



FINANCING THE BLUE ECONOMY IN TIMOR-LESTE: A PRELIMINARY ROAD MAP





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Financing the Blue Economy in Timor-Leste: A Preliminary Roadmap

<u>FINANCING THE BLUE ECONOMY IN TIMOR-LESTE: A PRELIMINARY ROADMAP</u>	1
<u>SECTION 1:</u>	3
<u>ABOUT THIS BLUE ECONOMY FINANCING ROADMAP</u>	3
1.1 INTRODUCTION AND BACKGROUND	3
1.2 METHODOLOGICAL APPROACH	4
<u>SECTION 2:</u>	7
<u>THE BLUE ECONOMY, TIMOR-LESTE AND THE SDGS</u>	7
2.1 WHY THE BLUE ECONOMY? THE BLUE ECONOMY AND ITS CONTRIBUTION TO THE SDGS	7
2.2 THE BLUE ECONOMY AND TIMOR-LESTE	10
<u>SECTION 3:</u>	15
<u>FINANCING BLUE GROWTH: THE CURRENT LANDSCAPE IN TIMOR-LESTE</u>	15
3.1 INTRODUCTION	15
3.2 DOMESTIC PUBLIC RESOURCES AND THE BLUE ECONOMY	15
3.3 DEBT OUTLOOK AND OPPORTUNITIES TO LEVERAGE DEBT FINANCING IN SUPPORT OF THE BLUE ECONOMY	21
3.4 DEVELOPMENT PARTNERS AND THE BLUE ECONOMY IN TIMOR-LESTE	23
3.5 PRIVATE FINANCE AND THE BLUE ECONOMY IN TIMOR-LESTE	29
<u>SECTION 4:</u>	34
<u>INNOVATIONS IN FINANCING THE BLUE ECONOMY: OPPORTUNITIES FOR TIMOR-LESTE</u>	34

4.1 INTRODUCTION	34
4.2 BLENDED FINANCE FOR THE BLUE ECONOMY	34
4.3 BLUE BONDS	36
4.4 INCUBATOR/ACCELERATOR FUNDS	38
4.5 IMPACT INVESTING FOR THE BLUE ECONOMY	39
4.6 INNOVATIVE “BLUE” INSURANCE	40
4.7 BLUE CARBON MARKETS	41
4.8 BOOSTING DOMESTIC RESOURCES FOR THE BLUE ECONOMY: ENVIRONMENTAL FEES	41
SECTION 5:	45
<hr/>	
CASE STUDY: THE SEYCHELLES	45
SECTION 6:	48
<hr/>	
RISK ASSESSMENT	48
SECTION 7:	50
<hr/>	
BINDING CONSTRAINTS	50
SECTION 8:	52
<hr/>	
A ROADMAP FOR FINANCING THE BLUE ECONOMY: RECOMMENDATIONS AND NEXT STEPS	52
1. DEVELOP A BLUE ECONOMY INVESTMENT STRATEGY	52
2. CATALYSE DOMESTIC RESOURCES FOR THE BLUE ECONOMY THROUGH THE CREATION OF A BLUE ECONOMY FINANCING FACILITY	53
3. LEVERAGE NEW INNOVATIVE FINANCE MECHANISMS AND FUNDS FOCUSED ON THE BLUE ECONOMY	54
4. MODEL SCENARIOS FOR ENVIRONMENTAL FEES/LEVIES	56
5. LEVERAGE CLIMATE FINANCE	57
6. LOANS, SAVINGS AND INSURANCE SCHEMES FOR COASTAL COMMUNITIES	57
ANNEX:	58
<hr/>	
LIST OF INSTITUTIONS CONSULTED IN THE AREA OF BLUE ECONOMY	58

Section 1:

About this blue economy financing roadmap

1.1 Introduction and Background

This roadmap has been commissioned by the United Nations Development Programme (UNDP) in Timor-Leste with financial support from the United Nations Joint SDG Fund.¹ The aim of the project is to assist the Government of Timor-Leste (GoTL) to develop an Integrated National Financing Framework (INFF) with a special focus on how finance can be mobilised and effectively used to support economic diversification and recovery from the COVID-19 pandemic.

This roadmap focuses on the economic diversification opportunities presented by the blue economy, and explores opportunities to leverage finance for “blue growth” in Timor-Leste. The country is heavily reliant on petroleum revenues, and as oil revenues decline, it must diversify its sources of finance and the structure of the economy if its development ambitions to become an upper-middle-income country by 2030 are to be realised. These objectives have become even more urgent in the context of the ongoing COVID-19 pandemic which has led to extraordinary additional spending demands on the GoTL, combined with a dramatic fall in economic activity. Poverty has increased. Looking forward, recovery from the pandemic combined with the wider need to diversify the economy will require a step change in investment. This roadmap will help the GoTL to think about how it can use various sources of finance in the most strategic ways possible to support blue economy development.

Many Small Island Developing States (SIDS) as well as countries with large coastlines are increasingly recognising the promising sustainable development opportunities represented by the blue economy, and are putting in place strategies to sustainably manage valuable ocean and marine resources, while also create new livelihoods and job opportunities, and reduce poverty. Several countries are piloting new and innovative approaches to financing key blue economy interventions like the Seychelles with its blue bond issuance and debt-for-nature swap focused on sustainable fisheries launched in 2018. Blue economy development may be able to play a role in accelerating the economic recovery from COVID-19 while also lay the foundations for a new model of sustainable development. This will in turn support progress towards multiple SDGs, including SDG 1 (no poverty); SDG 2 (zero hunger); SDG 8 (decent work and economic growth); SDG 13 (climate action); SDG 14 (life below water) and SDG 17 (partnerships for development).

Timor-Leste’s Strategic Development Plan (SDP) 2011-2030 articulates Timor-Leste’s development vision for the next two decades.² The SDP is an integrated package of strategic policies, which aims to transform Timor-Leste from a low-income to upper middle-income country, with a healthy, well-educated and safe population by 2030. The SDP covers four pillars: (1) Social Capital, (2) Infrastructure Development, (3) Economic Development, and (4) Institutional Frameworks. Progress however has thus far been disappointing and has been further derailed by the current COVID-19 pandemic.

¹ See UN Joint SDG Fund: <https://www.jointsdgfund.org/>

² Timor-Leste Strategic Development Plan 2011-2030: <http://timor-leste.gov.tl/wp-content/uploads/2011/07/Timor-Leste-Strategic-Plan-2011-20301.pdf>

This blue economy financing roadmap explores the role that the blue economy can play in accelerating sustainable economic development and the four key pillars of the Strategic Development Plan, and focuses in particular on the ways in which both domestic and external financial resources can be leveraged in strategic ways to support blue economy development and the transition to a post-oil economy. The roadmap represents a first step in identifying and mapping financing options for the blue economy and aims to inform a national dialogue on future development pathways, and the role that different financing flows can play. It covers key sources of finance for Timor-Leste, namely Timor-Leste’s national Petroleum Fund, financial assistance from development partners and multilateral development banks, and innovative sources of finance for the blue economy.

Box 1: What is an Integrated National Financing Framework (INFF)? A Definition³

“An integrated national financing framework (INFF) helps countries strengthen planning processes and overcome existing impediments to financing sustainable development and the Sustainable Development Goals (SDGs) at the country level. It lays out the full range of financing sources – domestic and international sources of both public and private finance – and allows countries to develop a strategy to increase investment, manage risks and achieve sustainable development priorities, as identified in a country’s national sustainable development strategy.”

Source: INFF Knowledge Platform (2021)

1.2 Methodological approach

This blue economy financing roadmap is being developed in line with the first building block of the Integrated National Financing Framework (INFF) methodological approach, namely *“assessment and diagnostics to understand and assess current financing trends, including risks and opportunities the current financing landscape presents.”*⁴ It is structured as follows:

- Section 2 clarifies what is understood by the term “blue economy” then looks at its specific characteristics in Timor-Leste.
- Section 3 looks at the full range of financing flows in Timor-Leste (including domestic public resources, financial assistance from development partners and private financial flows), and explores the extent to which there is already – or could be – a strong focus on the blue economy.

³ For more information, see Integrated National Financing Framework (INFF) Knowledge Platform: <https://inff.org/>

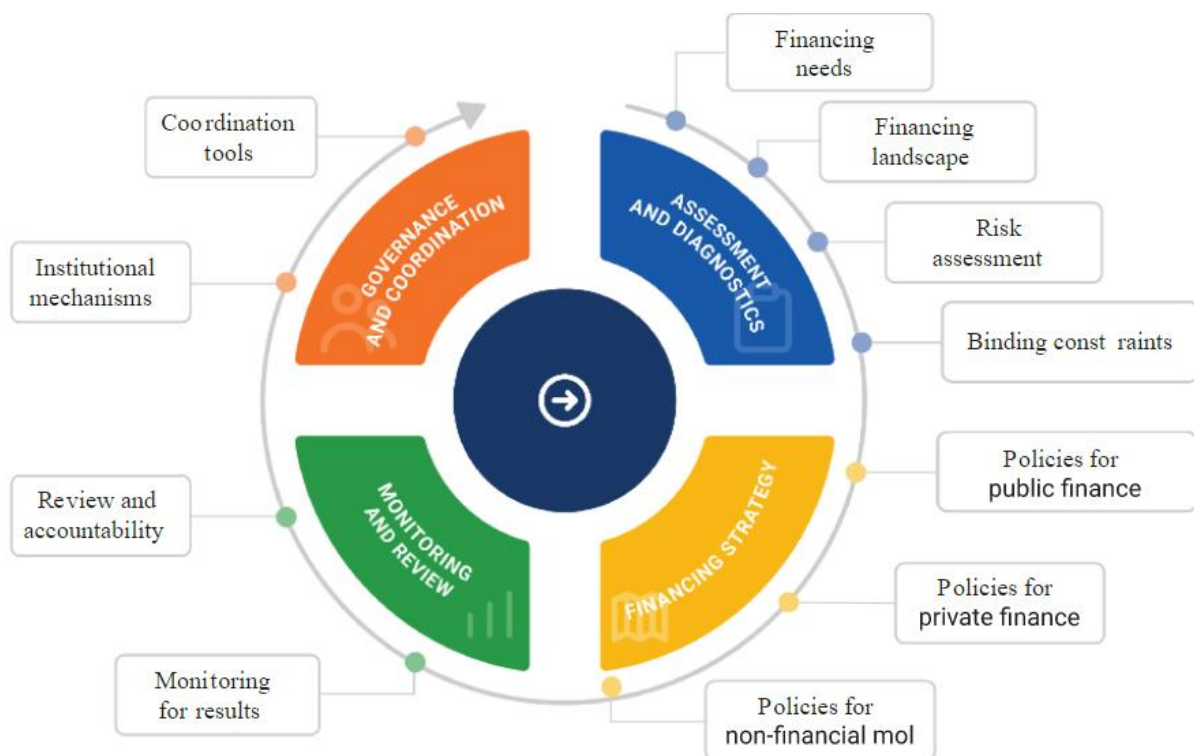
⁴ See: Integrated National Financing Framework (INFF) Knowledge Platform: <https://inff.org/>

- Section 4 maps new financial instruments and innovations in the broader development finance landscape as they relate to the blue economy, and sets out how these might be relevant and useful to Timor-Leste.
- Section 5 presents a case study of innovative blue economy financing from the Seychelles, including lessons learned.
- Section 6 maps out key risks related to financing the blue economy.
- Section 7 explores the binding constraints to financing the blue economy and outlines ways in which these might be overcome.
- Section 8 ends with a series of recommendations and proposed next steps to take forward financing for the blue economy.

Following this initial roadmap, *and should there be interest on the part of the Government of Timor-Leste*, work can be undertaken on the *second* building block of the INFF, namely the preparation of a more detailed financing strategy for the blue economy.

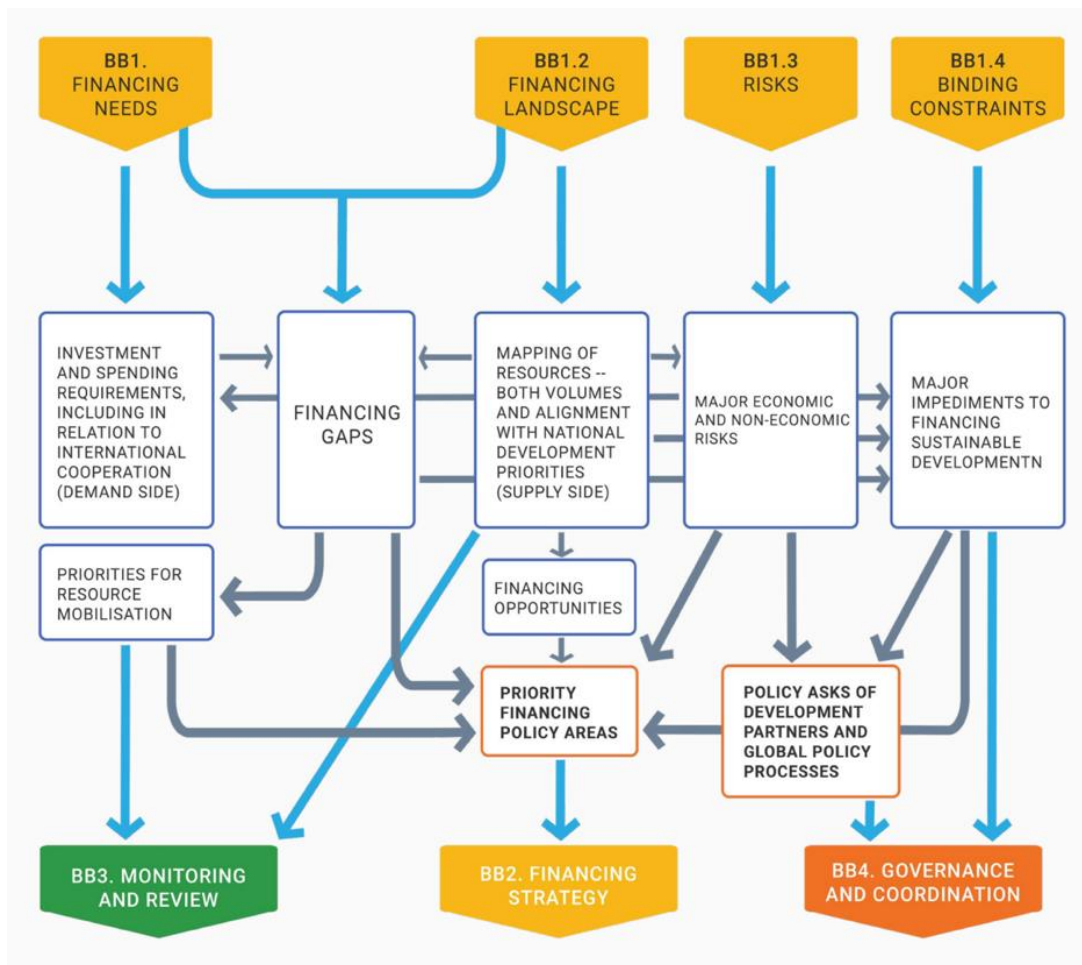
The overall aim of the work is to support the Government of Timor-Leste to build the knowledge and capacities to mobilise, strategically plan and manage financing related to the blue economy, and in so doing accelerate recovery from the COVID-19 pandemic, long-term economic diversification and sustainable development for all its people.

Figure 1: Four INFF building blocks



Source: UNDP (2020)

Figure 2: INFF Building Block 1. Key elements of the analysis



Source: UNDP (2020)

Section 2:

The Blue Economy, Timor-Leste and the SDGs

2.1 Why the Blue Economy? The Blue Economy and its contribution to the SDGs

What is the blue economy? And why does it matter for sustainable development? For the purposes of this report, the term blue economy is understood as activities that directly or indirectly take place in the seas, oceans and coastal areas that use oceanic resources, and which contribute to sustainable, inclusive economic growth, employment, and well-being, while preserving the health of the ocean.

This definition is consistent with the Changwon Declaration of 2012, adopted by Ministers of the East Asian Seas (EAS) Region – including Timor-Leste – which defines the blue economy as *“the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, enhanced disaster and climate resiliency, while preserving the ocean health.”*⁵

Box 2: Blue Economy: A Definition

The sustainable use of ocean resources for economic growth, improved livelihoods and jobs, while preserving the health of marine and coastal ecosystems.

Source: World Bank (2016)

Healthy oceans and seas can greatly contribute to inclusiveness and poverty reduction and are essential for a more sustainable future. Oceans and their related resources are the fundamental base upon which the economies and culture of many SIDS are built, and they are central to their delivery of the 2030 Agenda for Sustainable Development. The blue economy provides SIDS with a basis to pursue a low-carbon and resource-efficient path to economic growth and development designed to enhance livelihoods for the poor, create employment opportunities, enhance food security and reduce poverty while also protect valuable natural environments.

The blue economy holds opportunities to advance the UN Sustainable Development Goals (SDGs) in multiple ways. These include across industrial and service sectors such as fisheries, mariculture and aquaculture, low-carbon marine transportation, ports and shipping, business and finance, tourism, education and traditional knowledge, health, national security, and international relations. However, many of these opportunities remain underexplored – both within and outside Timor-Leste – and any new developments in these diverse blue economy sectors must also be carefully managed to ensure interventions are both sustainable and inclusive, and do not perpetuate societal inequalities.

