Tonga issued securities

There is no evidence of this exemption being applied in practice. Its presence could potentially incentivise local investment in green or blue securities issued by the Government of Tonga, in the future. This exemption is administered by the Ministry of Revenue and Customs under the Income Tax Act. As a matter of policy the net impact of this tax exemption on non-government securities when issued in the future should be considered and quantified to mitigate any discriminatory effect between these types of investment.

Consumption Tax exemption for fishing companies

The fisheries sector is exempted from a 15 percent consumption tax. Typically, productive sectors in Tonga are not exempted. The exemption was justified on economic grounds, to support the fishing industry. But CT exemptions are an unusual way to provide industry support. In normal circumstances – where refunds are processed quickly, and tax administration is adequate – CT should not in theory tax business income. However, determining the economic effects of such an exemption is complicated. The exemption might have been put in place as a temporary measure after the introduction of CT. It is designed to be a tax on final consumption which companies collect. When businesses, such as fishing, are involved in export transactions on which no VAT is charged, or where they make large capital investments, they can end up in a position where they have paid out more in input taxes on their own purchases than they owe to the government, and thus are due a refund. If the CT refund system is not quick or suffers from administrative difficulties, the companies can end up paying more than they should or can be disincentivised from the activity. So sometimes, the policy decision not to apply CT to fishing may help make sure that exporting fishing companies avoid being disadvantaged from locating in a country with a CT (or GST/VAT). As a matter of policy, the impact of this exemption on the other sectors should be considered and identified on concrete terms for equity consideration. The impact of this policy on the overall performance of the target benefactors and its counterfactual facets should also be evaluated. This review is needed to assess whether the policy outcome has produced the desired results or otherwise and its fairness to other productive sectors.

Duty free import of fish

Duties would typically apply to foreign fishing vessels landing fish in Tonga (and this was the case historically). This exemption means that foreign fishing vessels can land fish in Tonga without paying duties. This exemption has been noted as misaligning with ocean finance goals because the border presents an opportunity to measure the volume of fish being caught in a systematic way. However, the counterfactual is difficult to assess (i.e., the quality of catch information generated prior to the change to duty free status). For example, Customs officials told us that catch data is poor and the Customs administration has previously had difficulties with foreign vessels attempting to circumvent the duties applying to fish. The exemption has been justified publicly as a health-related exemption, to make fish cheaper for Tongans to eat.

Enforcement of income tax and duty payments by foreign fishing vessels has been challenging for Tonga's customs administration, according to a Customs official. The duty could be phased out and replaced with an excise, and the funds could be hypothecated to fish resource management. Policy makers are keen to reduce or remove duties, as a result of PACER Plus and pressure from trading partners, so excises are the preferred method. If a duty is imposed, WTO requires a ceiling for duties of either 15 percent or 20 percent. A review of this measure on the intended policy outcome is crucial to be undertaken.

Marine spatial planning budget

The Tongan government contributes to marine spatial planning to support sustainable development of the ocean.

Tax rules for foreign donors and tax rules for non-profits.

These are tax rules which could impact on the Generate objective for ocean finance as they affect returns from investment in financial products. The impact of these rules is difficult to evaluate without a) information about the potential returns from ocean-relevant investments (there are no examples in Tonga at present); and b) the differential between Tongan income and withholding rules relative to other investment destinations. They are included here as 'grey areas' to prompt consideration of policy alignment between countries. The discriminatory impact of this tax rule on other organisations needs to be reviewed.

Opportunities

The following opportunities have been considered by stakeholder consultations in Tonga:

- a) The Super Yacht Levy (which is charged as part of the Environment and Climate Adaption Levy in Fiji). In Fiji, the Levy is 10 percent and is levied on the stated gross charter fee as disclosed in the charter contract. To apply this tax, policy analysts would need to consider the application/intersection with the non-resident vessel charges and the practical application of the Levy to the whale-watching and tourist yacht industry, including the enforcement and collection of these charges. It would be sensible to consider hypothecation of these charges to an ocean fund and/or trust.
- b) The Green Fee: to be introduced as an addition to the existing departure tax to be charged on non-Tongans to raise funds for Protected Areas Network Fund.
- c) There is potential to suggest/support a Fishing for Litter scheme or better landfilling or recycling facilities using the funds generated by the existing Waste Management Levy and Cruise Ship Levy.
- d) Funding for a review of 'incentives' offered as CT exemptions and exemptions to Customs Duties and Excises, including those provided for fishing companies and for agricultural equipment. This review should explore the extent to which the subsidies support the development of the Tongan fishing industry, attempt to quantify the tax expenditures (i.e., the cost to Tonga in terms of lost customs and tax revenue) and review whether the subsidies should be removed (whether or not they qualify as harmful fishing subsidies under the WTO negotiations).
- e) When the 'cost' of each incentive is known, consider re-aligning that expenditure toward ocean-positive investments such as tax credits for monitoring equipment on fishing boats or improved catch technologies, or tax credits for imports or investments in 'green technology'.
- f) Consider subsidising private waste management companies, waste exporters, compost entities and recycling entities by offering tax incentives.
- g) Discourage the proliferation of fishing waste by requiring the tagging of fishing equipment as a pre-condition to offering tax incentives (in addition to compliance with other rules and licensing conditions).
- h) Offer discounts on the Waste Levy when imported plastic products can be shown to be biodegradable under landfill conditions (to encourage imports of biodegradable single-use products).
- i) As a matter of policy, that consideration should be given to the dead weight loss incurred to suppliers and consumers and society welfare generally on all existing and new measures related to taxes, exemption and subsidies.

