Towards a Blue Recovery in Samoa

APPRAISAL REPORT

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Foreword

The Blue Recovery Hubs initiative, a partnership between the OECD and the Friends of Ocean Action (a coalition convened by the World Economic Forum, in collaboration with the World Resources Institute), was established as an accelerator platform to support countries "build forward bluer" after the COVID-19 pandemic. By providing policy support and mobilising and aligning resources, the initiative aims to advance two key objectives: (i) enhance the long-term sustainability of existing ocean economy sectors and (2) generate new and sustainable opportunities that can enable economic diversification and act as a multiplier of the Sustainable Development Goals.

The Blue Recovery Hubs place an emphasis on small island developing states (SIDS), where the economic fallout of the COVID-19 pandemic was particularly severe, but which also hold a global leadership on sustainable ocean issues. The first Blue Recovery Hub was established in Fiji in 2022, with Samoa selected as the second focus country for the initiative.

Each Blue Recovery Hub consists of three stages:

1. An **appraisal** of the country's ocean economy, including its vulnerabilities made apparent by COVID-19, and the opportunities for the ocean to drive resilient and sustainable development.
2. Based on the appraisal, a **"Sustainable Investment Pathway",** which evaluates the barriers to investment in a chosen area and presents a roadmap to overcome them.
3. A **stakeholder roundtable** to facilitate co-ordination and collaboration among stakeholders in implementing the solutions of the Sustainable Investment Pathway.

Over the three stages, the Blue Recovery Hubs initiative enables focus countries to anchor their ocean policies in robust evidence and establishes a coherent and co-ordinated framework for partnership between them, development co-operation providers, the private sector, and other stakeholders. By identifying key opportunities for intervention, the initiative also supports development partners to achieve relevant international targets, such as the commitments made by the OECD Development Assistance Committee (DAC) members in their *Declaration on a new approach to align development co-operation with the goals of the Paris Agreement on Climate Change.*

This appraisal report presents the challenges and opportunities specific to Samoa and allows for tailoring the next stages of the Blue Recovery Hubs initiative to the Samoan context. It is informed by a fact-finding mission to the country, as well as data analysis and a review of the latest literature, all linked to Samoa's ocean economy.

The appraisal draws on the three analytical pillars of the OECD Sustainable Ocean Economy Country Diagnostics, which are economic and sustainability trends, governance and policy instruments, and financing flows and instruments (with a focus on development finance). The three pillars help assess alignment across Samoa's ocean economy. In principle, socioeconomic and environmental factors should inform and guide policy ambitions, which, in turn, shape suitable institutional arrangements. Meanwhile, the financing landscape ought to support these policy priorities and adapt to the economic context.

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The report was informed by structured interviews and consultations with representatives from relevant Samoan ministries and government bodies, development partner representatives, think tanks, civil society and the private sector, including from: Samoa's Ministry of the Prime Minister and Cabinet, Ministry of Foreign Affairs and Trade, Ministry of Natural Resources and Environment, Ministry of Finance, Ministry of Agriculture and Fisheries, Ministry of Works, Transport and Infrastructure, Ministry of Police and Prisons, Ministry of Customs and Revenue, Ministry of Communication and Information Technology, Ministry of Education, Sports and Culture, Ministry of Commerce, Industry and Labour, Central Bank of Samoa, Development Bank of Samoa, Samoa Ports Authority, Samoa National Provident Fund, Scientific Research Organisation of Samoa, National University of Samoa, Samoa Bureau of Statistics, Samoa Umbrella for Non-Governmental Organisations, Samoa Commercial Bank, National Bank of Samoa, Bank South Pacific, Australia and New Zealand Banking Group, Pacific Islands Forum Secretariat, Secretariat of the Pacific Regional Environment Programme, Pacific Islands Forum Fisheries Agency, European Union, New Zealand High Commission, Australian High Commission, British High Commission, Japan International Cooperation Agency, United Nations Development Programme, World Bank Group, Asian Development Bank, Food and Agriculture Organization, United Nations Capital Development Fund, Conservation International, Waitt Foundation, World Wildlife Fund and the International Union for Conservation of Nature. Support for the identification of stakeholders for these consultations and for the consultations themselves was provided by Janice Nand and Sheenal Naiker (Solved (Fiji) Pte Limited).