⁵ Changwon Declaration Toward an Ocean-based Blue Economy : Moving Ahead with the Sustainable Development Strategy for the Seas of East Asia, 2021: <https://www.pemsea.org/publications/agreements-and-declarations/changwon-declaration-toward-ocean-based-blue-economy-moving>

Figure 3: SDGs often addressed through blue economy strategies



Source: Caribbean Development Bank (2018)⁶

Figure 4: Why focus on the blue economy?



Source: UNDP (2018)⁷

⁶ Caribbean Development Bank, Financing the Blue Economy: A Caribbean Development Opportunity, 2018: <https://www.caribank.org/publications-and-resources/resource-library/thematic-papers/financing-blue-economy-caribbean-development-opportunity>

⁷ UNDP, Dominica Blue Economy Scoping Study (2018)

The blue economy has diverse components, including established traditional ocean industries such as fisheries, tourism, and maritime transport, but also new and emerging activities, such as marine renewable energy, aquaculture, seabed extractive activities, and marine biotechnology and bioprospecting. A number of services provided by ocean and coastal ecosystems, and for which markets do not exist, also contribute significantly to economic and other human activity such as carbon sequestration, coastal protection, waste disposal and the existence of biodiversity. The mix of oceanic activities varies in each country, depending on its unique national circumstances and the national vision adopted to reflect its own conception of a blue economy.

Figure 5: Key sectors connected to the blue economy



Source: Caribbean Development Bank (2018)

Despite its potential, blue economy development is often limited by a series of inter-connected challenges. The first relates to the need to overcome current economic trends that are leading to the rapid deterioration of ocean and coastal resources. This is occurring through the unsustainable extraction of marine resources, the destruction of marine and coastal habitats and landscapes, marine pollution and climate change. The second set of challenges is the need to invest in the human capital required to harness the employment, livelihoods and development benefits of diverse blue economy sectors, like tourism, marine renewable energy, ports and marine transportation, fisheries and aquaculture. The third set of challenges relates to inadequate policy and institutional frameworks for the effective management of ocean resources – or a lack of implementation where they do exist. This includes at the national, regional and international levels. The final set of challenges relates to financing. Ensuring ocean and coastal health will require new investment at-scale, including targeted financial instruments and a willingness on the part of both public and private finance providers to invest in creating new markets, especially in underserved countries and communities. It will also require placing a value on the valuable ecosystem services provided by ocean and coastal ecosystems

(like carbon sequestration by mangrove forests) so that this can trigger new long-term revenue streams for sustainable development.

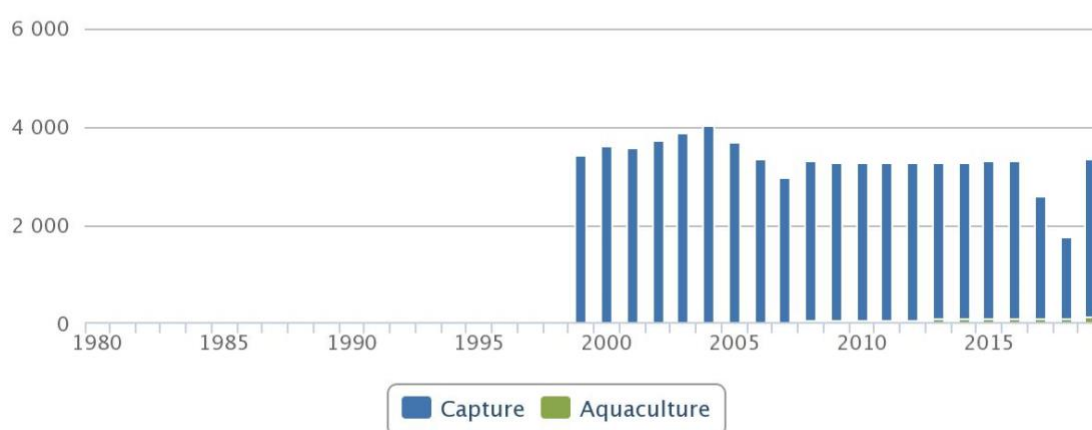
2.2 The Blue Economy and Timor-Leste

The concept of the blue economy is not new to Timor-Leste – though it is not widely understood throughout the population.

In 2018, the Ministry of Agriculture and Fisheries partnered with UNDP, the Global Environment Facility (GEF) and PEMSEA on a report entitled the *'National State of Oceans and Coasts 2018: Blue Economy Growth'*.⁸ The report identified the development opportunities the blue economy could bring to Timor-Leste. It showed that the ocean economy represents around 87% of the country's GDP – but this is derived mostly from oil and gas. Other key economic sectors such as fisheries, tourism and shipping in contrast contribute very little to the country's GDP. For example, the Gross Value Added (GVA) of the tourism sector in 2015 was just US\$ 19.6 million, equivalent to 1% to GDP. Fisheries comes in even lower at just 0.4% of GDP, and remains mostly artisanal in character. Indeed, Timor-Leste imports a large proportion of its seafood. The report concluded that more benefit can be had from other ocean-related sectors, such as tourism, fisheries and aquaculture (including seaweeds), seafood processing, shipping, marine transportation and ports, and ocean renewable energy – but underscored that these must be developed in sustainable ways.⁹

Figure 6: Domestic production (catch and aquaculture) remain small

Total capture and aquaculture production for the Democratic Republic of Timor-Leste (ton)
Source: FAO FishStat



Source: Ministry of Tourism, Commerce and Industry (2021)

⁸ See, National State of Oceans and Coasts 2018: Blue Economy Growth: [http://pemsea.org/sites/default/files/NSOC%20Timor%20Leste%202018%20\(FINAL\)%2010152020.pdf](http://pemsea.org/sites/default/files/NSOC%20Timor%20Leste%202018%20(FINAL)%2010152020.pdf)

⁹ The report compiled key data and information related to Timor-Leste's ocean economy, coastal and marine resources and environment, and aimed to assist policymaking, planning and management.

Well-known blue economy challenges are also present in Timor-Leste. The country has crystalline waters, abundant fish stocks and limited industrial pollution which have fostered a uniquely diverse maritime ecosystem. But its natural marine ecosystems are also under considerable anthropogenic pressures. For example, there has been a loss of mangroves in Timor-Leste's coastal areas mainly due to trees harvested for timber and fuel wood and in some instances hinterland mangroves have been removed for the establishment of brackish water shrimp and/or fishponds. It is estimated that the total mangrove area has been reduced from 9,000 ha in 1940 to 3,035 ha in 2000 to just 1,802 ha recorded in 2008 (the latest year for which data is available). This equates to a 40% loss since 1940. Siltation of river systems primarily due to deforestation is resulting in sediment dispersion to inshore coastal marine zones. In addition, fertilisers and pesticides being applied to upstream farms can also be carried down to coastal areas, causing irregular nutrient flows in estuaries and inshore coastal marine zones, impacting biodiversity within these areas.¹⁰ Climate change is further affecting Timor-Leste's ocean and coastal ecosystems. Changes projected to further worsen due to climate change include ocean acidification and warmer waters, sea level rise, more variability in weather patterns and increases in extreme weather events.

Second, Timor-Leste currently lacks the human capital to be able to both fully maximise the livelihoods, employment and development benefits of key blue economy sectors, while also conserve its natural marine environments. Some stakeholders interviewed noted that people don't have the awareness and knowledge to take care of local marine environments and manage them in sustainable ways. There is also little knowledge about potential business and livelihoods opportunities linked to the blue economy, with many business ventures to-date (e.g. in tourism) started, managed and owned by foreigners.¹¹ Stakeholder interviews noted that many blue economy-related industries, like seaweed farms, are still in the early stages and are at community level, and that many people simply haven't thought seriously about the blue economy as a source of income and livelihood.¹²

Third, Timor-Leste has an underdeveloped policy and institutional framework linked to the blue economy – though steps are now being taken to advance in this area. While Timor-Leste has developed a National Oceans Policy (NOP) which describes the country's vision for its ocean as: "*A healthy and secure ocean that sustains the livelihoods, prosperity and social and cultural values of the people of Timor-Leste in a fair and equitable manner*", the document has not yet been approved by the Council of Ministers, even though the process for its elaboration started in 2017. The document is anchored around six core strategic objectives which include effective ocean governance systems, a diversified blue economy, strengthened natural ecosystems, investments in people, and strengthening actions to combat and adapt to climate change. It will be important to both approve *and implement* this policy in order to ensure a truly national and coherent approach to ocean management, which will involve multiple government agencies, including local government authorities, the private sector, academia and local communities.¹³ At the same time, it lags behind other countries in its adhesion to international maritime standards and conventions, and alignment in sanitary and phytosanitary (SPS) measures, eco-labelling and other international standards which

¹⁰ Source: National Oceans Policy

¹¹ Based on interviews.

¹² Based on interviews.

¹³ Source: National Oceans Policy

will be critical in developing key industries like sustainable fishing and fish processing. Development partners, like Germany, have been supporting Timor-Leste in these areas, but stakeholders noted that capacities – and long-term sources of financing for this work – remain low.¹⁴

Finally, there are challenges related to financing the blue economy in Timor-Leste – which this roadmap explores in more depth. These include constraints on both the *supply* side (e.g. a lack of information and knowledge on the part of investors as regards potential opportunities presented by the Timorese market, leading to a high perceived investment risk and a high cost of finance) as well as the *demand* side (e.g. a lack of knowledge, capacity and awareness of business and investment opportunities linked to the blue economy, a lack of “bankable” projects, and the high cost of finance).

Despite these challenges, the recent *Blue Growth* report and stakeholders interviewed for this study were overwhelmingly positive as regards the potential sustainable development opportunities linked to the blue economy. These include the potential to further invest in fisheries and various types of aquaculture (such as tilapia, mud crab, seaweed farms and oysters) in sustainable ways, which to-date remain relatively underdeveloped. Seafood processing also represents an opportunity to develop higher value-added activities and can be further accelerated by Timor-Leste’s adherence to international phytosanitary standards and rules of origin requirements – a process which is currently underway. Other development and investment opportunities relate to ecotourism, such as community-based tourism with sustainable accommodation and locally-sourced food, dive and snorkel tourism, locally-operated boat excursions and transportation. Development of passenger and container ports, and shipping are also major investment opportunities – and we are seeing several new and ongoing investments in these areas.¹⁵

There is also much that can be built on. Timor-Leste has established seven Marine Protected Areas (MPAs) across the country, and although there are no central budget allocations to these MPAs, work is being supported by NGOs to build the capacities of local communities to protect and manage marine and coastal resources in their municipality and build new localised revenue models to fund ongoing MPA management in ways that benefit the whole community, for example in Atauro island. It is also part of international environmental initiatives, like the Coral Triangle (CTI) initiative, which also includes Indonesia, Malaysia, the Philippines, Papua New Guinea and the Solomon Islands.¹⁶ The CTI aims to promote regional cooperation and action plans to protect coral and key marine ecosystems. There are also opportunities to further develop academic and research links with a wider set of universities and research institutions that are increasingly interested in the blue economy, including the Blue Economy Research Institute at the University of the Seychelles, the Centre for the Blue Economy at Caribbean Maritime University, the Centre for Blue Governance at the University of Portsmouth (UK), the Blue Economy Cooperative Research Centre (CRC) in Australia, the Coral Research Institute in the Maldives, and others.¹⁷

¹⁴ Based on interviews.

¹⁵ Based on interviews.

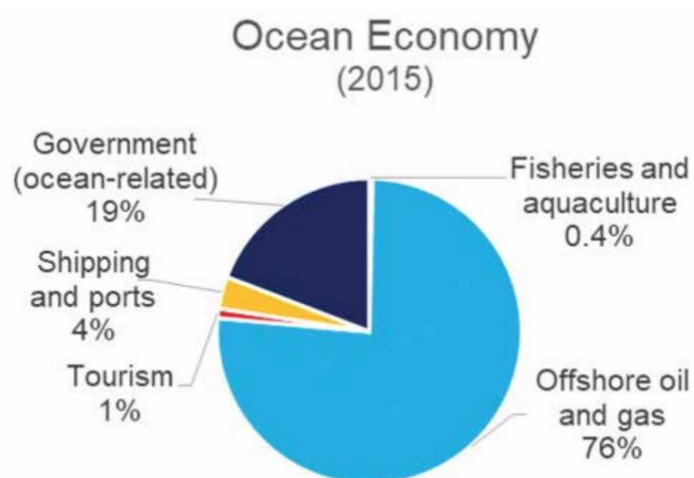
¹⁶ See: Coral Triangle Initiative: <https://www.coraltriangleinitiative.org/>

¹⁷ Contact author for details of a survey of blue economy research centres worldwide.

Figure 7: The blue economy in Timor-Leste: A Snapshot

Ocean economy in context ¹⁸	Available information
Coastline	Timor-Leste's coastline is 782.88 km
Marine area, including the exclusive economic zone (EEZ)	Approximately 72,000 km ²
Coastal population	85% (2017)
Ocean economy	87% of GDP, mostly from oil and gas
Coastal livelihoods	Coastal livelihoods are derived from fisheries, salt distillation, tourism, and ecosystem provisioning services, such as bamboo, mangrove, honey and fish
Marine Protected Area	1.37% (% of territorial waters)
Ocean Health Index	187 out of 221 EEZs (2020)
Shipping and ports contribution to GDP	4% in 2015
Fisheries contribution to GDP	Gross value added (GVA) of fish and other fish products in 2015 was US\$7 million (in constant prices) or 0.4% of GDP. 90% of fisheries is artisanal

Figure 8: The Ocean Economy in Timor-Leste is poorly diversified



Source: State of the Oceans Report (2018)

¹⁸ Data from: [http://pemsea.org/sites/default/files/NSOC%20Timor%20Leste%202018%20\(FINAL\)%2010152020.pdf](http://pemsea.org/sites/default/files/NSOC%20Timor%20Leste%202018%20(FINAL)%2010152020.pdf) and <http://www.oceanhealthindex.org/region-scores/scores/east-timor>

Figure 9: Investments in the blue economy are well aligned with Timor-Leste’s Strategic Development Plan and can help advance development across all four pillars

SDP Pillars	Five Core Areas	Links to blue economy
Pillar 1: Social Capital	Education and Training Health Social Inclusion Environment Culture and Heritage	Sustainable ocean ecosystems protect biodiversity, which in turn helps to ensure food security as well as attract visitors interested in both pristine marine environments and Timor-Leste’s cultural heritage. A focus on sustainable livelihoods linked to the blue economy can help advance new economic opportunities, including for marginalised communities as well as support the development of new professional and vocational skills.
Pillar 2: Infrastructure Development	Roads and Bridges Water and Sanitation Electricity Seaports Airports Telecommunications	The development of green ports and more environmentally friendly marine transportation networks can help enhance trade and tourism opportunities, while reduce costs. Improved wastewater treatment and sanitation systems can also help to preserve oceanic health.
Pillar 3: Economic Development	Rural Development Agriculture Petroleum Tourism Private Sector Investment	A strategic focus on the blue economy can catalyse new private sector investment, while also create opportunities for rural development through a focus on areas like sustainable fisheries and aquaculture, as well as create new tourism opportunities.
Pillar 4: Institutional Frameworks	Security Defence Foreign Affairs Justice Public Sector Management and Good Governance Strategic Planning and Investment	Provides a tool for strategic planning and investment for a diversified economy and helps to maximise all sources of finance.

Source: Author’s elaboration

Section 3:

Financing Blue Growth: The current landscape in Timor-Leste

3.1 Introduction

This section explores the current landscape for financing the blue economy in Timor-Leste. It looks at the full range of financing flows in Timor-Leste (including domestic public resources, financial assistance from development partners and private financial flows), and explores the extent to which there is already – or could be – a strong focus on the blue economy. It looks at how far blue economy sectors contribute to Timor-Leste’s overall combined source budget, as well as the extent to which blue economy sectors represent a priority for public investment projects, donor supported projects and private investment.

3.2 Domestic public resources and the blue economy

Timor-Leste’s total combined source budget for 2021 is just over US\$ 2 billion, with US\$ 1.85 billion from government expenditure, and the rest from international development partner commitments (US\$155.1 million) and external loans (US\$70.7 million).¹⁹ The total 2021 state budget is higher than that for the previous year, in part due to the exceptional support and recovery measures needed due to the COVID-19 pandemic.

Six areas are defined as priorities for the 2021 budget and of the remainder of the GoTL’s mandate for 2021-2023. These are outlined in the table below. Within these categories, there is a strong focus on:

1. Creating education and training opportunities that are high quality, inclusive and which respond to the needs of the economy.
2. Facilitating investment in the private sector, prioritising small and medium size enterprises.
3. Creating employment options to increase national productivity and opportunity for all.
4. Increasing agricultural productivity and food security.
5. Developing ports, airports and roads, both urban and rural
6. Developing logistical capacity both land, waterway and air.
7. Promoting sustainable behaviour and the environment.

While the blue economy is not mentioned as a distinct priority focus for the state budget, it is clear that key blue economy sectors could potentially be well captured across these seven priority areas. This section looks at the extent to which these priority policy areas translate *in practice* into budgetary allocations that support the blue economy.