4. ACCOUNT

Account for environmental, social, and economic impacts of ocean investments, and account for economic values over time of marine ecosystems.

Equally important to generating, investing and aligning financial capital, it is essential to carry out accounting at two major scales: i) at the program scale, to account for environmental, social, and economic impacts of ocean investments, and ii) at the ecosystem scale, to account for how economic values of marine ecosystem services change over time.

Ocean Investment Accounting

For the consultation on the draft of Tonga's Ocean Finance Profile, Tonga's public financial management system has been assessed (see below). Other components of ocean investment accounting require further investigation, including measurement of social, ecological, and economic impacts for both public and private ocean investments.

Public financial management (PFM) is generally defined as a set of laws, rules, systems and processes used by sovereign nations to mobilise revenue, allocate public funds, undertake public spending, account for funds and audit results. In its narrowest and most traditional sense, it is concerned with how governments manage the budget from the formulation to the execution phase (see Appendix 1).

The work on PFM in the Pacific region including Tonga has been focused on developing capacity to better manage public finances. It looks for ways to support the country's efforts more effectively by bringing together development partners and government authorities to:

- ▶ Foster good practices in implementing PFM reforms;
- ▶ Harmonise the measurement of PFM performance;
- ▶ Share knowledge and experiences among development partners and countries on using country PFM systems; and
- ▶ Strengthen accountability in PFM systems.

Tonga's Strategic Development Framework (2015 - 2025) provides the strategic direction to guide the work of the Government. The work related to sound and economic financial management is reflected in the Organisational Outcome 1.1 of Pillar 1: *"Improved macroeconomic management and stability with the development of a stronger, deeper, more inclusive financial system to ensure sound macro-economic environment within which inclusive and sustainable business and social opportunities can be developed and pursued"*.

The Public Finance Management Act 2002 regulates financial management in the national government to ensure that all revenue, expenditure, assets and liabilities of government are managed efficiently and effectively and that those entrusted to manage these public resources are accountable. Tonga's Public Finance Management Act was passed in the Legislative Assembly on 05 November 2002. According to the Ministry of Finance, the financial management capacity of the Ministry is adequate and it has defined policies and procedures in place for accounting, budgeting and auditing activities.

Tonga conducted its last Public Expenditure and Financial Accountability (PEFA) assessment in 2010 which focused on assessing the PFM systems against a given international best practice benchmark to provide a common information base for policy dialogue, discussion and debate. The ratings suggest that about two-thirds of Tonga's PFM system is performing at an average or above average level (Table 13). There were good ratings on the budget formulation, execution and reporting including management of cash and debts and internal controls. The results for about one-third of the indicators are below average: the collection of tax payments, timeliness of

annual financial statements and submission of audit report to legislature. Significant improvements in recent years have included a shift towards multi-year budgeting, revenue collection and enforcement, which has resulted in the level of tax arrears being identified and actively pursued, using a risk management approach.

Table 14: Summary of PFM Performance Rating (Source: 2010 Tonga PFM Performance Report, "C" being the average level, around half of the indicators are above this i.e. C+ or above)

PEFA Indicator	Scoring Method	Overall Rating (2007)	Overall Rating (2010)	Indicator Dimensions (2010)			
				(i)	(ii)	(iii)	(iv)
A. Credibility of the Budget							
P-1	Aggregate expenditure out-turn compared to original approved budget.	M1	B	A	A		
P-2	Composition of expenditure out-turn compared to original approved budget.	M1	C	C	C		
P-3	Aggregate revenue out-turn compared to original approved budget.	M1	A	A	A		
P-4	Stock and monitoring of expenditure payment arrears.	M1	B+	B+	A	B	
B. Comprehensiveness and Transparency							
P-5	Classification of the budget.	M1	C	C	C		
P-6	Comprehensiveness of information included in budget documentation.	M1	A	A	A		
P-7	Extent of unreported government operations.	M1	D+	A	A	A	
P-8	Transparency of inter-governmental fiscal relations.	M2	N/A	N/A			
P-9	Oversight of aggregate fiscal risk from other public sector entities.	M1	C	C	C	N/A	
P-10	Public access to key fiscal information.	M1	C	C	C		
C. Budget Cycle							
C(i). Policy-Based Budgeting							
P-11	Orderliness and participation in the annual budget process.	M2	B	A	B	A	A
P-12	Multi-year perspective in fiscal planning, expenditure policy and budgeting.	M2	D+	C	C	A	D
C(ii). Predictability and Control in Budget Execution							
P-13	Transparency of taxpayer obligations and liabilities.	M2	D+	A	A	A	B
P-14	Effectiveness of measures for taxpayer registration and tax assessment.	M2	C+	A	B	A	A
P-15	Effectiveness in collection of tax payments.	M1	D+	D+	D	A	A
P-16	Predictability in the availability of funds for commitment of expenditures.	M1	C+	C+	A	B	C
P-17	Recording and management of cash balances, debt and guarantees.	M2	B	A	A	A	B
P-18	Effectiveness of payroll controls.	M1	D+	D+	B	B	A
P-19	Competition, value for money and controls in procurement.	M2	B	C	B	C	D
P-20	Effectiveness of internal controls for non-salary expenditure.	M1	C+	B+	A	A	B
P-21	Effectiveness of internal audit.	M1	D	D+	D	C	D
C(iii). Accounting, Recording and Reporting							
P-22	Timeliness and regularity of accounts reconciliation.	M2	D	B	A	C	
P-23	Availability of information on resources received by service delivery units.	M1	D	D	D		
P-24	Quality and timeliness of in-year budget reports.	M1	C+	C+	C	A	A
P-25	Quality and timeliness of annual financial statements.	M1	D+	D+	C	D	C
C(iv). External Scrutiny and Audit							
P-26	Scope, nature and follow-up of external audit.	M1	D+	D+	C	D	C
P-27	Legislative scrutiny of the annual budget law.	M1	C+	D+	C	D	C
P-28	Legislative scrutiny of external audit reports.	M1	D	D	D	D	D
D. Donor Practices							
D-1	Predictability of Direct Budget Support.	M1	N/A	N/A	N/A	N/A	
D-2	Financial information provided by donors for budgeting and reporting on project and program aid.	M1	D	D	D	D	
D-3	Proportion of aid that is managed by use of national procedures.	M1	D	NS	NS		