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Abbreviations and acronyms

AFSP	Agriculture and Fisheries Sector Plan
DFNS	Debt for nature swaps
EEZ	Exclusive Economic Zone
FDI	Foreign direct investment
GDP	Gross domestic product
IFC	International Finance Corporation
IMF	International Monetary Fund
IUU	Illegal, unreported and unregulated fishing
KSO	Key strategic outcome
MAF	Ministry of Agriculture and Fisheries
MFAT	Ministry of Foreign Affairs and Trade
MIRAB	Migration, remittances, aid and bureaucracy model
MNRE	Ministry of Natural Resources and Environment
MPA	Marine Protected Area
MSP	Marine spatial plan
MWTI	Ministry of Works, Transport and Infrastructure
NESP	National Environment Sector Plan
NOSC	National Ocean Steering Committee
ODA	Official development assistance
OPEC	Organization of the Petroleum Exporting Countries
PDS	Pathway for the Development of Samoa (2021/22–2025/26)
PES	Payments for ecosystem services
SAMOA	Small Island Developing States Accelerated Modalities of Action
SDG	UN Sustainable Development Goal
SDS	Strategy for the Development of Samoa (2016/17–2019/2020)
SIDS	Small island developing states
SOS	Samoa Ocean Strategy

STSP	Samoa Tourism Sector Plan
SUNGO	Samoa Umbrella for Non-Governmental Organisations
USD	US dollar
VAT	Value-added tax
WST	Samoan tala

Executive summary

Samoa's ocean economy is both a source of vulnerability and opportunity for its sustainable development

Samoa, a small island developing state, has an economy closely tied to the Pacific Ocean. The pursuit of a sustainable ocean future is central to Samoa's development vision. This is reflected in the country's medium and long-term national development strategies, which recognise the potential of several ocean-based industries for economic growth. The government understands that harnessing ocean resources is vital for sustainable economic development and improving the livelihoods of its people. It also acknowledges that the ocean represents a source of cultural identity and spiritual connection for many Samoans and their communities.

Samoa's structural characteristics pose several challenges to the development of its ocean economy. Like many Pacific small island developing states (SIDS), Samoa has a small land mass and population, a predominantly maritime environment, and is remote from major markets. Compared to other developing countries, it faces specific challenges, including a lack of economic diversification, lower economies of scale, pressure on resources, and higher costs of goods and services.

The COVID-19 pandemic and climate change have exposed the vulnerability of Samoa's ocean economy to external shocks and natural disasters. This vulnerability partly stems from its heavy reliance on the tourism industry, which represents a quarter of Samoa's gross domestic product (GDP), while the rest of the ocean economy accounts for only 3% of GDP. Samoa's ocean-based sectors are also particularly exposed to natural disasters, the intensity of which is expected to rise due to climate change. Not only do these disasters cause severe disruptions in the short run (e.g. for maritime transport) but they also leave scarring effects (e.g. due to diminished tourist appeal).

Weak management of ocean-based economic activities can also lead to a degradation of Samoa's marine environment through waste and land-based pollution, overexploitation of resources, poorly planned development activities, and the introduction of invasive species. For example, approximately 10% of Samoa's annual plastic consumption is estimated to leak into the ocean. In the absence of adequate safeguards, the tourism sector can be a driver of this leakage. Likewise, overfishing can lead to the deterioration of the health of fish stocks. The sustainability of much of Samoa's fish stocks has not yet been assessed, leaving ambiguity over the extent of overfishing in Samoa's exclusive economic zone.