¹⁹ Source: State budget, 2021 and UNDP, Development Finance Assessment (DFA) for Timor-Leste

Figure 10: Priorities of the VIII Government, 2021

No.	Priority
1	Social Capital Development
2	Economic Development
3	Development of Basic Infrastructure
4	Development and Protection of the Environment
5	Institutional Development
6	Reform to Key Pillars

Source: Government of Timor-Leste State Budget 2021²⁰

Domestic sources of revenue

The Petroleum Fund remains the principal source of finance for the state budget, and the economy of Timor-Leste is highly dependent on it. At the same time, petroleum revenues are in steep decline due mainly to natural depletion of the Bayu-Undan field and the closure of Kitan field in December 2015, combined with a fall in the world’s demand for oil and a drop in oil prices. The Petroleum Fund’s balance was just over US\$ 18.06 billion at the end of December 2020 and is forecast to decline to US\$ 17.41 billion by the end of 2021 as withdrawals exceed petroleum receipts and investment income. The Petroleum Fund’s balance is projected to fall to US\$ 11.62 billion by the end of 2025 (though calculations of investment returns remain subject to uncertainty).²¹

Since 2009, withdrawals from the Petroleum Fund have exceeded the so-called “Estimated Sustainable Income (ESI)” amount, averaging 5% of petroleum wealth annually rather than the 3% established in the Petroleum Fund law.²² In 2020, the national parliament approved a US\$ 536.3 million extraordinary withdrawal from the Petroleum Fund to help finance the COVID-19 recovery effort. This means that withdrawals from the Petroleum Fund to fund the state budget for 2021 amounted to US\$ 1.37 billion, or 7.6% of Petroleum Wealth, the highest level in history, exceeding the ESI amount by US\$ 829.7 million.²³ This represents a near doubling of excess withdrawals in 2020 which totalled US\$ 419.6 million.

A further challenge is that interest rates are currently very low, which will result in low bond returns over the long-term. As a result, the Petroleum Fund is highly unlikely to earn a 3% real return over the next 10 years based on its current asset allocation. This means that the true level of sustainable withdrawals is actually lower than 3%. It is expected that annual budget withdrawals will further increase to exceed US\$ 2.1 billion in 2022 and 2023. The Ministry of Finance and external analysts have modelled various scenarios which project that the Petroleum Fund can expect to be depleted

²⁰ See: State Budget 2021, Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

²¹ Source: See: State Budget 2021, Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

²² Source: See: State Budget 2021, Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

²³ See: State Budget 2021, Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

within 10-15 years. This adds urgency to the need to radically diversify the country’s sources of revenue, as well as catalyse the remaining balance much more strategically to accelerate the transition to a more diversified economic model.

Beyond oil, tax revenues are the largest source of domestic financing in Timor-Leste, however tax revenues remain very low by international standards. Limited tax revenues are partly due to low per capita incomes, but also because of the structure of the tax system and poor compliance and enforcement. The forecast for 2021 puts domestic revenues – which includes both tax and non-tax revenues – at just US\$ 190 million, a near return to pre-pandemic collections which were US\$ 191.7 million in 2019 but still a very low amount. Looking forward, future projections of non-oil domestic revenues are expected to grow positively year-on-year provided that political stability and stable macroeconomic conditions hold, nearing US\$ 230 million by 2025. However, non-oil domestic revenues would still need to increase substantially to offset the decline in petroleum revenues and to be able to accelerate the investment required to achieve upper-middle-income status by 2030.

Figure 11: Domestic revenues: recent and projected

	2019 Actual	Proj 2020	Proj 2021	Proj 2022	Proj 2023	Proj 2024	Proj 2025
Total Revenues	947.9	478.5	258.7	234.8	320.8	218.7	229.0
Domestic Revenues	191.7	172.3	190.6	202.1	212.1	218.7	229.0
Petroleum Revenues (excl investment return)	756.3	306.1	68.1	32.7	108.7	-	-

Source: Government of Timor-Leste State Budget 2021²⁴

Domestic public expenditure priorities

Sustained public investment has attempted to drive growth in non-oil sectors and lay the foundations for long-term sustainable private sector led development. Government policy has been to frontload expenditure to invest in human capital formation and new infrastructure development, with a strong focus on rural roads and electricity. However high levels of public spending, fuelled by the country’s oil wealth, have focused private sector attention on pursuing government contracts in the construction and the retail/and wholesale industries.

In contrast, there has been limited investment in – or growth in output from – key productive sectors, such as agriculture, forestry, fisheries, aquaculture and manufacturing. While the agriculture sector as a whole remains a large component of the economy (including fisheries), its potential has not thus far been realised. Rather than act as a source of new livelihoods and income, the majority of rural households continue to rely on subsistence agriculture, and food insecurity remains a serious

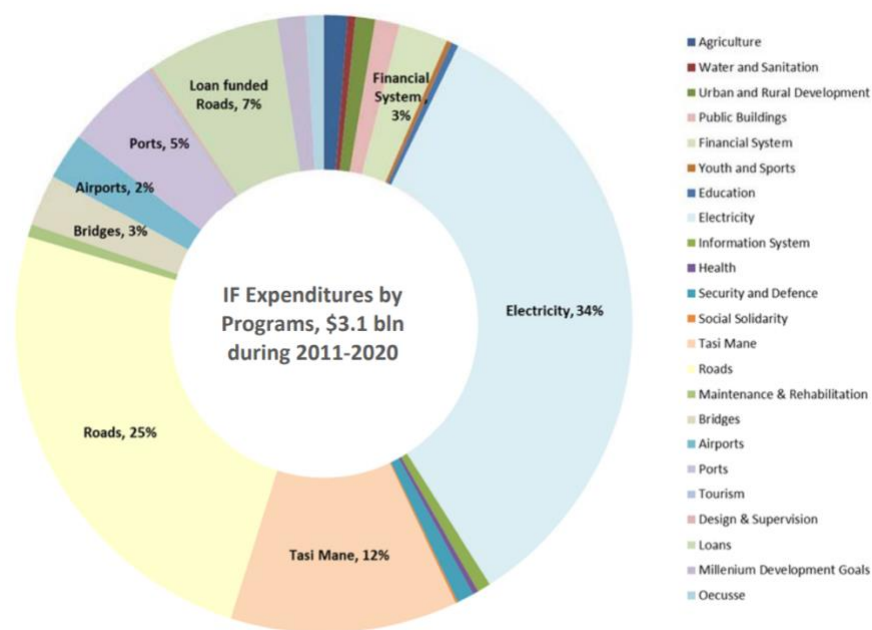
²⁴ See: State Budget 2021, Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

concern.²⁵ The data shows that in 2019, agriculture, forestry and fisheries *combined* added just US\$ 286.3 million to the Timorese economy. Disaggregated data for fisheries alone was not available for this study, but its value is likely to be very small.²⁶ UNDP’s climate public expenditure and institutional review analysis showed substantial climate relevant expenditure on *agriculture*, but not any noticeable allocations to fisheries or aquaculture.²⁷ Timor-Leste’s Marine Protected Areas (MPAs) notably also do not receive any central budgetary allocations for their ongoing management and protection.

Despite current policy commitments, the data shows that overall, key blue economy sectors, such as fisheries and aquaculture, tourism, ports, shipping and marine transportation have not featured prominently as priority public investment areas thus far.

Figures from the Timor-Leste’s Infrastructure Fund, established in 2011 to finance strategic infrastructure projects of over US\$ 1 million on a multi-year basis, show that over the last 10 years, the major investment focus has been on roads (25%) and electricity (34%). Port infrastructure for example has received just 5% of Infrastructure Fund resources over the last 10 years. Data is not available disaggregated for fisheries and aquaculture, however interviews with GoTL officials and other stakeholders universally point to a chronic underinvestment in the sector.²⁸ Tourism also received a very low share.

Figure 13: Infrastructure Fund investments: 2011-2020



Source: Government of Timor-Leste, State Budget 2021

²⁵ See: Asian Development Bank, Growing the Non-Oil Economy: A Private Sector Assessment for Timor-Leste, 2015: <https://www.adb.org/sites/default/files/institutional-document/161516/tim-growing-non-oil-economy.pdf>

²⁶ Source: Government of Timor-Leste

²⁷ UNDP CPEIR analysis (forthcoming)

²⁸ Based on interviews.

Stakeholders consulted for this study pointed however to a recent shift in policy priorities, and a much stronger recognition that port infrastructure, including smaller secondary ports, and fisheries and aquaculture required more sustained and targeted public and private investment. Tourism is also recognised as important for economic development and the GoTL has taken steps to develop a new tourism authority and tourism zone.

Several important projects are underway in these areas, most notably the construction of Tibar Bay Port, 10km west of Dili, which is now 50% completed, developed through Timor-Leste's first public-private-partnership (PPP). It is expected to replace Dili Port with a new state-of-the-art port facility, which will cost an estimated US\$ 490 million to construct over the life of the 30-year concession.²⁹ This comprises an initial investment of US\$ 280 million and a further US\$210 million in expansion costs as the port grows over time. In 2016, a competitive international tender facilitated by the International Finance Corporation (IFC) was won by the Bolloré Group, which will contribute US\$ 360 million of this cost, with remainder (US\$130 million) to be financed by the Government of Timor-Leste.³⁰ Construction is expected to be completed in 2022. Dili port meanwhile will be redeveloped as a tourism hub with support from USAID's Tourism for All project. The GoTL also reported plans to rehabilitate regional ports.³¹

Stakeholders interviewed emphasised that, in order to develop Timor-Leste's fisheries sector, it would need larger vessels which would require, in turn, a more developed port infrastructure. It was noted that Timor-Leste currently has no large vessels that can travel far out to sea. The country only operates small boats which cannot travel into deeper waters, and means, in turn, that fishermen do not catch enough to fulfil even domestic nutritional needs.³²

Data from Timor-Leste's Infrastructure Fund shows that even if there is an increased policy focus on blue economy sectors like ports, fisheries and tourism, this has not yet translated into substantial – and diversified – budgetary allocations from the country's Infrastructure Fund. In 2021, the Infrastructure Fund has an overall budget allocation in 2021 of US\$ 339.6 million. The largest share will continue to be allocated to roads (US\$ 60 million or almost 31% of total funds for 2021).³³ Ports will be allocated just US\$ 1.8 million in 2021 – though this will climb to US\$ 5.4 million in 2022. Both amounts continue to represent a relatively small share of the total Infrastructure Fund budget for the year. Agriculture, and water and sanitation combined will receive US\$ 3.8 million in 2021, however due to budget classifications, it is difficult to assess how much of this spending may have some form of marine/ocean-related focus. Much of this will be focused on land-based agriculture. Tourism meanwhile will be allocated just US\$0.7 million by the Infrastructure Fund in 2021. There is just one

²⁹ See: Government of Timor Leste, Tibar Bay Port construction work reaches 50 percent, 31 May 2021: <https://timor-leste.gov.tl/?p=28272&lang=en&n=1>

³⁰ See: International Finance Corporation: Timor-Leste: Tibar Bay Port: <https://www.ifc.org/wps/wcm/connect/80810a0f-a289-4d3f-ac1d-f1ee3ac29415/PPP-Stories-Tibar-Bay-Port.pdf?MOD=AJPERES&CVID=mmMDXFY>

³¹ Based on interviews.

³² Based on interviews.

³³ See: State Budget 2021: Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

project ongoing in the tourism sector – though it should be noted that several more are pending.³⁴ The tourism sector is at an early stage of development in Timor-Leste, with limited, but growing numbers of international tourist arrivals and an emerging tourism infrastructure (prior to the pandemic).

Overall, the impact of capital investments and the role of the Infrastructure Fund have been significant for the country. The GoTL reports that since the launch of the Infrastructure Fund in 2011, 988 projects have been completed and thousands of jobs created between 2011 and 2020.³⁵ Seen in this way, it will be important to look at how the Fund's resources could be more effectively catalysed in the future in support of blue economy development.

Similarly, it could also be useful to explore how the Human Capital Development Fund (HCDF), created in 2011 to develop human resources within the country, could incorporate the blue economy into its programmes. In 2021, the GoTL reported that the total budget for the Human Capital Development Fund was almost US\$ 13 million, a decrease on previous years (allocations to the HCDF were US\$178 million in 2019).³⁶ The HCDF offers principally four types of training: vocational training, technical training, scholarships and other types of training.

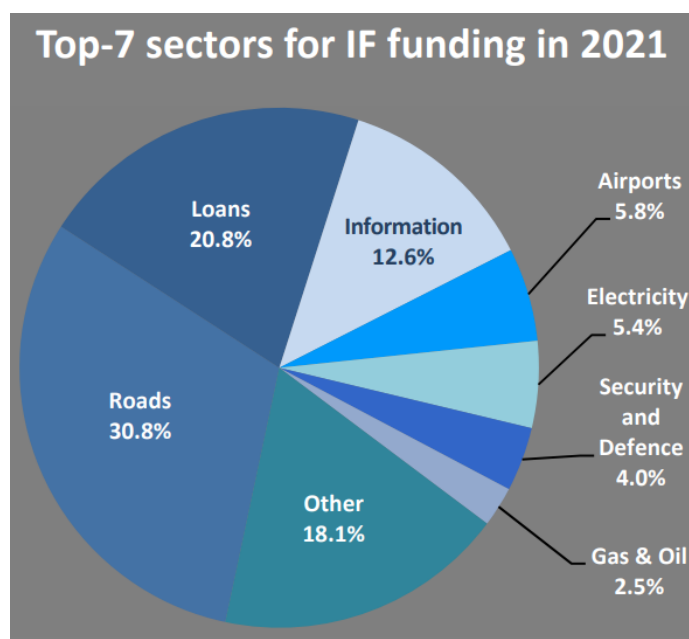
As the sub-section on development partner financing illustrates, the GoTL has tended to rely on *donor* finance to fund many blue economy related projects (e.g. in areas such as aquaculture, tourism and environmental protection) rather than fund them through domestic public resources.

³⁴ The Infrastructure Fund currently reports 25 total projects under the Infrastructure Fund: 10 completed; 1 ongoing; 3 new; 1 not-started; 9 pending and 1 cancelled.

³⁵ See: State Budget 2021, Infrastructure Fund: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB3A_Eng_1.pdf

³⁶ See: State Budget 2021

Figure 14: Infrastructure Fund: Priorities for 2021



Source: Government of Timor-Leste, State Budget 2021

3.3 Debt outlook and opportunities to leverage debt financing in support of the blue economy

Loans are becoming an increasingly important financing tool for the Government of Timor-Leste. Total loan financing for 2021 is reported as US\$ 70.7 million.³⁷ The majority of loans are multilateral loans, provided at relatively low rates of interest and long maturities. The only bilateral lender to-date is Japan with US\$ 28.9 million in outstanding credits.³⁸

At the portfolio level, the World Bank's IBRD and IDA loans are the most competitive, with the Asian Development Bank at a slightly lower level of concessionality. Timor-Leste has debt service obligations of US\$ 9.8 million in 2021, most of which corresponds to the Asian Development Bank (US\$ 7.8 million) followed by the World Bank (IDA) at US\$ 1.6 million in the same year.³⁹ The total debt service to revenue ratio is low at just 2.2% in 2021. Debt service is however projected to rise quite considerably to US\$ 24 million in 2022.⁴⁰

Overall, Timor-Leste is assessed by the IMF to be at low risk of debt distress.⁴¹ Its debt sustainability threshold is currently set at 40% of GDP. While the country is currently well below this threshold, it

³⁷ Source: State Budget, 2021

³⁸ Source: World Bank, International Debt Statistics: <https://datatopics.worldbank.org/dssitables/annual/TLS>

³⁹ Source: World Bank, International Debt Statistics: <https://datatopics.worldbank.org/dssitables/annual/TLS>

⁴⁰ Source: State budget, 2021

⁴¹ See: <https://www.worldbank.org/en/topic/debt/brief/covid-19-debt-service-suspension-initiative>

should be noted that debt indicators show that the debt to GDP ratio has recently risen very sharply from just 6.7% of GDP in 2017 to 20% of GDP in 2021.⁴²

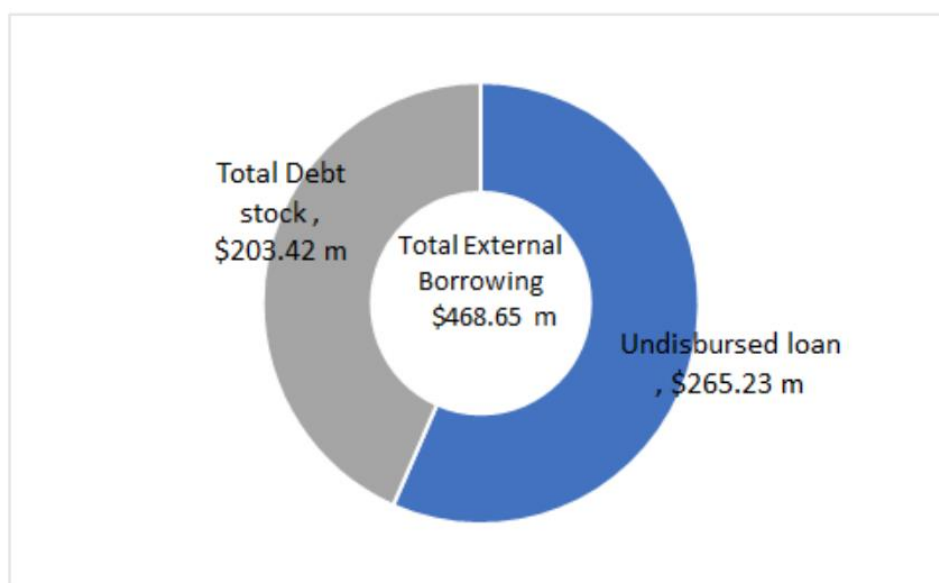
Loans have been used to finance mostly infrastructure projects to-date with a strategic focus on roads. The GoTL also cites energy, water and sanitation, housing, telecommunications, and air transport as priority investment areas to be financially supported through new concessional borrowing.