As part of the country's ongoing improvement program, the *Tonga Public Financial Reform Roadmap 2014/2015 to 2018/2019* was endorsed by the Government in October 2014. Since 2014, Tonga has consistently performed well above the regional average in relation to economic management, structural policies and public sector management and institutions. However, there are still some areas for improvement especially on enhancing budget credibility at the agency level, proper costing of sector-specific plans and presentation of budgetary impacts of policy changes. There is a need for a stronger link between policy, planning and budgeting.

Strengthening of fiscal policies are to be continued with relevant legislations to be reviewed to encourage more investment and revenue generation. Structural reforms on non-performing State-owned enterprises could lead to more efficient public enterprises that could create opportunities for employment and more domestic revenue.

The Private sector plays a key role in Tonga's economy. For this sector to thrive, it will need a business environment conducive to attracting private sector investment. Continuous dialogue between the government and the private sector is encouraged and must be built on genuine partnership that considers both parties' interests.

Tonga has received development assistance from numerous sources such as bilateral partners and multilateral development banks, UN-affiliated organisations and regional agencies over the years, channelled through the Ministry of Finance. In June 2019, the Asian Development Bank (ADB) approved a US\$5 million grant to assist Tonga strengthen its fiscal position by adopting prudent policies and better public financial management, as well as to improve the country's business climate with policy, regulatory and public enterprise reforms. The grant assistance will fund the third of three sub-programs of the ADB-supported Building Macroeconomic Resilience Program for Tonga. The program builds on progress under two earlier sub-programs of the initiative and previous policy-based support from other development partners, particularly the European Union, the World Bank and the governments of Australia and New Zealand.

The ADB assistance is policy-based, meaning that the funds are released as budget support once policy actions outlined in the program are successfully completed. The policy actions supported by the third sub-program include measures to strengthen tax revenue mobilisation, various public financial management improvements, the introduction of reforms to boost the financial viability of State-owned enterprises and a stronger public sector remuneration framework and performance management system. Such budget support is important for Tonga; however, it can only achieve good results if there is a transparent and accountable system in place with strong ownership from the Government.

Not all ocean investments go through national systems, which is a subject of debate. On one side of the debate, PFM experts advocate for all internal and external investments to go through public systems to increase transparency, accountability and coordination. On the other side of the debate, many private and philanthropic investors do not want their investments at risk of government bureaucratic processes and potential corruption or redirection of funds.

In Tonga, significant ocean investments are going outside of the national PFM system. For example, the Waitt Foundation and Oceans 5 are investing in marine spatial planning and ocean governance initiatives through grants to private actors and a local non-profit organisation. Accounting for private investments is governed by individual non-profit organisation systems and annual reporting metrics and may or may not be consistent with public accounting methods and metrics. To address this data gap, the best way forward would be to maintain the current practice of channelling funds directly to recipients on the condition that private and philanthropic investors are agreed to formally report annually to government on their financial contribution in order to record the annual total inflow to the country.

Based on the government and public enterprises operational and capital expenditures of US\$291.4 million in 2019/20, there is US\$162.5 million (56 percent) identified to have ocean-related benefits, of which US\$20 million is directly attributed to ocean finance. This is an estimate based on the Pacific Climate Change Finance Assessment Framework (PIFS 2013). However, the precise figure will be determined when the government will have incorporated specific accounting codes in their chart of accounts to track ocean finance that comes through government and non-government systems.

Opportunities

The following opportunities have been considered by stakeholder consultations in Tonga:

- a) Assess the benefits and risks of requiring all ocean investments, both public and private, to be used through the national PFM system and/or make arrangements that private investors share with government their report on the funds that they have sent directly to the non-government entities in order to determine accurately the total ocean fund that flows into country annually.
- b) Create a coding system within the Ministry of Finance to allow for easy tracking of ocean investments through and outside the national PFM system.
- c) Develop social, ecological, and economic metrics for ocean investments and integrate these metrics into both public and private accounting systems.
- d) Investigate a role for Civil Society Forum Tonga to support non-profit organisations with ocean investment accounting.
- e) Support the development of the results framework for the Tonga Ocean Plan in alignment with Framework for Pacific Oceanscape - Results Framework - through strengthening the monitoring and evaluation framework operating across government agencies and public enterprises and to anchor them on the M&E framework operated under the Tonga National Strategic Framework.
- f) The process of external scrutiny and audit may require further strengthening to ensure compliance.
- g) Build institutional, technical, and financial capacities within Tonga's public and private sectors to improve accounting practices.
- h) Update the economic valuation of marine ecosystem services at least every 5 years.