A sustainable ocean economy has the potential to improve Samoa's environmental, economic and social outcomes. Given its linkages to other ocean economy sectors, the tourism sector is the key to Samoa's recovery. It could advance the sustainable management and use of ocean resources, provided that the development of the sector aligns with the country's long-term economic, social and environmental objectives. The economic contribution of the fisheries sector, which is small despite its importance for Samoans' livelihoods, would benefit from a shift towards value-adding activities and import substitution. There is also room to leverage the potential of other ocean-related sectors, such as the shipping industry that could capitalise on Samoa's central Pacific location. Emerging sectors, like renewable energy, marine

biotechnology and aquaculture, also present new economic opportunities, although existing constraints would have to be addressed to attract investment.

Samoa's policy framework provides a solid foundation for sustainable ocean management, but links with development and sector strategies can be improved

The 2020 Samoa Ocean Strategy (SOS) lays the groundwork for a coherent approach to ocean governance. The SOS is well-placed to tackle Samoa's climate and environmental stressors, and it presents an opportunity to address gaps, redundancies, and contradictions in Samoa's ocean governance. Through extensive stakeholder consultations involving governmental ministries and agencies, local communities, representatives of civil society organisations, and development partners, the SOS has achieved broad-based legitimacy and support, and established clear guidelines and objectives for the sustainable management of ocean resources.

However, policy coherence and successful implementation of the SOS require better integration with national development and sectoral plans. While the SOS acknowledges the ocean's socioeconomic value, it does not fully articulate a vision for harnessing the ocean economy for resilient and inclusive long-term growth. Samoa's development aspirations are more directly captured by its national development plans and certain sector-specific planning instruments, which also guide budget allocations and development partners' priorities. This underscores the need to strengthen the connections between these planning instruments, and subsequently ensure proper funding of the SOS and a holistic view of the ocean economy.

Aligning scarce financial resources and ocean-related investment needs is crucial for unlocking the potential of Samoa's ocean economy.

Samoa's current financial landscape reflects the difficulties faced by SIDS, i.e a lack of economic diversification and limited opportunities for international trade and investment. Samoa is heavily dependent on remittances and official development assistance (ODA), which constituted respectively 28% and 12% of its financial mix in 2021. It also faces challenges in attracting private investment. Although Samoa's public debt is modest compared to other SIDS, its heightened vulnerability to natural disasters and external shocks significantly increases its risk of external and overall debt distress. This, in turn, restricts Samoa's fiscal capacity for large investments in the ocean economy.

Existing financing opportunities could bolster the sustainable development of the ocean economy. The government's ability to raise financing and attract investment is hindered by structural limitations, but there is room to more effectively direct ODA to promote ocean economy-related investments. Novel tax instruments (e.g., sustainable tourism levies) and innovative financing mechanisms, such as blue bonds and insurance schemes, could also be introduced to finance ocean conservation and increase linkages between economic, social, and environmental considerations of the sustainable use of ocean resources.

Successful implementation of the SOS hinges on its capacity to secure sufficient financial and technical support. While Samoa has made notable strides in developing a comprehensive approach to ocean resource management, active collaboration with development partners and the private sector will be crucial to mobilising the necessary funding and expertise for the development of its ocean economy.

1 The ocean economy of Samoa: Economic trends, the impact of recent crises and sustainability stressors

This chapter explores the structure and patterns of Samoa's ocean economy, highlighting the crucial roles played by key sectors such as tourism, fisheries and maritime transport. It emphasises their contributions to the overall economic context and assesses the socio-economic impacts of the COVID-19 pandemic, to draw lessons for building a sustainable and resilient ocean economy. The chapter also explores the pressing challenges faced by Samoa's ocean economy, including climate change, overexploitation of marine resources and environmental degradation, and discusses the potential of ocean economy activities to drive long-term economic growth and development.