At the time of writing, a ceiling of US\$ 400 million for new concessional foreign loans to be negotiated in 2021 has been put forward. The 2021 draft budget law also includes a proposal for a further US \$20 million for the possible issuance of public bonds, for a combined public debt ceiling of US\$420 million, subject to approval of the government bonds legal framework in 2021.

As detailed in section four, new borrowing instruments have emerged over recent years to finance green and blue economy investments, with green and blue bonds an increasingly popular financing tool. In addition, many low-income countries have successfully issued conventional “vanilla” bonds on international capital markets over the last decade, many for the first time, driven by low interest rates globally. Given Timor-Leste’s overall favourable debt profile, there may therefore be opportunities to harness new sustainability themed borrowing instruments to diversify its sources of finance beyond concessional loans to support key blue economy investments. At the same time, it is also important to bear in mind that Timor Leste is still classified by the International Financial Institutions (IFIs) as a low-income country and concessional loans are still recommended as the most appropriate form of loan financing in order to preserve long-term debt sustainability. With any new borrowing therefore, the level of concessionality would need to be carefully managed. Section four explores how support from development partners and multilateral development banks could be leveraged to support Timor-Leste to potentially leverage new sources of debt financing in support of the blue economy.

⁴² Source: State budget, 2021

Figure 15: Total External Borrowing



Source: Ministry of Finance (2020)

3.4 Development partners and the blue economy in Timor-Leste

The data shows that Timor-Leste's development partners provide extensive technical support and financial assistance to multiple blue economy-related sectors like fisheries, aquaculture, tourism and marine conservation, and that several Ministries depend heavily on this support.

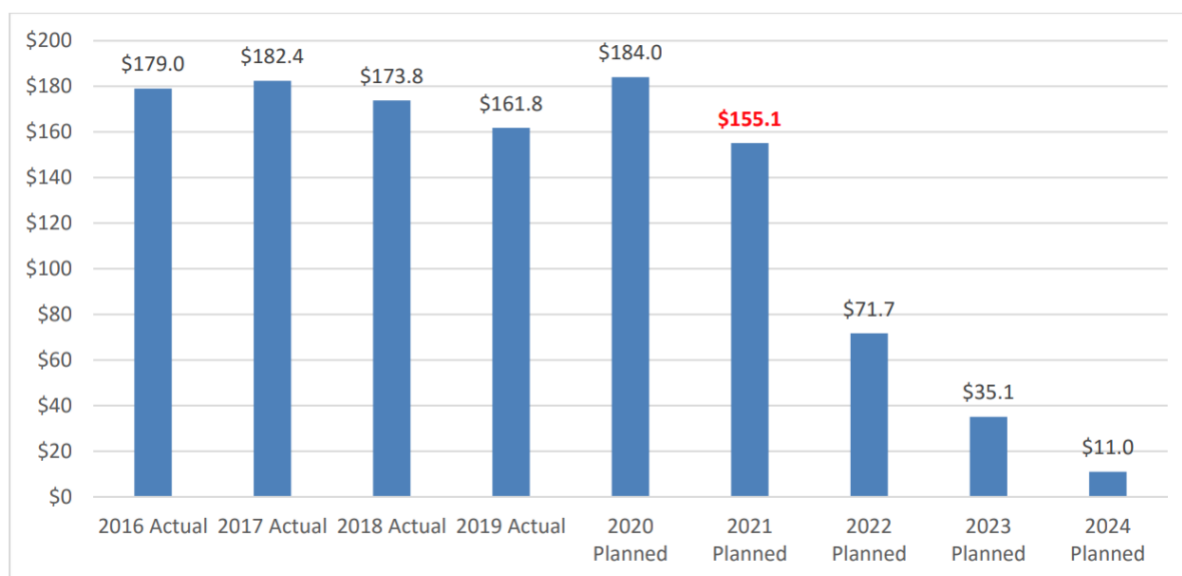
Overall, Official development assistance (ODA) has made a significant contribution to the development of Timor-Leste since independence. Although the relative size of external assistance has decreased in recent years as a result of both political instability and the rapid expansion of the state budget, it has consistently exceeded more than US\$ 150 million per year for the past 12 years.⁴³ In 2021, development partners are expected to provide US\$155.1 million in non-lending assistance to Timor-Leste. This represents a 15.7% decrease in 2021, as compared to 2020 planned disbursements, in part due to political instability.⁴⁴ Looking forward, ODA is projected to continue to decline, which further adds urgency to the need to explore alternative sources of finance for the blue economy and economic diversification.

In 2021, the donors that are scheduled to disburse the highest amounts of funding are as follows: Government of Australia (\$54.2 million; 35.0% of total), Portugal including funding from Camoes (\$18.2 million; 11.8% of total), the European Union (\$13.7 million; 8.9%), the United Nations (\$12.9 million; 8.3%), and the United States (\$11.1 million; 7.2 %).

⁴³ See: State Budget 2021: Development Partners: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB5_Eng.pdf

⁴⁴ See: State Budget 2021: Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

Figure 16: ODA flows to Timor-Leste, past trends and projected future flows



Source: Government Budget Book #5, 2021⁴⁵

The Foreign Aid Policy establishes that all donor projects should be aligned as closely as possible to existing national planning frameworks. Among the four pillars of the SDP, Pillar 1, Social Capital is the largest overall recipient of aid, with approximately \$105.8 million, or 57.5% of total planned disbursements in 2021. The priority areas for external assistance are set out in the box below.

Box 1: Priority Areas for External Assistance	
<ul style="list-style-type: none"> • Education • Health • Tackling Malnutrition • Youth and Gender • Agriculture and Rural Development • Tourism 	<ul style="list-style-type: none"> • Infrastructure for growth, connectivity and accessibility • Water and Sanitation • Regional Integration • Private Sector Development • Public Sector Management.

Source: Government Budget Book #5, 2021⁴⁶

Overall donor support for the blue economy

ODA data shows that Timor-Leste exhibits a high degree of dependency on donor ODA and technical assistance to support key blue economy sectors. At the same time, key blue economy sectors like fisheries and aquaculture, ports, marine transportation and tourism receive relatively smaller shares of total ODA flows.

⁴⁵ See: State Budget 2021: Development Partners: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB5_Eng.pdf

⁴⁶ See: State Budget 2021: Development Partners: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB5_Eng.pdf

For example, seaports received just US\$ 1.2 million of ODA funds in 2021, corresponding to just 0.8% of ODA flows for that year. Tourism is scheduled to receive US\$ 3.6 million in donor funds in 2021, representing 2.3% of total ODA flows. ODA which has a focus on private sector investment, and which will be critical in accelerating blue economy development, will receive US\$ 1.5 million in ODA flows in 2021, or 1% of total ODA for the same year. Agriculture and rural development, a category which captures some blue economy related assistance from donors, comes in much higher at 21.6% of total ODA flows for 2021 or US\$ 33.7 million, however it is important to note that these figures include substantial donor support to terrestrial projects.⁴⁷ None of the top ten donor projects with the highest scheduled non-lending disbursements focuses on the blue economy – most focus on forestry, agriculture, health, and education and training.⁴⁸

Figure 15: 2021 Top 10 donor projects with highest scheduled non-lending disbursements

Development Partner	SDP Sub-pillars	2021 Total in USD millions
EU and Germany	Agriculture	8.9
Australia	Health	8.2
World Bank	Agriculture	7.2
Australia	Agriculture Health Social Inclusion Justice Water and Sanitation Public Sector Management and Good Governance Education and Training	6.9
Portugal	Education and Training	6.0
Australia	Security	5.9
Portugal	Education and Training	5.5
Australia	Rural Development	5.4
USA	Education and Training	4.4
Australia	Education and Training	4.0

Source: Author’s adaptation from Government Budget Book #5, 2021⁴⁹

Donor contributions to individual line Ministries also provide useful insights into the extent to which donors are supporting the blue economy in Timor-Leste.

In 2021, the Ministry of Agriculture and Fisheries is scheduled to receive US\$ 24 million in development partner financial support (15.7% of total donor funds), and is the third highest beneficiary of development partner support in Timor-Leste (after the Ministry of Health at US\$ 33.6 million and the Ministry of Education, Youth and Sport at US\$ 28 million). Overall, the Ministry relies

⁴⁷ See: State Budget 2021: Development Partners: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB5_Eng.pdf

⁴⁸ See: State Budget 2021: Development Partners: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB5_Eng.pdf

⁴⁹ See: State Budget 2021: Development Partners: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB5_Eng.pdf

strongly on donor funds to deliver its environmental programmes. Donors report that the majority of this assistance focuses however on terrestrial agricultural activities, like sustainable agroforestry, increasing farmer productivity and improving animal husbandry. The Ministry of Tourism, Commerce and Industry (MTCI) received donor contributions of US\$3.7 million in 2021. The Ministry of Transport and Communication reports just US\$1.2 million in donor funds in 2021.⁵⁰

Individual donor activity on the blue economy

Individual donor support covers a variety of areas, including tourism, environmental protection and management, capacity development support for seafarers and technical assistance for alignment with international maritime conventions and standards. Aquaculture has been a focus for several development partners over recent years – though several report that the results in this sector have been variable.⁵¹

New Zealand launched the first phase of an aquaculture programme in 2014, with about US\$3.5 million in financial resources. The programme had an initial focus was on freshwater and brackish water species, with tilapia, milkfish and mud crabs all initially trialled. However, the focus is now only on tilapia with two ongoing projects – one in Maliana municipality which predominantly serves Dili, and another in Lospalos which serves the western part of the country.⁵² New Zealand is also looking to develop a further aquaculture project in the southern part of the country. The development aims of the project are to strengthen the fish supply chain, create enterprises and jobs, and improve nutrition. Phase two has been approved for a further US\$ 3.5 million until 2023, with USAID providing an additional US\$1.2 million to the project. USAID's support will aim to increase fish farmer resilience and livelihoods by scaling freshwater tilapia production. The key activities are to: 1) transition subsistence producers to commercial-scale fish production; 2) introduce integrated agriculture-aquaculture systems; 3) link production groups to local supply chains; and 4) develop harvest, post-harvest and distribution protocols and arrangements.⁵³ The implementing partner is World Fish.

While the project has enjoyed successes, the donor also reported several ongoing challenges.⁵⁴ One relates to the unfortunate consequences of the ongoing COVID-19 pandemic, which has led to struggles in the distribution of fish to key customers in Dili, and a loss in revenues. Aquaculture is also quite new to many communities leading to a low level of confidence. There are also challenges related to accessing fish feed which is predominantly imported from Indonesia. A reliance on imported fish feed combined with the local cost of transportation of feed leads to higher costs and means fish prices are less consistent. While some fish feed is being produced locally, this is happening only at a micro-scale, and overall, support to fish farmers has been at a small scale to-date. To scale-up the industry, some of these challenges will need to be addressed.

⁵⁰ See: State Budget 2021: Development Partners: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB5_Eng.pdf

⁵¹ Based on interviews.

⁵² Based on interviews.

⁵³ USAID, Accelerating Aquaculture Development in Timor-Leste: <https://www.usaid.gov/timor-leste/project-descriptions/accelerating-aquaculture-development-activity-timor-leste>

⁵⁴ Based on interviews.

Korea is also supporting aquaculture development in Timor-Leste in partnership with the National Institute of Fisheries and Aquaculture, with a key focus on building the capacities of the industry and local fish farmers through technical assistance. There is also a key focus in Korea's programme on research and development (R&D) in aquaculture and on job creation. Korea's aquaculture programme started in 2014, and was officially handed over to the GoTL in 2017. KOICA has so far allocated US\$6 million to the project but now reports that funding for the initiative has recently fallen.⁵⁵ One challenge has been Korea's ability to bring-in external technical expertise due to COVID related travel restrictions. Another has been the reliability of electricity supplies, which are central to the effective operation of ponds, hatcheries and breeding facilities. Korea also cited similar challenges related to the importation of fish feed and pointed to a partnership with the Food and Agriculture Organisation (FAO) to develop fish feed production and technologies using local ingredients. This also has the potential create new jobs long-term.

Work is also being carried out by UNDP with financial support from the Global Environment Facility (GEF) in aquaculture, fisheries management, building skills and capacities in community-based surveillance, and mangrove restoration with a scheduled disbursement of US\$ 1.17 million in 2021. This follows a disbursement of US\$538,000 in 2020. Through GEF funds, UNDP is also supporting coastal resilience activities to support vulnerable communities and their livelihoods, through nature-based solutions including shoreline mangrove restoration. These activities received US\$ 225,000 in allocated funds in 2021 and US\$1.8 million in 2020. Approved funds for this project total US\$6.6 million.

The European Union provides direct budget support as well as project-related assistance. The EU reports that its support has focused primarily on rural development (especially agriculture, agro-forestry and roads) and on good governance (including public financial management – PFM), and that to-date it has not had a bilateral programme specific to the blue economy. However, it reported that Timor-Leste is also eligible for financial assistance under the EU's regional programme for the Pacific. Under the "Pacific-European Union Marine Partnership (PEUMP)" programme which focuses on biodiversity protection and the sustainable use of fisheries and other marine resources, the EU and Swedish SIDA will provide about EUR 45 million over five years to 15 Pacific Island countries.⁵⁶ It is managed by the Pacific Community. In Timor-Leste, the cooperation agreement was signed only in 2020, and the Pacific Community and Ministry of Agriculture and Fisheries are still in the design phase as regards the programmes that will be supported. The amount of funds allocated to Timor-Leste is unlikely to be too high however since the country is only an observer to the Pacific Island Forum and there are restrictions around the programmes that observer members can benefit from.⁵⁷

More broadly in the maritime sector, the German Corporation for International Cooperation (GIZ) has two programmes in Timor-Leste which it started in 2007, and which has US\$ 1.2 million allocated in 2021.⁵⁸ These are focused on the development of the maritime industry and include technical assistance on international maritime laws, conventions and standards, so that the industry can

⁵⁵ Based on interviews.

⁵⁶ See: Pacific-European Union (EU) Marine Partnership (PEUMP): <https://www.peump.dev/home>

⁵⁷ Based on interviews.

⁵⁸ Based on interviews.

operate according to international standards. It also operates training programmes to seafarers.⁵⁹ A core focus of the work has been to build the capacities of the maritime industry and port administrations in international standards and conventions and support the GoTL to ratify and implement these conventions. GIZ has also supported the development of a vocational training centre in Tibar, where a major new seaport is currently under construction. Both components of the programme will come to an end at end-2021 with one key challenge mentioned by GIZ, the ability to secure long-term funding for the vocational training centre.⁶⁰

In tourism, USAID's Tourism for All project has an overall budget of US\$ 9.8 million and aims to support economic diversification through tourism development with a focus on the Mount Ramelau area (Ainaro Municipality), Atauro Island and Dili. A key pillar of the programme is to develop marine-related tourism, including whale-watching, marine conservation and training in scuba diving. This programme is also being used to fund the redevelopment of Dili port into a tourism hub following the development of the new port at Tibar Bay.⁶¹ New Zealand also has a smaller programme of support to tourism development in Timor-Leste, however it reports that this had been at an early phase when the current COVID-19 pandemic broke out, and has been temporarily put on hold with resources reprogrammed to other areas in the short-term.⁶² This programme had focused on capacity development support to hotels, guesthouses and restaurants, combined with agro-tourism, such as tourist visits to coffee and vanilla plantations. The World Bank is also carrying out tourism research as it relates to forecasting future tourism demand.

There are also other projects supported with donor funds which have an *indirect* positive impact on the blue economy. These include in the area of wastewater and sanitation – an area supported by the World Bank through IDA financing.⁶³ KOICA, USAID and the EU are also supporting initiatives that tackle plastic waste in various ways – a key marine pollutant – in partnership with the Secretary of State for the Environment. This includes work related to the policy landscape and support for the proper disposal and recycling of plastic waste. This is being implemented by Mercy Corps and aims to make Timor-Leste 'plastic neutral' as well as bring new opportunities for employment and entrepreneurship as waste plastic is collected and recycled into locally sought after products.⁶⁴ The International Organisation for Migration (IOM) is also carrying out research on coastal changes due to climate change with the aim of informing climate change adaptation policy and the long-term management of coastal migration.

Timor Leste has also recently leverage funds from the Green Climate Fund (GCF) – though these have not focused on the blue economy per se. In 2019, Timor-Leste secured US\$ 59.4 million over six years from the GCF for climate adaptation activities focused on safeguarding rural communities and their physical and economic assets from climate induced disasters. It includes landscape restoration, strengthening the capacities of mandated institutions to assess and manage climate risks, and

⁵⁹ Based on interviews.

⁶⁰ Based on interviews.

⁶¹ See: USAID, Tourism for All: <https://www.usaid.gov/timor-leste/project-descriptions/usaid-tourism-all-project>

⁶² Based on interviews.

⁶³ See: https://projects.worldbank.org/en/projects-operations/projects-summary?lang=en&countrycode_exact=TP

⁶⁴ See: Mercy Corps: <https://europe.mercycorps.org/en-gb/where-we-work/timor-leste>

measures to improve small-scale rural infrastructure in vulnerable areas.⁶⁵ UNDP is the implementing partner. In March 2021, the GCF approved a US\$ 15.4 million project to reverse high rates of deforestation and promote community-based sustainable natural resource management, with JICA as the implementing agency.⁶⁶ As discussed in section four, there are opportunities to apply to the GCF for funds to support activities related to the blue economy, such as climate change resilient coastal fisheries and aquaculture.