Capacity gaps and challenges



Status

To improve Tonga's ocean finance, it is critical to understand the capacity gaps for each of the ocean finance actions. Capacity can generally be broken down into three components:

1. Individual capacity - enabling people with competencies required to do their jobs
2. Organisational capacity - enabling systems, procedures, policies within entities for ocean finance
3. Societal capacity - enabling environment politically, economically and culturally

Based on the above construct, capacity gaps for each of the four ocean finance actions are summarised in Table 15.

Table 15: Tonga Ocean Finance Capacity Gap

Tonga Ocean Finance Capacity Gaps			
Ocean Finance Action	Individual capacity	Organisation capacity	Societal capacity
Generate	<ul style="list-style-type: none"> Limited human resources within line ministries with knowledge and experience on generating innovative finance Limited capacity on project proposal finance and accessing external funds at the community level 	<ul style="list-style-type: none"> Limited whole of Government effort on sustainable resource mobilisation for SDGs Limited capacity to access and manage funds 	<ul style="list-style-type: none"> Limited public understanding of ocean finance and resource mobilisation Limited community capacity to create entrepreneurial opportunities that generate monies for oceans
Invest	<ul style="list-style-type: none"> Government staff may have limited capacity to match revenue streams to strategic priorities Civil society staff may have limited understanding of how to support national ocean plans and policies, and how their investments line up to these national plans and policies 	<ul style="list-style-type: none"> Line ministries can be siloed and have limited coordination on policy and plan development and implementation Limited consultation procedures and capacity of Ministry of Commerce to social Tongan Investment Policy Framework to private sectors 	<ul style="list-style-type: none"> Limited enabling environment for line ministries, civil society, and private sector to partner on investments towards multi-sector ocean strategies
Align	<ul style="list-style-type: none"> Limited capacity in assessing, developing and implementing efficient fiscal policies 	<ul style="list-style-type: none"> Limited capacity to assess taxes and subsidies relative to other tools and levers Limited capacity to assess effectiveness and efficiencies of current taxes and subsidies Limited tools to compare the environmental and social costs / benefits of fisheries subsidies within cultural context 	<ul style="list-style-type: none"> Limited societal understanding of the role of taxes and subsidies in sustainable development

Account	<ul style="list-style-type: none"> Limited capacity in triple-bottom line metrics and accounting Limited capacity in natural resources economics 	<ul style="list-style-type: none"> Lack of appropriate metrics to measure effectiveness of ocean investments Lack of coding system to track projects through the national PFM system Very weak and inconsistent capacity for reporting and accounting of institutions and NGOs who managed related projects Insufficient administrative process and policies on inter-agency data archival, sharing and retrieval 	<ul style="list-style-type: none"> Limited societal understanding of the economic values of marine ecosystem services and the cost-benefit analysis of individual and collective actions
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Opportunities

The following opportunities have been considered by stakeholder consultations in Tonga:

- a) Notwithstanding the capacity constraints on key components of Ocean Finance in Tonga, it was evident that there are existing key drivers and some capacity at the institutional level already in place in Tonga that can be further strengthened to support successful Ocean Finance work.
- b) Firstly, there was high appetite at the institutional (Line Ministries, Private Sector & NGO) and political level (Permanent Secretary and Parliament level) to progress Ocean Finance objectives for Tonga’s own sustainable development. Secondly, with Tonga as one of the leaders in the region on Ocean Planning (Tonga Ocean Plan, Ocean committee, etc.) coupled with the existing support arrangement at the Ministry of Finance, there is a high possibility that the capacities required to implement Tonga Ocean planning and Ocean finance areas will be prioritised and supported.
- c) As outlined in this section, the capacity gaps and challenges were identified based on information derived from consultation workshops in 2019 and 2021 and therefore, may not be 100 percent reflective of the true capacity for broader Ocean Finance work in Tonga. Tonga has agreed with this analysis of the capacity gap needed and looks forward to working with development partners to develop a program of actions to address these gaps over time. The provision of training opportunities in the fields of ocean engineering, biotechnology, ocean planning and ocean research is considered critical for national capacity development.
- d) The subsequent recommendation is to consider meeting the identified capacity gaps and challenges through existing capacity development programs such as civil servants’ training, tertiary short courses, mentoring and scholarships, training of trainers, information sharing, monitoring and evaluation programs and related initiatives.

Lastly, these preliminary capacity constraints together with other emerging ones from future processes would need to be structured comprehensively into an action-oriented framework and mainstreamed into other training processes for their implementation.