Key messages

- Despite its structural limitations, characteristic of small island developing states, Samoa has achieved substantial economic development since graduating from the list of Least Developed Countries in 2014.
- Samoa's economy is intrinsically linked to the use of its ocean resources. This is reflected in the country's medium and long-term national development strategies (Pathway for Development of Samoa and *Samoa 2040*), which recognise the potential of ocean-based industries in driving economic growth.
- Recent crises, including the COVID-19 pandemic and climate change, have highlighted the vulnerability of the country's ocean economy to external shocks and natural disasters. This can be attributed in part to the high reliance on the tourism industry, which accounts for a quarter of Samoa's gross domestic product. Looking ahead, while tourism still represents an important economic opportunity, addressing the sector's risks is pivotal for Samoa's economic resilience.
- Ultimately, achieving long-term economic growth and sustainable development requires Samoa to better balance the economic potential of its ocean economy with social and environmental considerations. This involves ramping up its investments in adaptation and resilience, as well as addressing the constraints on the development of its ocean economy, such as the volatility of the labour market, heavy reliance on imports and insufficient private sector development.

1.1. Samoa's ocean economy in the context of its overall development

Samoa is a small ocean economy that shares many structural characteristics with other Pacific small island developing states (SIDS). The ocean plays a critical role in Samoa's economy and the livelihood of its people, with key sectors like tourism, fisheries and maritime transport relying heavily on the country's rich marine resources. Although Samoa's 120 000-square-kilometre exclusive economic zone (EEZ) is the smallest in the Pacific region, it includes some of the most biodiverse marine ecosystems in the world, with nearly a thousand species of fish recorded, including 890 found in shallow water or reefs (Convention on Biological Diversity, 2023[1]). Like many Pacific SIDS, Samoa is characterised by its small landmass (2 830 square kilometres) and population size (195 979 inhabitants, mostly dispersed across two main islands, Upolu and Savai'i), its remoteness from major markets, and a predominantly maritime environment (Government of Samoa, 2022[2]) (Figure 1.1). This results in specific development challenges compared to other developing countries, including a lack of economic diversification, lower economies of scale, pressure on resources, and higher costs of goods and services (OECD, 2018[3]).

Samoa's structural features have left it subject to economic constraints, with implications for its ocean economy. Due to its high exposure to natural disasters and external shocks, Samoa is classified as a country at high risk of debt distress (World Bank and IMF, 2021[4]). Increased investments are essential to provide for its future resilience and long-term growth, but its fiscal constraints mean that the viability of these investments depends on access to additional grant financing (IMF, 2023[5]). Samoa also faces a persistent trade deficit, because it relies on a narrow range of low-value exports, such as unprocessed fish and agricultural products, and high levels of imported goods.

Figure 1.1. Samoa consists of two main islands, Upolu and Savai'i, both encircled by coral reefs

Source: Government of Samoa (2022[2]), *Pathway for the Development of Samoa FY2021/2022-FY2025/26*, https://www.mof.gov.ws/wp-content/uploads/2022/02/Pathway-for-the-Development-of-Samoa.pdf.

Samoa plays an influential role on the international stage on core issues related to the sustainable development needs of SIDS, including climate change and the ocean. The country has been a leading voice in advocating for the needs of SIDS, including greater access to finance and technology to help build resilience and adapt to the effects of climate change. It has also been a vocal advocate for urgent global action on reducing greenhouse gas emissions, increasing investment in climate adaptation measures and the sustainable management of the world's oceans. Samoa's hosting of key high-level international events has given it considerable international influence and a high profile in advocacy on the SIDS development agenda. One notable example was the Third International Conference on Small Island Development States, held in Apia in 2014, which brought together representatives from SIDS around the world to discuss the unique challenges they face. The event resulted in the development of a plan of action, widely known as the Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway, which provided a framework to address the sustainable development needs of SIDS in areas such as climate change, ocean conservation and sustainable tourism (UN-OHRLLS, 2014[6]). More recently, the country hosted the 2022 Pacific Small Islands Developing States Solutions Forum, where leaders from across the region discussed the unique challenges facing SIDS, country-specific and regional successes and the next steps for advancing towards the achievement of the SAMOA Pathway and the 2030 Agenda for Sustainable Development (Government of Samoa, 2023[7]). Samoa is also an active member of various organisations with a mandate to support regional cooperation among Pacific countries, including on ocean-related issues, such as the Pacific Islands Forum, the Pacific Community, and the Secretariat of the Pacific Regional Environment Programme, headquartered in Apia. In addition, Samoa is engaged in regional collaboration initiatives in specific ocean-related sectors, such as fisheries (see Section 2.2) and tourism.