Note to UNDP:

- Interviews have not yet taken place with:
 - o Australia is a key development partners and I have not managed to have an interview with them.
 - o World Bank: which has projects in water and sanitation and tourism research.

3.5 Private finance and the blue economy in Timor-Leste

The state budget and development partner assistance are critical sources of finance for the blue economy. However, it is widely acknowledged that these will not be sufficient, and that much more *private* finance – from both domestic and external sources – will be required to support investments *at-scale* in the blue economy.

However, the private sector is highly underdeveloped in Timor-Leste. The country currently attracts limited Foreign Direct Investment (FDI) and has a weak domestic private sector. Most private sector activity has to-date focused on the implementation of publicly funded projects in areas like construction. The Chamber of Commerce notes for example that only 7% of private sector activity relates to agriculture and fisheries combined.⁶⁷

Data from TradeInvest shows that when it comes to blue economy sectors, only tourism has attracted FDI inflows since 2018 – from companies based in Singapore and Australia. It was described by Trade Invest as the most attractive blue economy area for foreign investors to-date.⁶⁸ FDI in this area has focused on the development of boutique hotels (in Dili and Tibar) and ecological-based tourism and activities, including accommodation (in Adara, Atauro).⁶⁹ However TradeInvest also reported an uptick in foreign investors' interest in tourism and fisheries/aquaculture investment opportunities in Timor-Leste, with interest being reported from investors in China, Hong Kong, Singapore and Australia.⁷⁰ Timor-Leste's private investment law provides domestic and foreign investors with substantial tax and customs advantages, which can last up to 10 years. It also reported that a private investment proposal was being brought to the Council of Ministers for a US\$ 17.5 million ship building and maintenance

⁶⁵ See: Green Climate Fund: Timor-Leste FP109: <https://www.greenclimate.fund/project/fp109>

⁶⁶ See: Green Climate Fund: Timor-Leste SAP021: <https://www.greenclimate.fund/project/sap021>

⁶⁷ Sourced from interviews.

⁶⁸ Based on interviews.

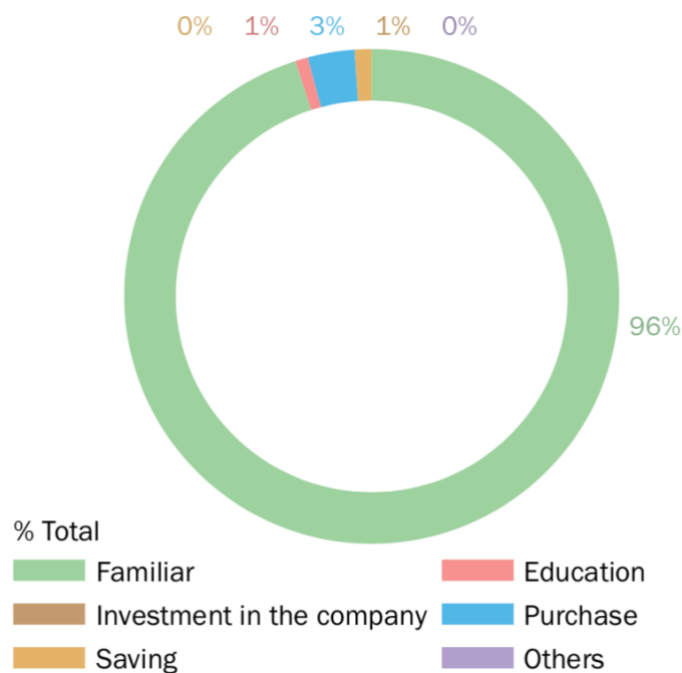
⁶⁹ Data from TradeInvest, 30 April 2021

⁷⁰ Based on interviews.

facility to be developed in Manatuto by a company from Malaysia. This investment was described as strategic to enable Timor-Leste to repair and upgrade vessels at home rather than send them to Indonesia at a high cost.⁷¹

Many households are also dependent on migrant remittances. Until the COVID-19 pandemic, remittances had increased every year since 2012, hitting US\$ 155.4 million in 2020, according to World Bank data.⁷² This is equivalent to 8.5% of GDP.⁷³ Geographically, most inward remittance transfers come from Europe at 61% of the total in 2020, according to Central Bank data. At the same time, there are also significant *outward* remittances from Timor-Leste, particularly sent by Indonesian citizens who reside and work in Timor-Leste.⁷⁴ Central Bank data shows that the vast majority of inward remittance flows into Timor-Leste support families (at 96% of total inward remittance flows in 2020), with just 1% invested each in companies, savings and education.⁷⁵ This means there may be opportunities to more effectively engage the diaspora in Timor-Leste’s blue economy development strategy.

Figure 16: Remittance inflows by purpose (2020)



Source: Central Bank (2020)

⁷¹ Based on interviews.

⁷² See: World Bank: <https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT?locations=TL>

⁷³ See: World Bank: <https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=TL>

⁷⁴ Central Bank of Timor-Leste, Annual Report 2020

⁷⁵ Central Bank of Timor-Leste Annual Report 2020. Remittance flows intermediated by Money Transfer Operators (MTOs)

The domestic financial system that can potentially mobilise domestic savings for sustainable development is small and relatively underdeveloped. The expansion of the local private sector in particular is dependent on its ability to secure appropriate finance to start and expand businesses. However, access to affordable credit is low, with micro, small and medium-sized enterprises (MSMEs) facing multiple constraints in terms of access to finance. While a relatively high proportion of firms in Timor-Leste have bank accounts (at 84%), only 15% of firms have a bank loan or line of credit.⁷⁶ Firms cite overly complex application procedures and unfavourable interest rates as the key reasons why access to finance remains difficult.

Loans to the private sector were at an average interest rate of 11.47% in August 2020.⁷⁷ Collateral requirements also make access to finance difficult.

The only national bank involved in lending for blue economy sectors like fisheries is the Banco Nacional de Comércio de Timor-Leste (BNCTL). However, BNCTL describes its activities in this area as still very small, despite high liquidity.⁷⁸ For example, over 50% of its investments to-date are in property development and real estate.⁷⁹ In agriculture, its relationships with farmers are at a very micro level and stand at less than 10% of the bank's overall portfolio with only one large agri-business, market-oriented client to-date.⁸⁰

Despite its limited engagement in the blue economy space to-date, the bank welcomed UNDP's focus on the blue economy and indicated its readiness to do more in this area and to explore further links with UN agencies and development partners to expand access to finance to enterprises linked to the blue economy. For example, it pointed to potential opportunities linked to marine transportation. The bank also cited key challenges. These include a lack of strong business proposals, and a poor understanding of risk. Clients also need assistance to develop their business proposals and plans. The high cost of capital and working capital requirements add additional barriers.⁸¹ The bank also pointed to high levels of diaspora and foreign ownership of businesses linked to the blue economy, particularly in the tourism sector (such as dive operators). These actors have access to external (cheaper) sources of finance and often prefer to bank with foreign banks.

Several initiatives are underway to address these various challenges. For example, USAID has in the past supported a five-year programme which aimed to assist private sector entities to develop project proposals – however reportedly the private sector did not make the best use of the scheme.⁸² The Chamber of Commerce also runs training programmes in financial literacy for small businesses.⁸³

In July 2019, the Central Bank launched a US\$ 4 million Credit Guarantee Scheme (CGS) for SMEs, which was expanded in 2020 to micro-enterprises. The programme aims to facilitate Micro, Small, and Medium-sized Enterprises' (MSMEs) access to finance. Under the programme, the Credit Guarantee

⁷⁶ WB Timor-Leste Economic Report, “Unleashing The Private Sector”, 2018

⁷⁷ See: State Budget 2021: Budget Overview: https://www.mof.gov.tl/wp-content/uploads/2020/10/BB1_Eng.pdf

⁷⁸ Based on interviews.

⁷⁹ Based on interviews.

⁸⁰ Based on interviews. The bank has a target of 20% of its loan portfolio for agriculture.

⁸¹ Based on interviews.

⁸² Based on interviews.

⁸³ Based on interviews.

System shares with the lender the credit risk associated with MSMEs' loans.⁸⁴ The scheme is managed by the BCTL and is available to commercially viable proposals owned by Timorese operating in agriculture, tourism, industry and manufacturing, trade and services sectors. BCTL noted however that to-date it had only received two proposals for the scheme in the area of tourism, and that while such financing facilities can play an important role in expanding access to finance for businesses, they also need to be accompanied by technical assistance, and information and awareness raising/promotional activities.⁸⁵

Similarly, the Ministry of Tourism, Commerce and Industry and the BNCTL have recently signed a memorandum of understanding (MOU) (September 2020) which will see the creation of a new Loan Guarantee Facility (LGF) aimed exclusively at social businesses (i.e. those that have a proven social impact) and which will reduce borrowing rates to 3% (down from 12% on average), as well as provide guarantees to reduce lending risks. The programme focuses on a range of economic sectors. Technical assistance in the design of the facility was provided by UNDP, which will also provide quality assurance for the pilot phase of the project. The LGF will provide loans of between US\$1,000 and US\$25,000 in value to applicants.⁸⁶ Both initiatives are at an early phase and while they are not specific to the blue economy, there may be potential to leverage these new schemes to foster private sector growth in key blue economy sectors.

The Ministry of Tourism, Commerce and Industry reports that it is also working across other areas to foster private sector development in Timor-Leste – and while they are not specific to the blue economy, they will enhance economic opportunities related to it.⁸⁷ These include:

1. **The development of industrial parks**, which is expected to generate jobs and attract fresh international investment across a range of economic sectors, including key blue economy sectors like transshipment. Construction on the first near Tibar Bay port is expected to start next year (2022) through a public-private-partnership (PPP) model and is projected to take about three years to complete. The GoTL's aims for the industrial park are that it will support technology transfer and stimulate demand for local content/materials and services – however the GoTL also recognises it needs to convince investors to come to Timor-Leste and that there is high competition from other economic and industrial zones already in operation in the region.
2. **Accession to the World Trade Organisation, ASEAN and the EU-Pacific Economic Partnership Agreement**, which is expected to promote international trade, including in goods related to blue economy sectors. Alignment in sanitary and phytosanitary (SPS) measures, eco-labelling and other international standards are expected to help to promote Timor-Leste's blue economy sectors, especially as they relate to agri-food. Accession to rules of origin requirements will also enable the importation of fish for fish processing – an activity which offers important opportunities for value-addition.

⁸⁴ Financial Inclusion Report, 2020

⁸⁵ Based on interviews.

⁸⁶ Interview with Ministry of Tourism, Commerce and Industry, August 2021

⁸⁷ Interview with Ministry of Tourism, Commerce and Industry, August 2021

Other private non-profit actors are also engaged in various marine-related projects and initiatives, and are helping to devise long-term financing strategies for the country's Marine Protected Areas with a focus on revenues from tourism. These include Conservation International which has a marine conservation programme focused on expanding scientific research and knowledge, supporting the development of eco-tourism, building a network of properly enforced – *and resourced* – Marine Protected Areas, and building capacities for the local stewardship of protected areas.⁸⁸ As mentioned earlier, Timor-Leste's MPAs receive no central budgetary allocation, and there are limited human resources and equipment to manage them.⁸⁹ Conservation International (CI) is helping to put in place structures at the local level – for example in the communities of Atauro island – which sees dive operators pay local community conservation groups for access to dive sites, with revenues raised supporting the management and monitoring of the protected area, as well as a shared account for emergencies to be used at the community's discretion.⁹⁰ CI reports that funding structures, such as entrance fees, do work in some areas at the local level but they also depend on the organisational capacity of each MPA community. Funds are also typically retained in the community that claims the MPA area (those close to the beach) which can raise issues with neighbouring communities.

Many of the initiatives that target private sector development in various ways are at an early stage, are at a smaller-scale and are dependent on donor funds and technical assistance. Nevertheless, stakeholder interviews indicated a high level of support for a focus on the private sector blue economy. For example, the Chamber of Commerce welcomed UNDP's focus on the blue economy and emphasised that its hope was for Timor-Leste to develop a larger set of companies that could draw revenues sustainably from the ocean.⁹¹ It will focus on the blue economy in its next strategic plan as part of its strategy to support longer-term economic diversification in the country. It can play a role, it said, in educating the private sector on opportunities in areas such as tourism and connecting people with loans.⁹² Stakeholder interviews noted that many blue economy-related industries, like seaweed farms, are still in the early stages and are at community level, and that many people simply haven't thought seriously about the blue economy as a source of income and livelihood.⁹³

⁸⁸ See: Conservation International: <https://www.conservation.org/timor-leste/our-work>

⁸⁹ Based on interviews.

⁹⁰ See: Conservation International, Nature-Based Development: Conservation pays off for communities in Timor-Leste, October 2019: <https://www.conservation.org/press-releases/2019/10/23/nature-based-development-conservation-pays-off-for-communities-in-timor-leste>

⁹¹ Based on interviews.

⁹² Based on interviews.

⁹³ Based on interviews.

Section 4:

Innovations in Financing the Blue Economy: Opportunities for Timor-Leste

4.1 Introduction

The blue economy has been described as the “next investment frontier” and is estimated to represent a US\$3 trillion market opportunity by 2030.⁹⁴ Recent years have seen the emergence of new actors in the blue economy space, from both the public and private sectors, as well as the development of new financing instruments and funds specifically dedicated to the blue economy.

This section covers recent developments in financing related to the blue economy. The aim is to assist Timor-Leste to navigate this increasingly complex landscape, explore potential opportunities and increase its ability to mobilise, strategically plan and manage various sources of financing for sustainable blue economy development.

The “ecosystem” for financing blue economy-related interventions is relatively nascent but is quickly gaining in momentum. Today, a much more diversified, complex and sophisticated range of financing instruments is available to support investments in the blue economy. At the same time, challenges remain on both the supply (investor) and demand (recipient country) side to fully maximise these new opportunities. These challenges include a lack of awareness and knowledge on the part of both investors and investees as to potential blue economy-related investment opportunities, low risk tolerance on the part of investors and uncertainty as regards new markets, and a lack of investment-ready projects in developing countries. These challenges mean that many blue economy investments in developing countries continue to require financing and technical assistance from multilateral financial institutions and bilateral development partners.

4.2 Blended finance for the blue economy

Blended finance has emerged as a particularly important financial tool to support blue economy investments in developing countries. Blended finance is broadly understood as the strategic combination of public and/or private development finance flows (e.g. concessional donor funds or philanthropic funds) with private return-seeking capital. Donor and philanthropic funds are used to adjust the risk-return profile of the investment so that private capital providers are incentivised to invest. Donors can also provide much valued technical assistance in project identification and preparation.

Interest in blended finance has mushroomed in recent years, and it is one of the most dynamic fields in the financing for development arena. A host of actors are now involved in blended finance-- from bilateral development agencies to multilateral development finance institutions and philanthropic foundations. Many are keen to expand their activities in this arena as blended finance presents an

⁹⁴ OECD: The Ocean Economy in 2030 (2016): <https://www.oecd.org/environment/the-ocean-economy-in-2030-9789264251724-en.htm>

opportunity to scale up both public and private financing for development in an overall context where public aid resources for development are limited. Several new blue economy initiatives that have emerged recently, especially those run by multilateral development banks like ProBlue from the World Bank and the Oceans Financing Initiative from the Asian Development Bank, use blended finance as a tool to expand the supply of financing for the blue economy in developing countries (see table). Most recently, the Global Fund for Coral Reefs, a private philanthropic foundation also launched its blended finance vehicle in 2020 designed to fund innovative business models that increase the resilience of coral reefs and the communities that depend on them.⁹⁵

Blended finance is most often used to support investments in infrastructure and other areas where there is an expected economic return. In a blue economy context, these include investments in sustainable fisheries and aquaculture, ocean renewable energy, wastewater management and pollution control, ports, clean marine transportation and tourism. As outlined in the recommendations to this roadmap, the second phase of the INFF process (the development of a financing strategy), could further explore the ways in which the GoTL blended finance could be leveraged in support of blue economy development.