Conclusion



Conclusion

Tonga is a leader in ocean governance and planning - being the first country in the region to conduct ocean finance profiling - and has an ocean budget of approximately US\$20 million. There is a huge future investment program requiring US\$865.5 million for development of the ocean infrastructure that government has identified under its five-year national indicative Infrastructure plan. Donor funding is expected to be the major source for implementing these projects. New sources of ocean finance will be required to make a contribution toward funding these ocean-related projects. The substantial ocean infrastructure investment program indicates that additional financial resources are required to fully achieve Tonga's ocean objectives.

Tonga's ocean budget is heavily dependent on ODA and philanthropic donations, which creates risks in terms of the lack of diversification, potential political issues with bilateral funds and limited self-determination while answering to a small number of powerful donors. While these traditional sources of funding remain necessary, it is recommended that Tonga diversify and pursue additional donors and investors through a variety of finance mechanisms. There is an important and urgent opportunity to insert a finance facility or finance mechanism(s) in the forthcoming Tonga Ocean Plan, to build towards a diversified portfolio of revenue streams to support this overarching policy framework.

The isolation of the archipelago and the exposure to external shocks and extreme climate change induced events creates challenges with economic development. When combined with attendant risks for private sector ocean investment, there are very large-scale opportunities in the pipeline for ocean infrastructure projects that are ready to receive external investment. Pipeline development and sustainable development capacity building are required before Tonga is ready for ocean impact investments.

Small-scale opportunities for new ocean finance mechanisms do exist and they are well-matched to the scale of traditional and cultural governance structures, i.e., SMAs. The whale-watching and super yacht industries provide unique opportunities for local communities to gain economic benefits from their well-managed marine resources. User fees should be expanded and regulated and the number of user fee systems can be scaled through time as capacity increases.

Given the constraints of taxes as a lever for aligning behaviours and the associated inefficiencies of hypothecated taxes, there are opportunities for creating new taxes such as carbon tax and green departure tax for non-nationals, that can benefit oceans. It is recommended, however, that fishing subsidies be sensitively reviewed to better understand the context of developing local fisheries instead of foreign-flag fisheries in Tongan waters and whether the current fisheries subsidies strike the right balance of social, economic and ecological priorities in the TSDF.

Tonga, like the rest of the Pacific Island Countries, could benefit from incorporating into the Ministry of Finance existing chart of accounts, the coding system to facilitate tracking of ocean projects (and other tags such as climate projects, etc.) being managed through the public finance management system and outside it. Combining this with improved metrics for social, ecological, and economic impacts of ocean investments, consistently applied across sectors, would result in actionable data about whether ocean investments are achieving their intended aims.

Underlying all ocean finance work is the need to better understand and enhance Tonga's capacity to generate, invest, align and account for ocean investments. The ocean finance profile process is a start in identifying where Tonga can improve in ocean finance. It is an opportunity for the government, alongside development partners, civil society and the private sector, to articulate how Tonga can increase the amount and efficacy of financial resources to achieve sustained ocean health and governance envisaged in the Tonga National Strategic Framework.



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Appendix 1. Tonga Public Financial Management and Ocean Budget Review

By Mr. 'Aholotu Palu and Mr Ledua Vakaloloma, Pacific Islands Forum Secretariat

Public Financial Management

Public financial management (PFM) is generally defined as a set of laws, rules, systems and processes used by sovereign nations to mobilise revenue, allocate public funds, undertake public spending, account for funds and audit results. In its narrowest and most traditional sense, it is concerned with how governments manage the budget from the formulation to the execution phase.

The work on PFM in the Pacific region including Tonga has been focused on developing capacity to better manage public finances. It looks for ways to more effectively support the country's efforts by bringing together development partners and government authorities to:

- ▶ Foster good practices in implementing PFM reforms;
- ▶ Harmonise the measurement of PFM performance;
- ▶ Share knowledge and experiences among development partners and countries on using country PFM systems; and
- ▶ Strengthen accountability in PFM systems.

Strong PFM systems are essential for effective and sustainable economic management and public service delivery. States are effective and accountable when they are underpinned by good PFM institutions and systems. Good PFM systems are also indispensable in ensuring that aid is being used to achieve development goals.

PFM consists of six cycles beginning with policy design and ending with external audit and evaluation (see Figure 1-1). Many actors are engaged in this cycle to ensure it operates effectively and transparently, while preserving accountability. Funds flowing through the public finance system ultimately reach the projects and are spent on the implementation of activities. Reports are submitted through acquittals and progressive reports which are subject to auditing at the end of the project period. Project reports are also used for future programming.