Since graduating from the Least Developed Country category, Samoa has experienced substantial economic growth and development gains. Samoa graduated in 2014 from the United Nations' list of Least Developed Countries, in large part thanks to improvements in its gross national income and human development indicators (United Nations, 2018[8]). It has achieved significant socioeconomic progress in areas such as health and education, driven by the government's commitment to sustainable development. For example, maternal mortality continued to decline, from 47 deaths per 100 000 births in 2014 to 43 in 2019, and under-5 mortality decreased from 18.7 per 1 000 deaths in 2015 to 17.4 in 2019. Besides, Samoa's Human Capital Index 2020 value of 0.55 remains slightly higher than those of Fiji (0.51), Tonga (0.53) and Tuvalu (0.45). The country's gross domestic product (GDP) increased consistently until 2020, rising by 18% between 2014 and 2020 (OECD, 2022[9]). However, the economic fallout from a 2019 measles outbreak, immediately followed by the COVID-19 pandemic, has threatened to derail these gains. An online survey conducted by the United Nations Resident Co-ordinator Office in 2020 reported that two-thirds of Samoan households had experienced a decline in their chief source of income, 57% were eating less food overall, and nearly half (49.6%) were worried about being able to educate their children (United Nations, 2020[10]).

Figure 1.2. Samoa's progress on nearly half of the SDGs has stagnated or reversed.

Source: Sachs et al. (2022[11]), Sustainable Development Report 2022, https://doi.org/10.1017/9781009210058.

Despite progress in key development areas, Samoa is not on track to achieve most of the Sustainable Development Goals (SDGs). Since the adoption of the SDGs in 2015, Samoa has made significant strides in key areas of development such as poverty reduction, access to education, clean water and sanitation, climate action and the fight against undernutrition. This contrasts with persistent challenges in achieving other development goals, such as gender equality or inequality reduction. As of the end of 2022, Samoa had achieved two SDGs, namely SDG 12 on responsible consumption and production and SDG 13 on climate action, in large part thanks to its low volumes of waste and CO_2 emissions. On the other hand, the country is falling short on at least 12 of the other SDGs (Figure 1.2). It is nonetheless important to exercise caution when interpreting these results. As with many other Pacific SIDS, assessing and comparing Samoa's progress towards attaining the SDGs is difficult due to limited data availability, resulting in the country being unscored and unranked in the 2022 Sustainable Development Report (Sachs et al., 2022[11]).

The pursuit of a sustainable ocean future is central to Samoa's vision of development. Samoa acknowledges that harnessing the potential of its ocean resources is essential for achieving sustainable economic growth and improving its people's livelihood. The government also recognises that the ocean is more than an economic resource, and represents a source of cultural identity and spiritual connection for many Samoans (Government of Samoa, 2020[12]). As a result, Samoa's approach to the sustainable ocean economy is grounded in the principles of traditional knowledge, community engagement and inclusive governance. In recent years, the country has worked towards developing a policy framework that encourages sustainable marine management practices, including conservation measures and responsible exploitation of marine resources (see Chapter 2). By prioritising the ocean's sustainable use, Samoa seeks to base its development on a comprehensive and integrated vision that encompasses economic growth, social equity and environmental protection.