Figure 17: Many new ocean financing initiatives use blended finance to catalyse additional financing for the blue economy

Initiative name	Lead institution	Institution type	Resources available	Description	Projects in Timor-Leste?
ProBlue ⁹⁶	World Bank	Multilateral development bank	US\$5.6 billion in active projects in 2020	Multi-donor trust fund administered by World Bank that provides financing and technical assistance across 4 pillars: 1/ fisheries and aquaculture; 2/ marine pollution; 3/oceanic sectors; 4/seascape management	No
Oceans Financing Initiative ⁹⁷	Asian Development Bank	Multilateral development bank	US\$5 billion between 2019 and 2024	The initiative leverages public sector funds and technical assistance to create “bankable” investment opportunities for the private sector. Key focus areas: blue economy; ecosystem management; pollution control; sustainable infrastructure	

⁹⁵ See: Global Fund for Coral Reefs (GFCR): <https://globalfundcoralreefs.org/>

⁹⁶ See: World Bank, ProBlue: <https://www.worldbank.org/en/programs/problue/overview>

⁹⁷ See: Asian Development Bank, Oceans Financing Initiative: <https://www.adb.org/sites/default/files/related/145041/Oceans%20Financing%20Initiative.pdf>

Clean Oceans Initiative⁹⁸	European Investment Bank	Multilateral development bank	€2 billion until 2023	Provides finance for public and private sector projects in Asia, Africa and Latin America that reduce plastic waste in the oceans	No
Global Fund for Coral Reefs⁹⁹		Foundation	US\$500 million over 10 years	A blended finance instrument that provides grants, loans and technical assistance to support the development of business models linked to coral reef ecosystem conservation	No

4.3 Blue bonds

Blue bonds are another recent innovation to emerge in the blue economy financing landscape. A blue bond is a debt instrument issued by governments, municipalities, development banks, corporate entities or others to raise capital from investors to finance marine and ocean-based projects that have positive environmental, economic and climate benefits. Blue bonds are modelled on green bonds, which have witnessed extraordinary growth over the last decade. In 2020, a record US\$ 270 billion in “labelled” green bonds were issued worldwide by a variety of sovereign and corporate entities across 53 countries.¹⁰⁰ Green bonds fund a wide variety of projects with environmental and climate benefits, including renewable energy (35% of total issuance), low-carbon transportation (24%), energy efficiency (26%), water management and waste (9%).¹⁰¹

In contrast to green bonds, blue bonds are a new and relatively underused financial instrument. The world’s first blue bond was issued by the Government of Seychelles in 2018 and raised US\$15 million for investments in sustainable fisheries. It was supported by the World Bank and Global Environment Facility (GEF), which provided technical assistance and additional financing and guarantees to lower interest payments on the bond.¹⁰² In January 2019, the Nordic Investment Bank issued a SEK2 billion (US\$200 million) 5-year Blue Bond to protect and rehabilitate the Baltic Sea. This funded investments in water resource management and environmental protection in the Baltic Sea. Eligible projects included wastewater treatment, prevention of water pollution and water-related climate change adaptation.¹⁰³

⁹⁸ See: European Investment Bank, Clean Ocean Initiative: <https://www.eib.org/en/publications/the-clean-ocean-initiative#>

⁹⁹ See: Global Fund for Coral Reefs (GFCR): <https://globalfundcoralreefs.org/>

¹⁰⁰ See: Climate Bonds Initiative: <https://www.climatebonds.net/2021/01/record-2695bn-green-issuance-2020-late-surge-sees-pandemic-year-pip-2019-total-3bn>

¹⁰¹ See: Climate Bonds Initiative: <https://www.climatebonds.net/2021/01/record-2695bn-green-issuance-2020-late-surge-sees-pandemic-year-pip-2019-total-3bn>

¹⁰² See: World Bank, Seychelles launches World’s First Sovereign Blue Bond, October 2018: <https://www.worldbank.org/en/news/press-release/2018/10/29/seychelles-launches-worlds-first-sovereign-blue-bond>

¹⁰³ For further information, see: Nordic Investment Bank: https://www.nib.int/who_we_are/news_and_media/news_press_releases/3170/nib_issues_first_nordic-baltic_blue_bond

Blue bonds must typically meet a series of specific requirements. These include: environmental and social benefits (the proceeds should finance marine and ocean-based projects that have positive environmental, economic, and climate impacts); the capacity to generate revenues (investors are likely to prefer to support revenue generating activities with blue bonds); an attractive storyline (marketing materials should tell a story about the proposed investments); a clear reporting framework (evidence that the bond is having the stated positive impacts, including clear quantifiable indicators); the capacity to disburse funds rapidly (the need to have a strong investment pipeline in place).

Despite relatively few experiences to-date, many sustainable finance observers see significant potential for this type of financial instrument in the future. In 2020, the UN Global Compact Sustainable Ocean Business Platform issued step-by-step practical guidance on blue bond issuance which aims to accelerate blue bond issuance in financial markets and outlines several pillars of good practice.¹⁰⁴

It should be noted that, while blue bonds can help raise much-needed capital *at-scale* for investments in the blue economy and can increase transparency in the use of funds, “sustainability themed” bonds do not necessarily involve a discount and finance is typically secured by sovereign issuers at market rates. The case of the Seychelles (see case study in this roadmap) illustrates how multilateral financial institutions can play a key role in supporting blue bond issuance, for example assist with project identification and selection, onboard potential bank partners for the issuance, bring in legal counsel, identify possible investors, arrange additional support from other stakeholders, provide credit enhancement other support to improve chances for a successful issuance. This will all have an important “signalling” effect on the market. Timor-Leste’s favourable debt outlook means it may be able to further explore the viability of a blue bond issuance in the near future. Potential next steps in this regard are outlined in the recommendations to this roadmap.

Figure 18: Making a success of blue bonds

List of pre-requisites for “coastal resilience” blue bonds

- ✓ Pipeline of acceptable projects large enough in size
- ✓ Growing awareness of market participants
- ✓ Adequate monitoring and verification procedures
- ✓ Adequate impact management procedures

Source: UN Global Compact Sustainable Ocean Business Platform (2020)

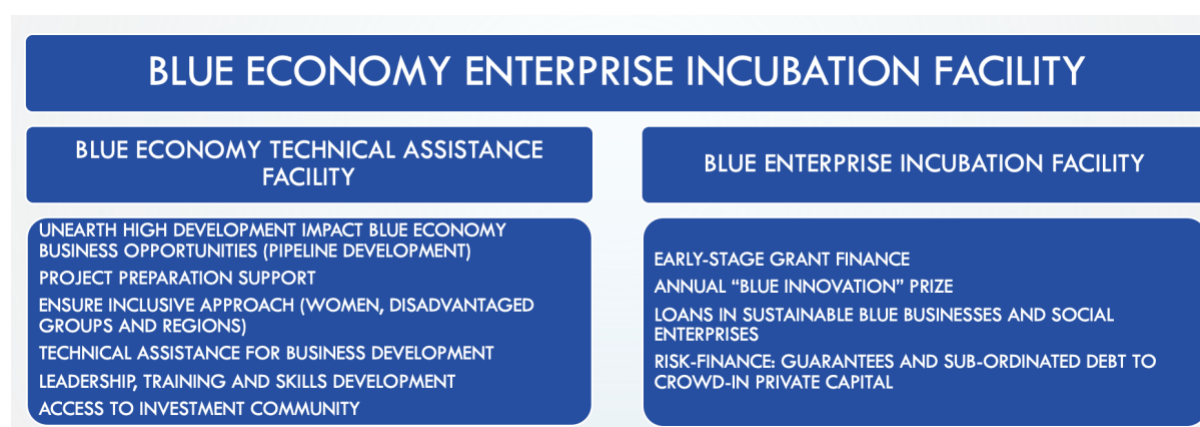
¹⁰⁴ See: UN Global Compact Sustainable Ocean Business Platform, 2020: <https://ungc-communications-assets.s3.amazonaws.com/docs/publications/Practical-Guidance-to-Issue-a-Blue-Bond.pdf>

4.4 Incubator/accelerator funds

Challenge initiatives and incubator facilities have emerged as another recent addition to the blue economy financing landscape. With challenge initiatives, like the Inter-American Development Bank's Blue-Tech Challenge, entrepreneurs, community organisations and other local stakeholders are invited to submit project proposals that identify business models that apply new technologies or solutions to foster long-term sustainability of the ocean economy. "Winners" are awarded financing and technical support to turn their blue economy business ideas into a reality. In the IDB's Blue Tech challenge, projects focusing on a range of topics such as recycling, pollution, sargassum reuse, marine exploration, clean energy and coral restoration were selected for support across the Caribbean region.¹⁰⁵

This kind of initiative recognises that, despite significant potential among small and medium sized enterprises (SMEs) in the blue economy arena, they often face significant capacity constraints and have difficulties in accessing affordable – or indeed any – financing. A further solution being developed by UNDP in the Barbados Multi-Country Office and in Papua New Guinea is the creation of blue economy "enterprise incubation facilities". Under these facilities, SMEs related to the blue economy are provided with technical support in areas such as project preparation, skills development and access to domestic and international investors, as well as various forms of finance such as early-stage grants and more affordable loans. They may also extend guarantees or other forms of risk capital to incentivise other finance providers – domestic and external – to support the business. The overall aim is to use donor finance strategically to nurture blue economy enterprise development and crowd-in private capital.

Figure 19: Papua New Guinea: UNDP proposal for "enterprise incubation facility" to nurture blue economy enterprise development



Source: UNDP (2020)

¹⁰⁵ See: Inter-American Development Bank, Blue Tech Challenge: <https://www.iadb.org/en/news/iadb-announces-selected-proposals-its-blue-tech-challenge-caribbean>

4.5 Impact investing for the blue economy

We have also seen the emergence of impact investment funds focused on the blue economy, most notably Mirova’s Sustainable Ocean Fund. Mirova’s fund makes return-seeking impact-driven investments in marine and coastal projects and has a special focus on developing countries. Most of its investments have to-date been in the fisheries sector.

Figure 20: Impact Funds for the Blue Economy

Initiative name	Lead institution	Institution type	Resources available	Description
Sustainable Ocean Fund ¹⁰⁶	Mirova	Private impact fund	US\$132 million	Fund that makes pioneering impact investments into marine and coastal projects and enterprises that can deliver sustainable economic returns in fisheries, aquaculture, the circular economy and marine conservation

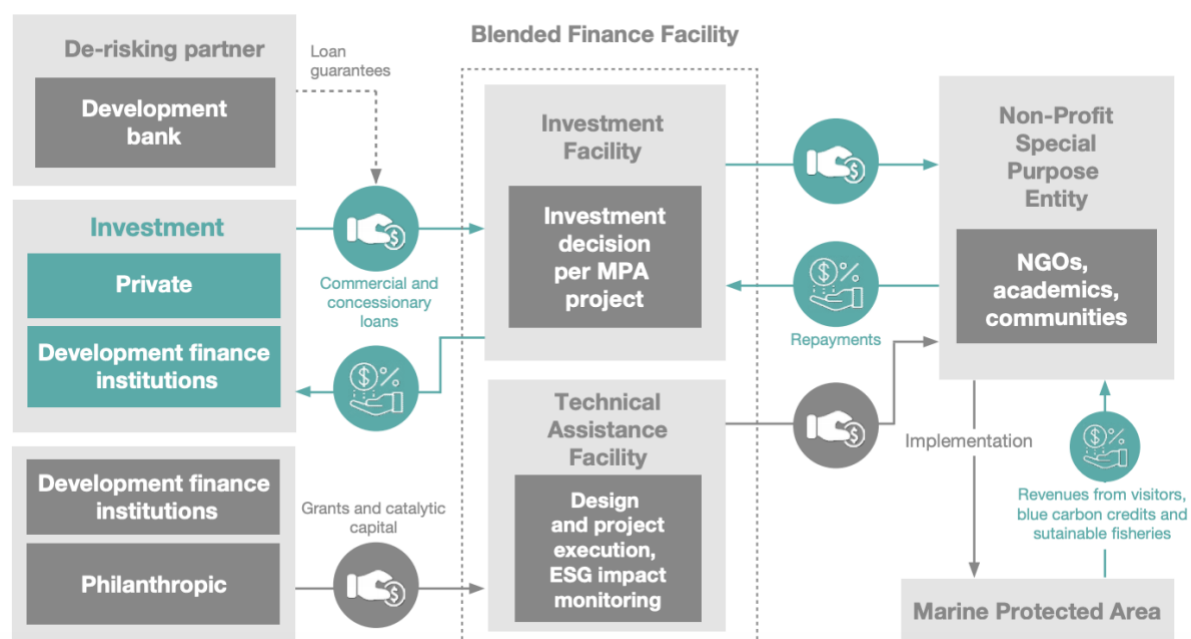
Impact investment and public-private-partnership models are also increasingly being looked at to fund the long-term financing of Marine Protected Areas. Under such models, a public-private partnership is arranged between a non-profit co-management entity (Special Purpose Entity - SPE), formed by NGOs, scientific organisations and community associations, and the government that designated the MPA. The SPE then receives funds from impact investors and donors for capital expenditures, and a Development Finance Institution (DFI) can provide derisking options (such as guarantees). The SPE carries out the conservation activities agreed with the government, within a co-management agreement for a specified period of time (usually 10 years). Since the SPE is responsible for hiring and managing staff and purchasing equipment, there is no increase in public debt. The SPE generates its own income through tourism/user fees (e.g. marine park entrance fees) and other innovative financing models, such as carbon and biodiversity offsets. The aim is to put in place a model that is financially sustainable in the long-term. This kind of approach is being utilised in the Dominican Republic in partnership with Blue Finance, an international NGO, to sustainably manage 8000 km² of the Marine Sanctuary “Arrecifes del Sureste”.¹⁰⁷

¹⁰⁶ See: Mirova Sustainable Ocean Fund, May 2020: <https://www.mirova.com/en/news/mirova-sustainable-ocean-fund-reaches-final-close-132m-commitments>

¹⁰⁷ For further information, see: Blue Finance: http://blue-finance.org/?page_id=961

Figure 20: Collaborative Management for MPAs

Investment and operating model



Source: Coalition for Private Investment in Conservation (2020)¹⁰⁸

4.6 Innovative “blue” insurance

Parametric insurance is also being piloted in a number of small island states to support coastal resilience and the blue economy. In 2019, the World Bank and the Caribbean Catastrophe Risk Insurance Facility (CCRIF) launched the COAST initiative (Caribbean Oceans and Aquaculture Sustainability Facility) to support reliance in the fisheries sector through an innovative ‘blue’ insurance scheme. This combines a microinsurance livelihood protection product for small fishers with coverage for losses and damages caused by extreme weather such as cyclones. Fishers are provided with an incentive to fish sustainably and protect their marine environments. The first two pilot countries for the initiative are Grenada and St. Lucia.¹⁰⁹ UNDP and the Nature Conservancy also partnered in 2018 to develop the world’s first coral reef insurance policy in Mexico’s Yucatan peninsula. The policy was then triggered in October 2020 and paid close to US\$ 800,000 to fund large scale repairs of the reef following Hurricane Delta. It is a model which the developers say can be applied to other world regions and ecosystems and may be of interest to Timor-Leste as a tool to help safeguard the pristine conditions of its coral reef systems.¹¹⁰

¹⁰⁸ See: Coalition for Private Investment in Conservation, 2020: <http://cpicfinance.com/channeling-private-finance-into-marine-protected-areas/>

¹⁰⁹ For further information, see: Caribbean Catastrophe Risk Insurance Facility (CCRIF): https://www.ccrif.org/sites/default/files/publications/CCRIFSPC_COAST_Brochure_July2019.pdf

¹¹⁰ See: The Nature Conservancy, Insuring Nature to Ensure a Resilient Future, December 2020: <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/insuring-nature-to-ensure-a-resilient-future/>

Box 3: The Caribbean Ocean and Aquaculture Sustainability Facility (COAST)

The COAST project (still in its design phase) proposes to create a platform for innovative insurance financing that also incentivises small-island governments to support coastal management and reef restoration for climate resilience among other activities. Belize, Grenada, Jamaica and The Bahamas are the first countries that have expressed an interest in being part of the COAST project, with scaled up activities and more countries possibly involved over time. The Bahamas is vulnerable to an increase in tropical storms, both in number and intensity. Grenada faces the strong possibility of land loss from a rising sea, while Jamaica's coastal infrastructure, from airports to government buildings, will become increasingly threatened. Insurance against disaster, incentives to rejuvenate the coast Insurance premiums for disaster risk insurance would be co-financed and discounted for the countries that incorporate climate resilience and marine economy protection measures. Payouts would also be supplemented for countries that commit to implement country-led plans to ensure that small enterprises and smallholder fisher folk are provided for after extreme weather events. The project is a joint initiative of the World Bank, US Department of State, FAO, the Nature Conservancy and the Caribbean Catastrophe Risk Insurance Facility.

4.7 Blue carbon markets

Mangrove and seagrass conservation can be used to create saleable "blue carbon" credits for attracting income to marine conservation projects. The extraordinary amount of carbon stored in their biomass and sediments, known as 'blue carbon' has a value on international carbon markets. If this value can be realised and transferred to local people, it could incentivise and finance community-led mangrove management, and help safeguard the fisheries that mangroves support. While this is a very nascent area of innovative finance, it is set to explode, according to some analysts' predictions, and represents another opportunity to leverage innovative finance in support of the blue economy. Carbon certificates from mangrove conservation are still in a pilot phase, but are being tested in Madagascar.¹¹¹ Key risks and challenges relate to the robustness of monitoring systems, quantifying greenhouse gas (GHG) emissions reductions that can be achieved through mangrove conservation, and ensuring local communities derive the socio-economic benefits from blue carbon credits and that mangrove management is community-led.

4.8 Boosting domestic resources for the blue economy: environmental fees

Several SIDS have also taken steps to mobilise additional resources *domestically* for environmental conservation, including marine ecosystems. For example, there are several countries that implement various form of tourism or "green" fee which helps to fund conservation measures, both terrestrial and marine. Palau's "Pristine Paradise Environmental Fee" (PPEF) is one of the world's most successful conservation fees. US\$100 is included in the price of visitors' airline tickets as part of an effort to

¹¹¹ See: Blue Ventures: Blue Forests: <https://blueventures.org/conservation/blue-forests/>

attract high value tourism while also generate resources for environmental protection.¹¹² Of this amount, US\$10 is ear-marked for the Fisheries Protection Trust and US\$30 for the Protected Area Network; some also accrues directly to the National Treasury for unallocated expenditures. Thus far the policy has led to the mobilisation of millions of dollars in public domestic revenues, and represents an important – and sustainable – source of financing for conservation, including the blue economy. While the US\$100 fee may be considered relatively high, other countries have adopted other forms of tourism and conservation related charges. These include Belize, where a conservation exit fee of US\$3.75 forms part of the departure tax for all foreign visitors. There is also a small environmental charge levied on cruise ship passengers. Combined, this provides 50% of the funding for the Belize Protected Areas Conservation Trust (PACT).¹¹³ The advantages of such ‘environmental fees’ are that they represent long-term sustainable sources of revenue for governments without the complexities involved in many of the innovative finance mechanisms discussed. Scope to implement some form of “blue levy” on visitors, including potentially cruise ship arrivals could be further explored and various scenarios modelled for financing the blue economy in Timor-Leste. This could be incorporated into stage two of the INFF process, namely the Blue Economy Financing Strategy.