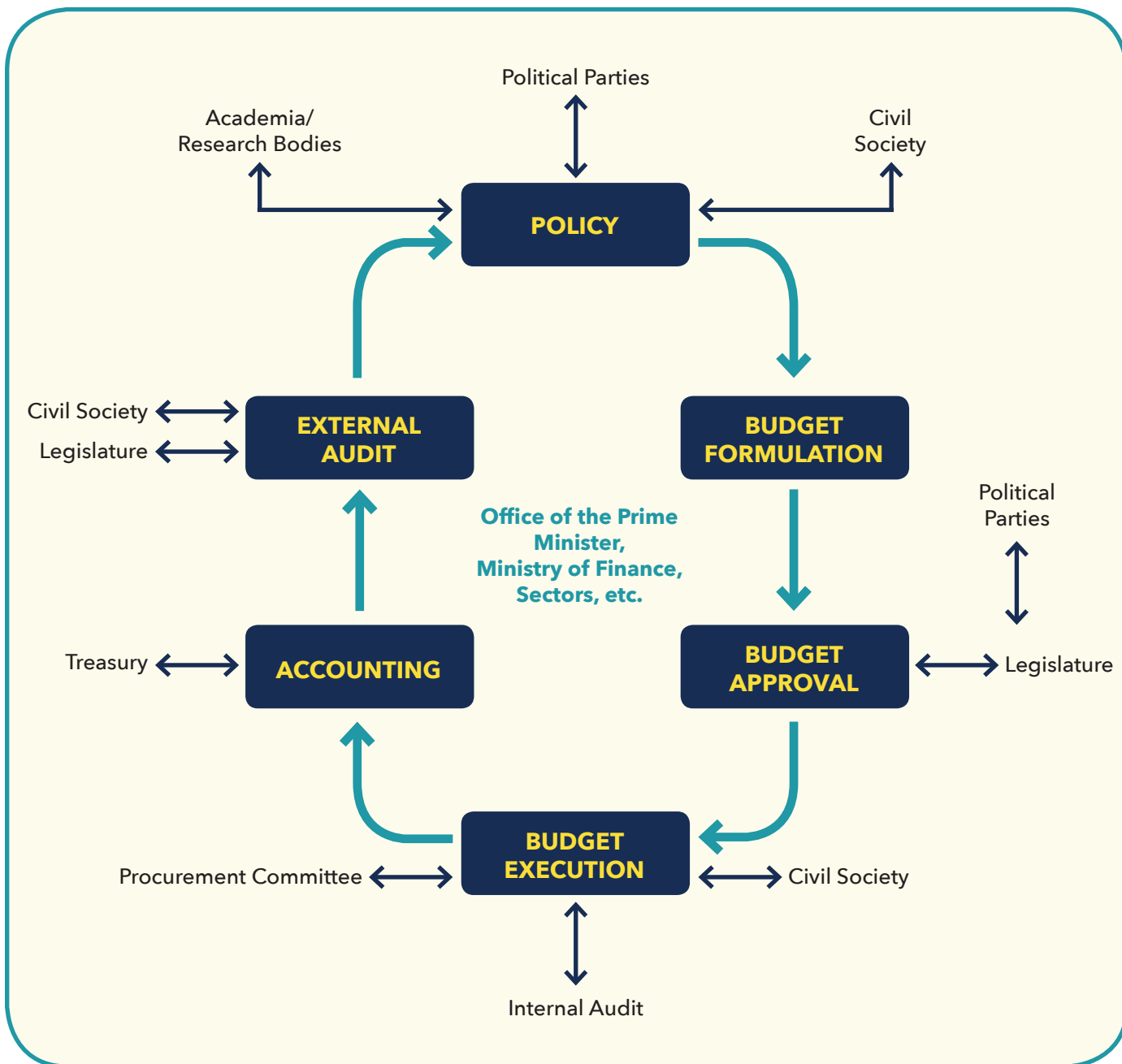


Figure 1-1: Public Financial Management Cycle

Structure of the Tonga National Budget

This section discusses the current government budget structure, budget resources envelope and distribution and flow of funds into the country’s PFM system and attempts to estimate the budget ocean resources expended and generated for ocean-related activities based on information provided by the Ministry of Finance for the financial year 2019/20. The public enterprises expenditures are also included in the calculation of the national ocean finance generated, but its financial system is not included in this analysis. The government and public enterprises operational and development expenditures are used for estimating of the ocean finance in Tonga in order to capture the picture for the whole of government or public sector PFM system. However, the detailed analysis in this section is concentrated on government finance only. Financial resources going directly to recipients outside the government machinery are not captured in this analysis.

The Tonga budget is structured under a programming budget layout with resources allocated to ministries, departments, and agencies (MDA) through an assigned programs, sub-programs, activities and items level that are administratively defined. This has made the estimation of resources (domestic or external) going to ocean activities quite challenging, albeit several related ministries such as fisheries, tourism and environment appeared to have some clear linkages to ocean activities. The annual reports of the public enterprises for 2019/2020 were the source of information for the public enterprises' expenditures.

Tonga's programming budget structure is categorised into two major funding components- recurrent (domestic) and development (donor or aid) budget. Within these two major funding components, there are two major expenditure groups - one for salary & wages and the other for operational budgets with additional layers of 10 expenditure groupings under the operational budget. In 2019/20, the total government recurrent or operational expenditure was US\$147.2 million with US\$60.4 million (41 percent) estimated to be financed by domestic resources including the direct ocean finance component of approximately US\$7.2 million (which is 5 percent of the total expenditure). The 2019/20, actual development expenditure was US\$58.4 million of which US\$4 million was for ocean benefits. On the recurrent (domestic) revenue for 2019/20 it was projected to increase to the same level as the recurrent expenditure, up by about US\$5m from the last financial year. The increase was based on assumptions of tax revenue recovery and collection after tax exemptions allowed to TC Gita related imports coming to an end in early 2018/19, coupled with increased economic and business activities attributable to returns of economic confidence after the impact of the global crises erupted in the late 2008 in the USA. The increase of revenue also presented an indication that Tonga's fiscal condition is improving.

Tonga's budget allocation is allotted to 25 MDAs. Allocation of resources was based on the initiatives and priority areas that are highlighted in the Tonga Strategic Development Framework (TSDF)²⁰ II and government priority agenda 2019/2020, which contributes to the developmental theme, a *"more progressive Tonga supporting high quality of life for all"*.