1.2. Composition and trends of Samoa's ocean economy

Samoa's economy is relatively concentrated and dependent on external transfers and tourism. Samoa presents many characteristics of the MIRAB model, a term coined in the 1980s to designate Pacific SIDS with an economic model based on "migration, remittances, aid and bureaucracy" (Bertram and Watters, 1985[13]). As a result, the country is heavily reliant on external transfers, including official

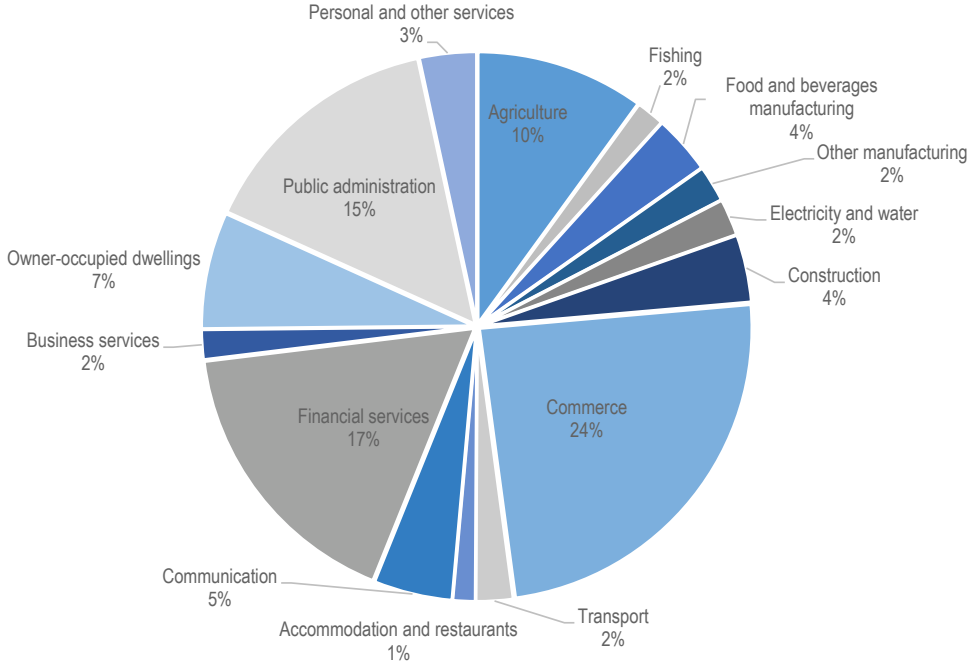
development assistance and remittances from Samoans living abroad, which accounted respectively for 13% and 30% of its gross national income in 2021. In some respects, however, Samoa has been gradually shifting away from a typical MIRAB model over the past two decades, with tourism representing an increasingly significant tranche of the economy.

While external transfers provide Samoa with significant income to help alleviate poverty and ease financial constraints, they also pose a challenge to its sustainable development. First, high dependence on external transfers can have negative implications in the long run, exposing Samoa to shifts in donor priorities and shifts in the global economy. Second, the heavy reliance on external transfers can sometimes lead countries to experience "Dutch disease" symptoms, a phenomenon where the influx of foreign currency leads to an appreciation of the exchange rate, making domestic industries less competitive and potentially leading to a decline in exports and economic diversification (Chami et al., 2018[14]). Additionally, the growth in remittances has been mostly driven by the increasing use of seasonal worker schemes, which creates other issues for the country. A notable one is the depletion of the prime-age workforce, which can impact the productivity and skills availability of key sectors of the economy (see Section 3.2).

The main force driving Samoa's GDP is the tertiary sector, which accounts for 70% of its economy. This is largely due to the leading roles played by commerce and financial services (accounting respectively for 24% and 17% of total GDP), which reflect in large part the importance of tourism and remittances for the country's economy. The public administration, which is formally categorised as part of the tertiary sector, also plays a crucial role, representing around 15% of total GDP. Conversely, primary industries such as agriculture and fishing, and secondary industries, including manufacturing and construction, make a relatively minor contribution to the economy, at respectively 12% and 10%.