Figure 21: Innovative sources of finance for the blue economy: menu of options

Instrument name	Description	Type of intervention
Blue bonds	A blue bond is a debt instrument issued by governments, municipalities, development banks, corporate entities or others to raise capital from investors to finance marine and ocean-based projects that have positive environmental, economic, and climate benefits. They should benefit SDG 14 (life under water).	Best suited to fund investments in infrastructure and assets that will generate an economic return, e.g. marine renewable energy, marine transportation, sustainable fisheries etc.
Blended finance	The strategic use of donor aid flows or philanthropic funds to alter the risk-return profile of the investment and incentive the private sector to invest.	Suitable for investments in infrastructure and assets that will generate an economic return, including financial services.
Environmental fees/taxes	Fee charged by governments, municipalities or authorised agents for the use of/access to a particular ecosystem (e.g. marine protected area, national park etc.). Environmental fees can also be levied on visitor arrivals to/departures from a country.	Flexible financing tool suitable for funding a wide range of conservation activities, including non-return seeking activities.
Impact funds	Funds that invest in enterprises that further social/environmental aims, while also generating returns for investors	Channels investment into private enterprises (debt and equity).
Climate funds	Funds that provide a range of technical and financial support for climate mitigation and	Suitable for financing a broad range of climate-actions,

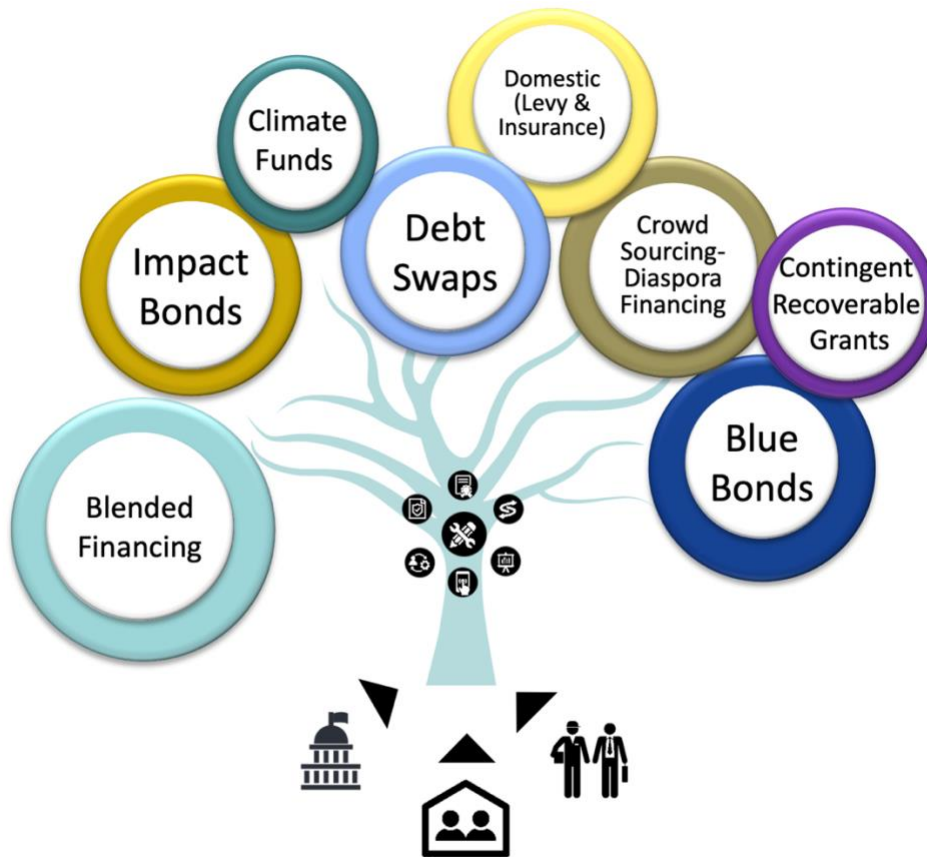
¹¹² See: Government of Palau: http://www.palaucustoms.org/files/common_unit_id/c8672894-ba61-43f7-b6c4-6a69acbd1b61/PUBLIC%20NOTICE.pdf

¹¹³ See: Protected Area Conservation Trust (PACT) Belize: <https://www.pactbelize.org/>

	adaptation activities. Resources provided can be in the form of both grants and loans.	especially those that help to build long-term resilience to climate change.
Contingent recoverable grants	Grants that are used to fund early-stage project preparation costs, and which are refundable only if the project goes on to be successful.	
Debt-for-nature swaps	Debt is cancelled by the creditor and in exchange, the debtor pays debt service it would have paid the creditor (typically at a discount) into a trust fund and the proceeds are used to fund environmental projects.	Helps to mobilise additional resources for conservation programmes, typically over 3-5 years.
Social/environmental impact bonds	Payment for results mechanism in which private investors provide upfront capital for a project, and are repaid (with interest) by donors or governments when pre-agreed project results are achieved. If the project is unsuccessful, investors lose some or all of their capital.	Funds improvements and innovations in service delivery, rather than infrastructure (e.g. new ways to monitor and prevent harm to protected animal species and increase populations numbers).
Incubator/accelerator funds	Funds that provide specialised technical assistance and financial support to impact-driven businesses to help them start or grow their business.	Channels funds to social enterprises from cradle to exit.
'Blue' carbon credits	High-growth market potential through the sale of carbon stored in mangroves and seagrass beds	Can help to incentivise and fund ongoing conservation of essential marine ecosystems.

Source: Author's elaboration

Figure 22: Key instruments to finance blue economy interventions



Source: Caribbean Development Bank and UNDP (2018)

Section 5:

Case study: The Seychelles

The concept of the blue economy has been embraced by the Government of the Republic of Seychelles (GoS) as mechanism to realise sustainable development and advance the SDGs. In 2018, it published its “Blue Economy Strategic Roadmap” which was anchored in several flagship initiatives, including marine spatial planning and the implementation of innovative new financing approaches.¹¹⁴

Figure 23: The Seychelles Blue Economy Roadmap

Goals of the Seychelles Blue Economy Roadmap	
1	Economic diversification and resilience to reduce economic vulnerability and increase % of GDP derived from marine sectors
2	Shared prosperity through the creation of high value jobs and local investment opportunities
3	Food security and well-being
4	Integrity of habitats, sustainable use and climate resilience

Source: Author’s adaptation

The Seychelles has been a market leader when it comes to the deployment of innovative finance instruments to support blue economy investments. In 2018, it became the first sovereign state to issue a blue bond and provides a useful model / reference point to other small island developing states interested in blue bonds. The blue bond raised US\$15 million and had a maturity of 10 years. Proceeds of the bond were invested in sustainable marine fisheries and fisheries projects.

The model implemented by the Seychelles was particularly unique. Issuance of the bond was supported by a World Bank (IBRD) partial guarantee (US\$5 million) which lowered the Seychelles’ borrowing cost by at least 2.0% per year. An additional US\$5 million concessional loan from the Global Environment Facility (GEF) also partially subsidised payment of the bond coupons and further lowered the Seychelles’ net borrowing cost by over 3% per year. These credit enhancement instruments allowed for a reduction of the price of the bond by partially de-risking the investment. As a result, the bond pays a 6.5% annual coupon to investors, but the GEF loan reduces the cost to the Seychelles to 2.8%. This arrangement allowed the Seychelles to save over US\$8 million in interest charges over 10 years.¹¹⁵ The Rockefeller Foundation also covered most of the transaction costs.

Multilateral development partners also conducted outreach to potential investors, and the blue bond was privately placed with three socially responsible impact investors (specifically Calvert Impact Capital, Nuveen, and Prudential).¹¹⁶ Standard Chartered acted as placement agent for the bond.

¹¹⁴ Seychelles’ Blue Economy, Strategic Policy Framework and Roadmap: Charting the Future (2018-2030): <https://seymsp.com/wp-content/uploads/2018/05/CommonwealthSecretariat-12pp-RoadMap-Brochure.pdf>

¹¹⁵ See: World Bank: <http://pubdocs.worldbank.org/en/242151559930961454/Case-study-Blue-Bond-Seychelles-final-6-7-2019.pdf>

¹¹⁶ For further details, see: World Bank: <https://www.worldbank.org/en/news/feature/2018/10/29/sovereign-blue-bond-issuance-frequently-asked-questions>

Assistance provided by the World Bank included market outreach; direct support in the design of the Blue Bond; liaising with investors to identify buyers of the issue; and documentation of the transaction involving coordination of legal teams of the arranger and client. This experience illustrates the ways in which development partner financing can be used to anchor a blue bond issuance and build investor confidence.

The US\$15 million proceeds of the Seychelles Blue Bond capitalised a 'Blue Grants Fund' and a 'Blue Investment Fund' managed respectively by the Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT) and the Development Bank of Seychelles (DBS). The Blue Grants Fund received US\$3 million and the Blue Investment Fund received US\$12 million; the two funds are designed to be complementary. The first provides grants to fund small-scale sustainable fisheries projects, including support for capacity-building, with financing awarded on a competitive basis; the second provides repayable loans to more established enterprises.

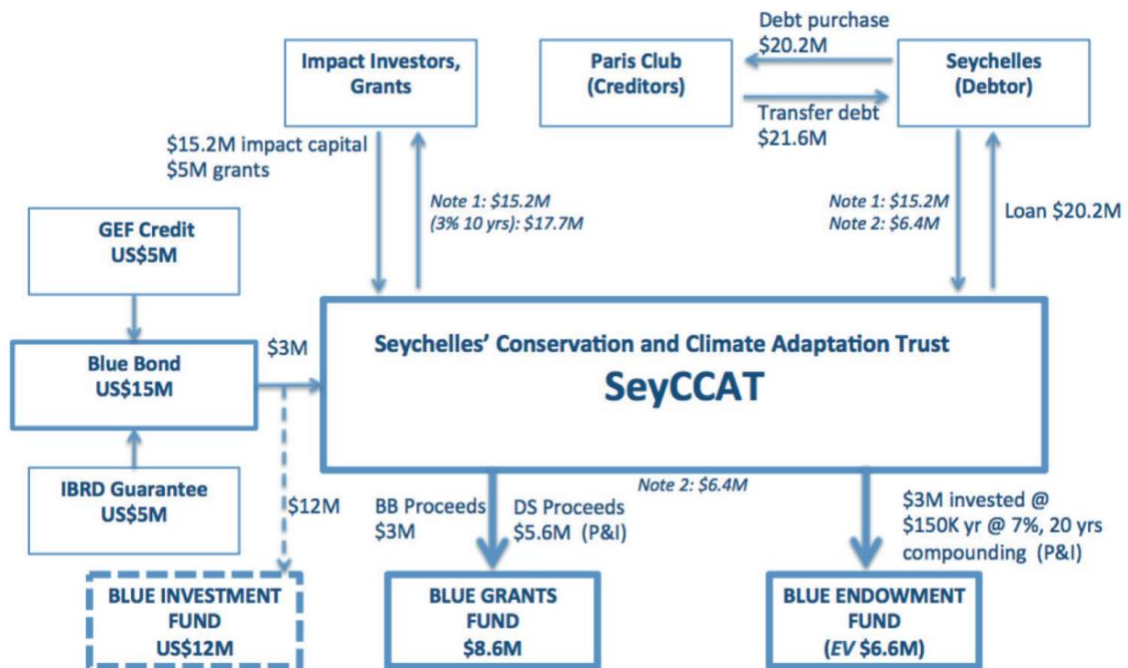
The blue bond issuance was accompanied by a debt-for-nature swap also focused on the blue economy. The debt swap refinanced US\$22 million of the country's bilateral debt into more manageable debt held by a new independent public-private trust fund established for this purpose – the the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) in a deal designed and brokered by the Nature Conservancy. The debt swap reduces the Seychelles' annual debt service by about US\$2 million annually by extending repayment terms from eight to 20 years with most of the debt repayable in local currency rather than hard currency.¹¹⁷

Prior to the blue bond issuance, the Seychelles had put in place an enabling environment that paved the way for these blue economy financing mechanisms. It had initiated an extensive and participatory marine spatial planning (MSP) process in partnership with the Nature Conservancy and other key development partners like UNDP and the Global Environment Facility (GEF). This outlined a policy roadmap for the conservation and development of the country's coastal and marine spaces, and expanded the network of marine protected areas.¹¹⁸ It had also prepared fisheries management plans to create the conditions for expanded business opportunities while better preserve fish resources. These planning instruments were key to the issuance and success of the Blue Bond, as they helped guarantee that the activities that it would finance would be sustainable and protect the country's extensive marine assets.

¹¹⁷ For further details, see: The Nature Conservancy: <https://www.cbd.int/doc/meetings/mar/soiom-2016-01/other/soiom-2016-01-seychelles-01-en.pdf>

¹¹⁸ For further information on the marine spatial plan, see: Seychelles' Blue Economy, Strategic Policy Framework and Roadmap: Charting the Future (2018-2030): <https://seymsp.com/wp-content/uploads/2018/05/CommonwealthSecretariat-12pp-RoadMap-Brochure.pdf>

Figure 24: The Seychelles: innovative financing for the blue economy



Source: SEYCATT

Section 6:

Risk assessment

The third component of INFF Building Block 1 is a risk assessment. In pursuing a blue economy approach, what are some of risks? Shocks, crises and disasters can destabilise the mobilisation and allocation of financing for sustainable development, increasing financing gaps and ultimately undermining sustainable development progress. Particular care must be undertaken when it comes to the development of new economic sectors like the blue economy to ensure that structural inequities are not replicated.

The aim of the risk assessment is to strengthen governments' understanding of risks to blue economy development financing, and to support the design of risk-informed financing strategies. As the COVID-19 pandemic has further underlined, financing strategies that do not consider the impact of potential shocks and disasters cannot be sustainable.

This section maps a range of risks – economic and non-economic – that may impact financing related to the blue economy in Timor-Leste. Examples are provided below as per the INFF methodological template.

Figure 25: Risks and their impact on financing for the blue economy

Risk	Impact on financing for the blue economy	
	Primary impact	Secondary impact
Global pandemic	May divert national budgetary and donor resources to other purposes in the short-term	Long-term investments in the blue economy may be delayed or cancelled (de-prioritised such than economic diversification is delayed)
Environmental disaster	May divert national budgetary and donor resources to other purposes in the short-term	Long-term investments in the blue economy and resilience may be delayed or cancelled
Climate change	Climate change is likely to negatively affect ocean health in various ways, leading to a need for increased longer-term budgetary resources and investments to restore and protect key marine ecosystems	Climate change may negatively impact the viability of some ocean-linked livelihoods like fisheries, leading to a need for investments in alternative skills and livelihoods
Shift in political priorities	Financing programmed for blue economy interventions are reduced and funds deployed in other sectors	Long-term investments in blue economy development may not be realised
Political instability	Delays in approvals to the budget leading to delays in approving new capital projects	Withdrawal (or reduced levels) of donor aid
Limited local support and buy-in for a blue economy approach	Communities do not meaningfully engage in blue economy development opportunities	Interventions are not sustainable

Increased debt risks due to new capital investments related to the blue economy	Increased debt risks can lead to increases in borrowing costs and elevated refinancing risks	High debt service levels can crowd out other important social and environmental investments
Significant resources flow into blue economy development but these resources are not well managed/spent	Poor allocation of resources for blue economy development could exacerbate – rather than resolve – existing social and environmental pressures (e.g. marine ecosystem harms, increased societal inequalities etc.). It can also be inflationary.	Social and environmental harms caused by the misallocation of resources could lead to further budgetary and donor resources being needed to “undo” the damages, leading to further costs

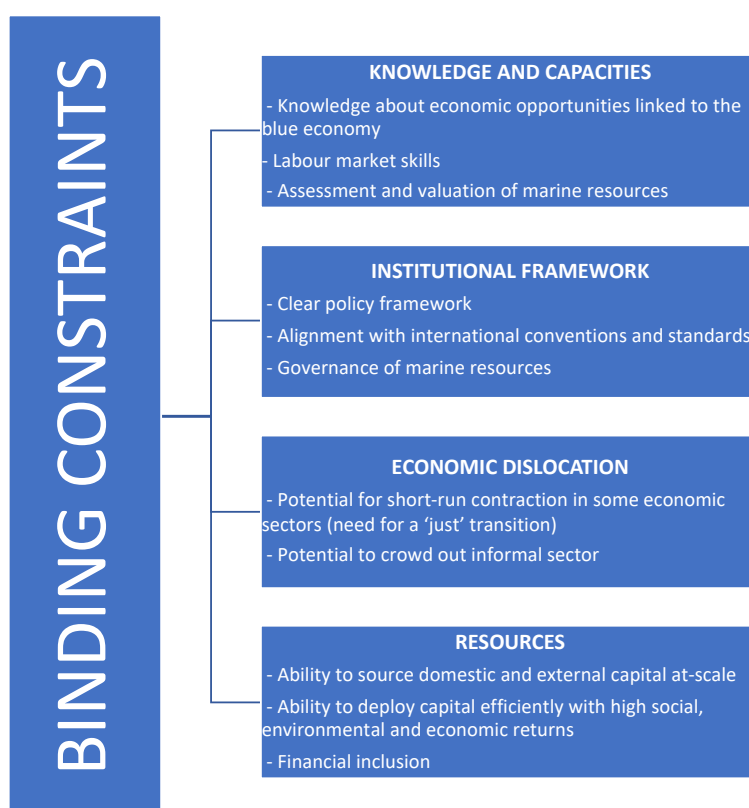
Section 7:

Binding Constraints

The final component of INFF Building Block 1 is an analysis of binding constraints, i.e. what are the constraints to the effective mobilisation and use of financing for sustainable blue economy development? The aim is to guide the identification of those constraints that, if removed, would have the greatest impact on the country's ability to finance sustainable blue economy development.