Tonga Flow of Budget Resources (Funds)

The Budget document is the central tool to tracking how government's financial resources are generated, received, managed and distributed in accordance with the country's development priorities. To understand how the budget expenditure for ocean-related activities are being funded and channelled through to the country, it is important to understand how the budget resources are generated and mobilised either from domestic (taxes and non-taxes) or external sources (ODA, climate finance, ocean finance and budget support).

The diagram below shows the major categorisation of the flow of funding sources to the national budget for funding of various government development activities, including the ocean actions. The domestic and external funds are processed through the government's Public Finance Management (PFM) system with some transactions conducted and managed via the partners' systems.

ODA resources are reported to come into the country in the form of cash or in-kind donation. The amount presented in the budget for development activities combined the cash and in-kind contributions. The domestic generated resources are channelled through the national PFM system into the annual budget (The Appropriation). The Budget support and loan proceeds, including blend (mix of grant and concessional loan) money, are also channelled through the national PFM system whilst technical cooperation support requires Cabinet approval to channel through or outside the PFM systems and processes.

²⁰ This is the national development plan for Tonga outlining sectors' priorities for the Year 2015-2025.

The Flow of Funds

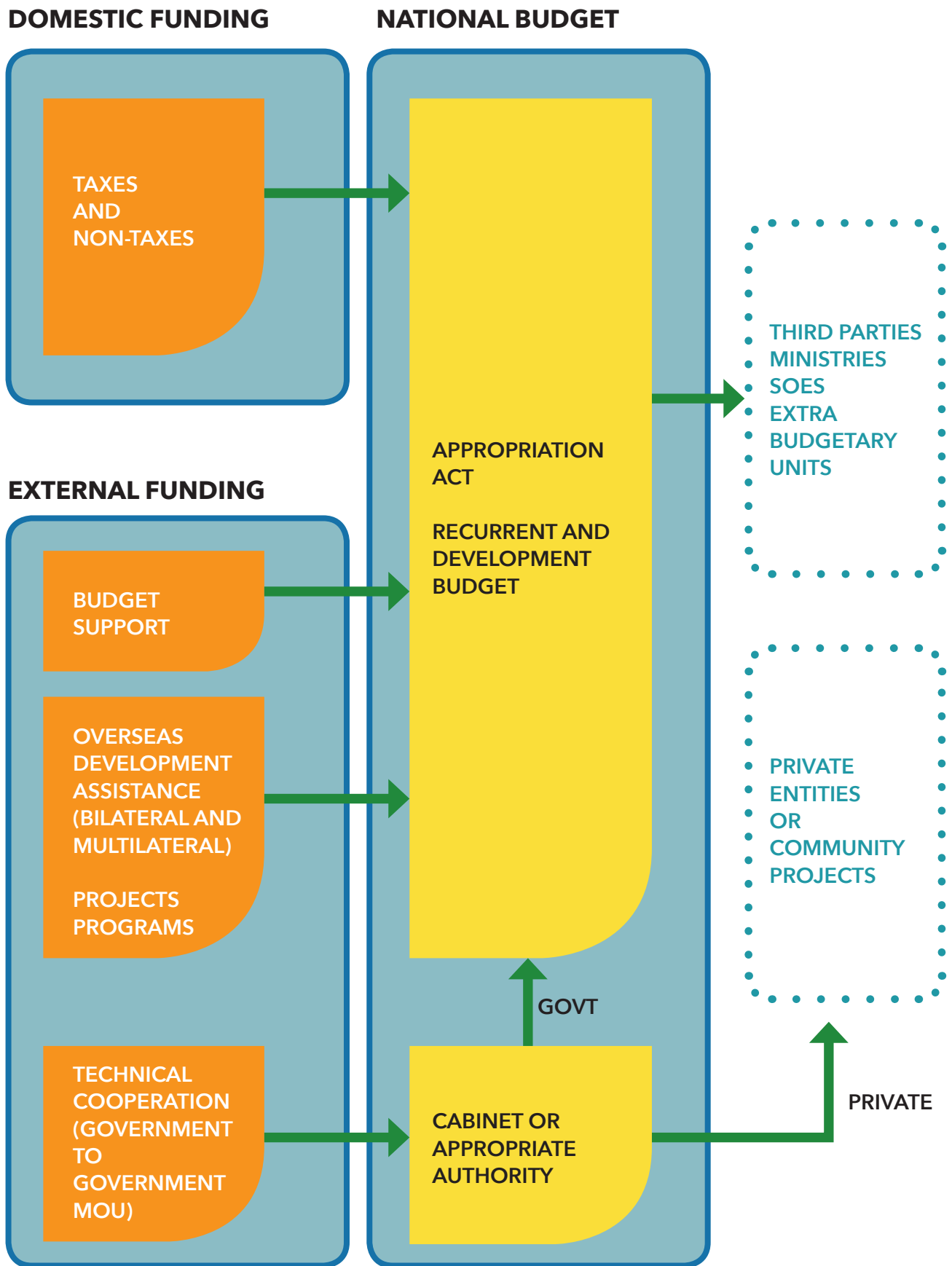


Figure 1-2: Flow of fund diagram

National Ocean Budget

The 2019/20 National Budget did not provide detailed information of technical and financial resources allocated to ocean-related activities. However, the next section will attempt to explain the structure of the Budget and the overall budget allocation to key ministries that considered having related ocean activities such as fisheries and natural resources.