Figure 1.3. The tertiary sector makes up more than two-thirds of Samoa's GDP

GDP by industry (% of total), 2022



Source: Samoa Bureau of Statistics (2023[15]), National Accounts, https://www.sbs.gov.ws/national-accounts/

StatLink https://stat.link/hdg3af

Assessing the economic impact of ocean-related industries on Samoa's economy is a complex task, and a precise picture is not yet available. The ocean economy encompasses a wide range of sectors, each with its specific challenges in terms of data collection and analysis. Consistent and comparable economic data on ocean activities is not yet available, largely due to the difficulty of isolating the ocean-related component from aggregate categories found in standard economic statistics (Jolliffe, Jolly and Stevens, 2021[16]). While satellite accounting offers promise, including for Samoa, which has launched a tourism satellite account pilot, the methods are still experimental and the results preliminary. Additionally, some ocean economy activities are informal, making it challenging to accurately measure the ocean's contribution to Samoa's GDP. Small-scale fishing is partly informal and carried out on a subsistence basis, which makes it difficult to capture its economic impact comprehensively using traditional measures of economic output. As described in Sections 1.3 and 1.4, the ocean economy is also subject to a range of external and environmental factors, including global economic trends, natural disasters and changing weather patterns, that can significantly affect its contribution to the economy from one year to the next. Table 1.1 provides an initial mapping of key ocean economy sectors against the GDP categories used by the Samoa Bureau of Statistics. This, while imperfect, helps to approximate the economic importance of the ocean to Samoa's economy.

Table 1.1. Mapping ocean economy industries to Samoa's national accounts

Ocean economy sectors (OECD, 2021)	Possible Samoa Bureau of Statistics-allocated sector for economic reporting	Main data sources in Samoa
Marine fishing	Fishing	Ministry of Agriculture and Fisheries
Marine aquaculture		
Processing and preserving of marine fish, crustaceans and molluscs		
Maritime passenger transport	Transport	Samoa Ports Authority; Ministry of Works, Transport and Infrastructure
Maritime freight transport		
Maritime ports and support activities for maritime transport		
Maritime ship, boat and floating structure building	Other manufacturing	Ministry of Works, Transport and Infrastructure
Offshore extraction of crude petroleum and natural gas	Not applicable	Not applicable
Maritime manufacturing, repair and installation	Other manufacturing	
Marine and coastal tourism	Accommodation and restaurants; food and beverages manufacturing; commerce; business services	Samoa Tourism Authority; Ministry of Natural Resources and the Environment
Offshore industry support activities	Construction; other manufacturing	Ministry of Works, Transport and Infrastructure
Ocean scientific research and development	Public administration	Ministry of Education; Scientific Research Organisation of Samoa
Marine and seabed mining	Not applicable	Not applicable

Source: Authors' representation based on Jolliffe, Jolly and Stevens (2021[16]), "Blueprint for improved measurement of the international ocean economy: An exploration of satellite accounting for ocean economic activity", https://doi.org/10.1787/18151965 and Samoa Bureau of Statistics (2023[15]), National Accounts, https://www.sbs.gov.ws/national-accounts/.

Detailed analysis of Samoa's GDP shows that the services industry, with tourism at its core, is a significant and growing contributor to the economy. More than 60% of Samoa's GDP relies on the services industry, with tourism being its largest contributor and accounting for nearly 25% of the country's GDP (Pacific Tourism Organization, 2023[17]). Tourism, which caters primarily to international visitors and relies largely on Samoa's sociocultural and environmental assets, grew significantly in the years before the measles outbreak and the COVID-19 pandemic. From 2012 to 2019, international tourist arrivals