The roadmap has identified four broad constraints/challenges as they relate to successfully implementing a blue economy development strategy in Timor-Leste. These are: 1) knowledge and capacity constraints; 2) policy and institutional gaps; 3) short-run risks to the economy; 4) access to – and ability to effectively deploy – resources from all sources.

Figure 26: Challenges with implementing a blue economy financing strategy



Source: Author's elaboration (2021)

The first challenge, "knowledge and capacities" recognises that the blue economy concept is fairly new to Timor-Leste and is not widely understood. Stakeholder interviews showed that many communities don't have the knowledge or skills to manage local marine assets in sustainable ways and are even less aware of potential livelihoods opportunities connected to ocean and coastal environments. While some capacity-building initiatives are underway at the local level, especially as they relate to the sustainable management of designated marine protected areas, these need to be

significantly scaled-up if the GoTL is to pursue an economic diversification strategy based on blue economy development. Investments in human capital, in particular youth, to develop the skills and competencies that are responsive to the needs of the blue economy will be critical. Labour market assessments and investments in the areas where the country has significant gaps and there is potential to transition into high-value productive sectors (like fish processing) will be useful. Further work is also needed to map and value Timor-Leste's marine and coastal assets. This data will be needed to put in place innovative finance streams which require baseline data against which progress can be assessed, and can help to build the investment, conservation and economic case for particular interventions. A lack of data and knowledge about specific marine ecosystems can also hinder investors' propensity to invest.

The second challenge is the need for a clear policy framework and well-designed implementation strategy. While Timor-Leste has in principle elaborated its National Oceans Policy, this has still not been approved by the Council of Ministers, even though the process for its elaboration started in 2017. Once formalised, the policy will be a useful framework for blue economy development. Governance and the capacity to effectively manage marine resources also matters for sustained – and sustainable – blue growth. For example, Trade Invest reports that Chinese investors left the fisheries and aquaculture sector in 2018 because they could not compete with illegal fishing. Timor-Leste loses an estimated US\$ 40 million annually from illegal, unregulated and unreported (IUU) fishing in its waters (though data is unreliable) and it will be vital to continue to strengthen Timor-Leste's knowledge and capacity to tackle the problem, and effectively manage its marine assets.

The third challenge relates to how any economic diversification strategy may negatively impact current practices and output, and may imply stoppages or the phasing-out of certain practices/industries to ensure sustainability in the long-term. These will impact on certain communities or populations more than others. The transition requires a social and political consensus on the long-term economic vision that surpasses short-term interest – which in turn needs to be institutionalised and funded by the Petroleum Fund. Additionally, the introduction of larger private sector firms into some predominantly informal sectors, such as fisheries and marine tourism (e.g. private boat operators) may lead to a 'crowding-out' of vulnerable populations who engage in these activities. As such, the strategy needs to identify disadvantaged groups and seek to promote an inclusive approach to blue growth.

The final challenge relates to resources and the ability to source capital at-scale from both domestic and external sources for investment in the blue economy. In a context in which revenues from oil are on the decline and economic growth is weak due to the COVID-19 pandemic, significant investments in the blue economy are constrained by a lack of fiscal space and readily available financing. Moreover, the record on public spending in Timor-Leste has been inflationary over several years and, in many cases, capital spending has not delivered quality infrastructure with positive economic returns. The country also has a poor record in maintaining physical assets, due in part to inadequate planning and limited capacity. Private sector growth and development has not been unleashed by public sector spending and access to finance for firms remains low. This roadmap offers some recommendations in the following section on steps that can be taken to ensure financing for blue economy development yields high economic, social and environmental returns for the country.

Section 8:

A Roadmap for financing the blue economy: recommendations and next steps

Becoming an upper middle-income country by 2030 requires strong, sustained non-oil economic growth. An inability to foster economic diversification will hurt Timor-Leste over the long-term. The blue economy aims to move beyond business as usual to consider economic development and ocean health as compatible propositions. It is generally understood to be a long-term strategy and is aligned with Timor-Leste's Strategic Development Plan 2011-2030.

This roadmap has shown that to maximise the development opportunities offered by the blue economy, action across multiple inter-related areas is critical – from investing in knowledge and human capital, to better data on Timor-Leste's marine and coastal assets, to putting in place a conducive policy and institutional framework, and careful planning and coordination between different parts of the economy. As such, blue economy development is about more than financing. However, resources clearly matter and it will be vital to put in place a 'financing ecosystem' that can underpin blue economy growth.

The analysis in this paper points to several pathways which could be further explored under the next stage of the INFF process being supported by the UN Joint SDG Fund.

1. Develop a blue economy investment strategy

Timor-Leste could benefit from developing a *blue economy investment strategy* as a tool to identify those *inter-linked and transformative investments* which will underpin sustainable blue growth over the next decade and beyond. The strategy should cost these investments. The process for elaborating the investment strategy should, in turn, be inclusive and involve multiple line ministries (such as the Ministry of Ministry of Tourism, Commerce and Industry and the Ministry of Agriculture and Fisheries etc.) as well as other stakeholders from the private and non-profit/community sectors, and development partners.

In addition to identifying and costing key investment opportunities/priorities, the strategy should make recommendations as to any policy and institutional changes that may need to take place to realise those investment opportunities. It should look at what financial instruments may be best suited to fund those investments, including the innovative sources of 'blue' finance presented in this roadmap, and how development partners can most effectively use their financial firepower and technical expertise to make them a reality.

The overall aim should be to help build a pipeline of high-quality investments linked to the blue economy. The strategy should be anchored in the priorities of the new National Oceans Policy and socialised to ensure there is widespread support. Each priority investment should clearly articulate how it will benefit both local communities as well as preserve ocean health.

Other countries have taken this approach. One example is Cabo Verde, which used support from the African Development Bank and the UN Food and Agriculture Association (FAO) to develop a ‘National Blue Economy Investment Plan’ (PNIEB) in 2017. The plan took an inter-sectoral approach and focused in particular on how public-private-partnerships could support blue economy growth. It identified opportunities for targeted investments in fisheries and aquaculture, seafood value chains, tourism and ecotourism, maritime transportation, marine plastic, as well as initiatives to build community resilience and a focus on youth. It also included relevant information on climate change to ensure the sustainability of investments.

The overall aim should be to prepare a single investment programme document for the coordination, harmonisation and alignment of all blue economy-related interventions. It should also help to ensure there is an economic return for large-scale investment projects, and that this crowds-in private investment.

Figure 27: Cabo Verde: National Blue Economy Investment Plan’(PNIEB)

	Key elements of the investment strategy
1	Analyse the constraints and opportunities, and identify the sources of blue growth
2	Draw up an inventory and analyse the performance of existing programmes
3	Identify investment needs and the reforms to be implemented nationwide to generate significant economic impacts and effects
4	Estimate the overall cost of the National Blue Economy Investment Plan, identifying the main sources of financing and designing the resource mobilisation strategy
5	Identify institutional adjustments and public and private partnerships (PPPs) that enable the implementation of components of the National Strategy for Transition to Blue Economy in the most efficient, transparent and participatory manner
6	Establish an institutional mechanism for PNIEB implementation, monitoring and evaluation
7	Facilitate the organisation of a donor round table bringing together blue economy stakeholders

Source: African Development Bank and FAO (2017)

2. Catalyse domestic resources for the blue economy through the creation of a blue economy financing facility

To-date, key blue economy sectors like ports, fisheries and aquaculture, and tourism have not featured as prominent investment priorities for domestic public resources despite these areas being identified as priority sectors in the Strategic Development Plan.

Timor-Leste’s Petroleum Fund is an institutional mechanism which could be better harnessed in support of the blue economy. One option is to leverage some of these resources to capitalise a new

blue economy financing facility which could be structured in such a way that it is also able to receive resources from donor partners and other entities engaged in marine conservation.

The facility should be established not as a small pilot fund but a larger mechanism which is able to offer technical assistance and capacity-building support on the blue economy, as well as provide a mix of financial instruments to blue economy projects and enterprises (grants, concessional loans and guarantees). It should be developed as a facility that is able to absorb higher risk and can offer patient capital/take a long-term view, and is able to withstand some losses. A key role for the facility will be the ability to provide concessional capital and guarantees to incentivise the local financial system to invest in the blue economy, unlocking private resources for development. There will be a key role for development partners, and especially multilateral development banks, to support the facility with both technical assistance and concessional financing, especially in its early days.

The aim would be to put in place the ‘building blocks’ for a national blue economy financing ecosystem which supports an integrated approach to financing the blue economy and institutionalises a shift away from smaller, short-term projects which are expensive and not necessarily well-coordinated, towards an institutional mechanism for blue economy growth and development. The facility should play a central role in supporting the implementation of the blue economy investment strategy.

The next phase of the work could develop more detailed technical proposals around how such a blue financing facility could be structured, its mission, the services it would provide, and governance structure. A strong focus on technical assistance, capacity-building and business “incubation” are likely to be critical. Experience in the Seychelles has shown for example that the availability of funds through specially designed mechanisms like its Blue Grant Fund does not automatically mean that entrepreneurs or organisations have the capacities to apply for those funds. Barriers persist with respect to application processes and the ability to prepare high quality project proposals locally, especially amongst more marginalised communities like fishing communities and female entrepreneurs.¹¹⁹ These lessons will be critical for Timor-Leste.

3. Leverage new innovative finance mechanisms and funds focused on the blue economy

This roadmap has illustrated how the landscape for financing activities related to the blue economy has become more sophisticated and diversified over recent years. New funds and financial instruments have emerged, which present opportunities to work with different partners and mobilise additional public and private financing for the blue economy. This roadmap has aimed to raise awareness of these diverse opportunities in Timor-Leste, however further work will be needed to identify which financial instruments may hold the most potential for Timor-Leste and which activities or investments they could ultimately fund. Timor-Leste’s development partners can play a critical role to help build capacities on new and innovative forms of financing, through targeted training, as well

¹¹⁹ See Commonwealth Secretariat, 2020: https://bluecharter.thecommonwealth.org/wp-content/uploads/2020/10/D17094_V2_CBC-Case-Studies_14_BlueEcon_Seychelles.pdf

as use their resources in a catalytic way to crowd-in private investors. Areas that could be looked at in more detail in the next phase of work include:

- **Blended finance:** Blended finance has emerged as a key tool used by development partners to crowd-in private capital. It is also being used by philanthropic entities like the Global Fund for Coral Reefs. The demonstration effect of the Tibar Bay Port transaction places the government in a stronger position to look further at the ways in which blended finance and PPP-models might attract future private sector infrastructure investment to the country. The development of the blue economy investment strategy can identify which investments might be well suited to blended finance approaches.
- **Blue bonds:** Timor-Leste’s favourable debt position means it may have space to explore the viability of a blue bond issuance at some point over the next few years. The Seychelles’ blue bond illustrated the important role that development partners can play in blue bond issuance. This includes direct financing support (to de-risk the bond and thus make it more affordable) as well as their role in project identification, targeted investor outreach, and other areas. Investments funded through blue bonds need to be large enough to be worthwhile and to attract investors’ attention, but not so large they pose too great a risk. Small countries can absorb only smaller risks. The quality of the investment pipeline is therefore paramount, and further work needs to be done to develop this including through a blue economy investment strategy. Timor-Leste will also need to think about the storyline or narrative it will develop to attract private investors. Possible areas of intervention for a blue bond and a description of the ways in which success can be measured are outlined in the table below.

Figure 28: Areas of intervention for a blue bond

Blue Economy Sector	Key Performance Indicator (KPI) Areas
Sustainable and fully traceable seafood	Fisheries: All operations Marine Stewardship Council certified Aquaculture: All operations Aquaculture Stewardship Council certified All seafood traceable to origin
Ocean energy	Sizeable increase in ocean-based renewable energy production Develop new renewable energy production from wave and tidal energy
Ocean transport	Reduce GHG emissions below International Maritime Organisation trajectory
Ocean waste	Reduction in ocean plastic waste Reduce run-off from land pollutants like agriculture

Source: Author’s adaptation from UN Global Compact Sustainable Ocean Business Platform (2020)

4. Model scenarios for environmental fees/levies

Timor-Leste’s Marine Protected Areas do not have a nation-wide and institutionalised system to generate on-going revenues for the protection and management of marine ecosystems. Where they exist, they are very localised and have only recently been piloted. It will be important to look at the financial requirements for the ongoing financing of MPAs, taking into account the impacts of climate change, and taking into account a review of existing mechanisms for financing MPAs, and their effectiveness.

Experiences from other countries have shown that various forms of “environmental fee” – mostly from tourism – can generate revenues on a sustainable basis for supporting ongoing management of MPAs. In Timor-Leste, there is likely to be some scope to implement some form of “blue levy” on visitors to Timor-Leste, including through marine protected area entrance fees, dive or snorkel fees, cruise ship arrivals, or other tourism related fees. These should be further explored and various scenarios modelled.

These can also be supplemented by innovative sources of finance to fund MPAs, like blue carbon credits, which is a fairly new market but one which is likely to see significant growth over the coming period. This approach is being implemented in Madagascar to help protect and restore mangrove forests.¹²⁰

Figure 29: Lesson learned from blue carbon projects

1	Consult with local stakeholders from the beginning to understand local demand, desired outcomes and to build ownership for the project
2	Define project objectives, and have in-country capacity for monitoring, reporting and verification
3	Consider potential impacts of climate change for site selection, prioritising areas most resilient to sea-level rise
4	An early-stage feasibility assessment is recommended to explore technical, legal, financial planning and community engagement considerations
5	Develop a business plan that shows when credits will begin to be accumulated, how much they will be worth, and how much money can be expected over the life of the project. Often blue carbon projects are expensive up front and the carbon credits do not kick in for several years after the project has been established
6	Development of trust funds can help to improve the transparent and accountable disbursement of carbon credit revenues, ideally with a professional board and fund manager who can provide regular, detailed reporting on the receipt and use of funds
7	Incorporate livelihood considerations into conservation and restoration projects for blue carbon
8	Commit to long-term adaptive management, including monitoring, to assess and adjust management of blue carbon habitats as needed

Source: Author’s adaptation from Reef Resilience Network¹²¹

¹²⁰ See: Blue Ventures: <https://blueventures.org/conservation/blue-forests/>

¹²¹ See: Reef Resilience Network, Blue Carbon Projects: <https://reefresilience.org/blue-carbon/blue-carbon-projects/>

5. Leverage climate finance

Timor-Leste could work with development partners explore options to leverage climate finance in support of the blue economy. While Timor-Leste has successfully accessed grant financing from the Green Climate Fund, projects have focused on reforestation and the strengthening of institutions to assess and manage climate risks. Other areas where climate finance can play a role and which may be relevant to Timor-Leste include projects that seek to model climate risks on the fisheries and aquaculture industries so that adaptive actions can be taken to help build the resilience of coastal communities and fishing communities to climate change. This kind of work is being undertaken in Belize for example.¹²²

6. Loans, savings and insurance schemes for coastal communities

The domestic financial system can play a much more prominent role in financing the blue economy. On the lender side, while the BNCTL indicated a strong interest in the blue economy, its portfolio linked to the blue economy is negligible.

Financial inclusion has increased considerably over recent years, while access points to financial services have tripled over the last two years, facilitated in part by new technologies. 61% of the Timorese population now uses bank services.¹²³ However there is a need to provide more diversified financial products in Timor-Leste. Some of these can be tailored to the blue economy and to coastal communities to help drive economic diversification.

For example, Timor-Leste could explore the development of community microfinance programmes to enable/incentivise sustainable marine activities and livelihoods linked to marine ecosystems. It could also explore the implementation of innovative “blue” microinsurance schemes like COAST which is being implemented in the Caribbean, and which provides insurance coverage for small fishers, while incentivises the sustainable use of marine resources. These kinds of financial initiatives can act as a tool to strengthen the local private sector and build resilience to shocks and stresses of various kinds, like extreme weather events.

¹²² <https://www.greenclimate.fund/document/enhancing-adaptation-planning-and-increasing-climate-resilience-coastal-zone-and-fisheries>

¹²³ Financial inclusion report (2020)

Annex:

List of Institutions Consulted in the area of Blue Economy

- **Government Institutions**
 1. Ministry of Agriculture and Fisheries
 2. Ministry of Commerce and Industry
 3. Ministry of Foreign Affairs
 4. Secretary State of Environment
 5. Chamber of Commerce
 6. Trade Invest

- **Donors**
 1. KOICA
 2. New Zealand Embassy
 3. USAID
 4. GiZ
 5. EU
 6. IOM

- **Banks**
 1. Central Bank of Timor-Leste
 2. Commercial Bank of Timor-Leste