It is important to note the challenges in obtaining specific revenue and expenditure data for ocean-related activities. However, the table below shows the recurrent and development budget distributed to Ministries, Departments and Agencies (MDA). It is understood that there are aid resources going into the country outside the national Budget system, which is reported to be in the vicinity of 60 percent of the estimated total aid flows. Collection of outside flows of aid resources is quite challenging because of the lack of information available from the recipients such as private sectors, CSOs or individual/communal groups. However, as explained in the next section, the profiling conducted an estimation of the budget allocated to key MDAs that appears to have related to ocean activities by applying an estimated weighting percentage as follows with 12 per cent of the estimation attributed to direct ocean finance:

- a) 5 percent marginal relevance- refers to activities that have very indirect links to ocean
- b) 25 percent low relevance- refers to activities that show attributes relevant to ocean
- c) 50 percent medium relevance- refers to activities that at least have a relevant mix to ocean
- d) 80 percent high relevance- refers to clear activities relevant to ocean

Government operational and development expenditures and ocean finance

Table 1-1 presents the government ministries expenditures for operation and development at a total of US\$147.2 million, of which US\$7.2 million is for direct ocean finance. The development expenditure of US\$58.4 million has a direct ocean finance component of US\$4 million. The total direct ocean finance for government operation and development is approximately US\$11.3 million.

Table 1-1: Government recurrent or operational and development expenditures

Ministries, Departments, and Agencies	Government -funded expenditure 2019/20 US\$m	Government -funded Expenditure Weighted Ocean Budget 2019/20 US\$m	ODA Development Finance 2019/20 US\$m	ODA Development Finance Weighted Ocean Budget 2019/20 US\$m
Palace Office	1.9	0.01	-	-
Legislative Assembly	4.9	0.29	-	-
Tonga Office of the Auditor General	0.7	-	-	-
Ombudsman	0.6	-	-	-
Ministry of Foreign Affairs	4.3	0.13	-	-

His Majesty's Armed Forces	4.4	0.27	-	-
Prime Minister's Office	1.6	0.01	-	-
Ministry of Finance	37.3	3.58	6.9	0.7
Ministry of Revenue and Customs	3.8	0.36	-	-
Ministry of Public Enterprises	0.5	0.05	-	-
Ministry of Commerce and Economic Development	2.4	0.07	0.8	
Ministry of Justice and Prisons	4.6	0.03	0.4	-
Attorney General's Office	1.2	0.01	-	-
Ministry of Police and Fire	6.0	0.36	1.8	0.1
Ministry of Health	19.2	0.11	3.9	
Ministry of Education and Training	24.9	0.15	3.7	
Ministry of Internal Affairs	3.2	0.02	3.2	
Ministry of Agriculture, Food and Forestry	4.1	0.24	1.3	0.1
Ministry of Infrastructure	10.5	0.63	9.4	0.6
Ministry of Land, Survey and Natural Resources	2.1	0.2	0.7	0.1
Public Service Commission	0.8	-	0.6	-
Statistics Department	1.3	0.01	0.1	-
MEIDECCC	3.3	0.32	24.8	2.4
Ministry of Fisheries	1.9	0.18	0.7	0.1
Ministry of Tourism	1.8	0.11	0.1	
TOTAL	147.2	7.25	58.4	4.0

(Source: Ministry of Finance)

Public Enterprises operational and development expenditures and ocean finance

The Ministry of Public Enterprises contribution to ocean finance in the Government operation and development expenditures was estimated at 80 percent. This same proportion is used for the estimation of the ocean finance in the public enterprises operation and development expenditures for 2019/2020; the result is shown in Table 1-2. Combining the operational and development expenditures, the total amount for ocean benefits is approximately US\$8.2 million out of overall expenditures of US\$85.8 million.

Table 1-2. Public Enterprises Operation and ODA development Finance Weighted for Oceans Relevance 2019/2020

Public Enterprises	Public Enterprises operation expenditure 2019/20 US\$m	Public Enterprises operation Expenditure Weighted Ocean relevance 2019/2020 US\$m	Public Enterprises ODA Finance Weighted for Oceans Relevance 2019/2020 US\$m	Public Enterprises ODA Finance Weighted for Oceans Relevance 2019/2020 US\$m
Tonga Power Ltd	26.4	2.53	0.91	0.09
Tonga Water Board	4.0	0.38	4.36	0.42
Waste Authority Ltd	1.6	0.15	0.62	0.06
Tonga Communication Corporation	13.7	1.3	3.10	0.30
Tonga Cable Ltd	2.8	0.27	2.12	0.20
Tonga Broadcasting Commission	0.9	0.09	0.44	0.04
Tonga Airport Ltd	5.5	0.52	11.66	1.12
Tonga Post Ltd	0.4	0.04	0.06	0.01
Ports Authority Tonga Ltd	4.0	0.39	1.97	0.19
Talamahu Market Corporation Ltd	0.7	0.06	0.04	-
Tonga Asset Management Authority	0.6	0.06	0	-
Total	60.5	5.81	25.27	2.43

(Source: Public Enterprises Annual Reports 2019/20)