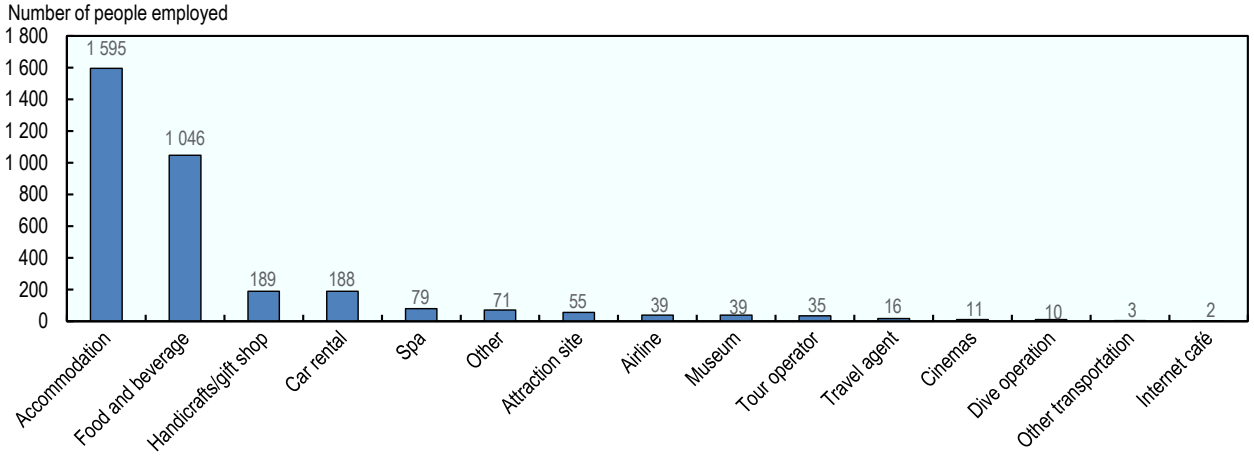
increased by 34%, from 135 000 to 181 000, and tourism receipts totalled USD 206.1 million in 2019, an increase of about 39% from USD 148.2 million in 2012 (World Tourism Organization, 2022[18]).

Tourism has significant economic and social benefits for Samoa, contributing to employment and supporting broader economic activity. As a labour-intensive industry, tourism provides employment opportunities for Samoans across a large range of skill levels, particularly in the hospitality and retail sectors. This includes the accommodation and food services sector, which accounted for 6.2% of total formal employment in Samoa in 2019 and is dominated by small and medium-sized enterprises. In addition to direct employment, the tourism industry also generates spill-over effects in other sectors of the economy. Tourist demand for locally sourced food and handicrafts creates opportunities for small-scale farmers and artisans. Moreover, the development of infrastructure and transportation services to support tourism also benefits other industries, such as agriculture, construction and manufacturing. Given its skew towards international visitors, the tourism industry is a significant source of export earnings; in 2019, Samoa's international tourism receipts represented 61% of total exports (World Bank, 2023[19]).

The accommodation and food and beverage sectors account for the majority of direct employment in the tourism industry. In 2020, accommodation alone represented nearly half of direct employment in the tourism sector (with around 1 600 employees, or 47% of total), followed by the manufacturing of food and beverages (around 1 000 employees, or 31%). Together, these two sectors represent approximately 80% of Samoa's direct employment in tourism (Figure 1.4). Handicraft and transportation come next in the ranking of sectors with the most employment related to tourism.

Figure 1.4. Tourism directly employed more than 3 000 people in Samoa in 2020

Tourism employment, 2020



Source: (Government of Samoa, 2022[20]), *Samoa Tourism Sector Plan 2022/2023 – 2026/2027*, https://www.mof.gov.ws/wp-content/uploads/2023/02/Tourism-Sector-Plan-2022-2027.pdf.

StatLink https://stat.link/lr3nyi

Other sectors of the ocean economy beyond tourism represent a smaller share of Samoa's GDP. The rest of the ocean economy, excluding tourism, accounts for a relatively modest 3% of the country's GDP. This includes activities such as fisheries, shipping and renewable energy. The fisheries sector represents around 1.8% of GDP and includes subsistence and commercial fishing. Tuna is the most important commercial fishing product in terms of revenue (Table 1.2) and accounts for 90% of Samoa's fish exports. The relatively small size of the fishing industry is reflected in its modest contribution to the

labour market. It accounted for only 0.4% of total employment in 2019, according to statistics from the Samoa Bureau of Statistics and the country's National Provident Fund.

Table 1.2. Tuna fisheries contribute to Samoa's economy through license revenue, employment and exports

Economic contribution of Samoa's tuna fisheries (2010-19)

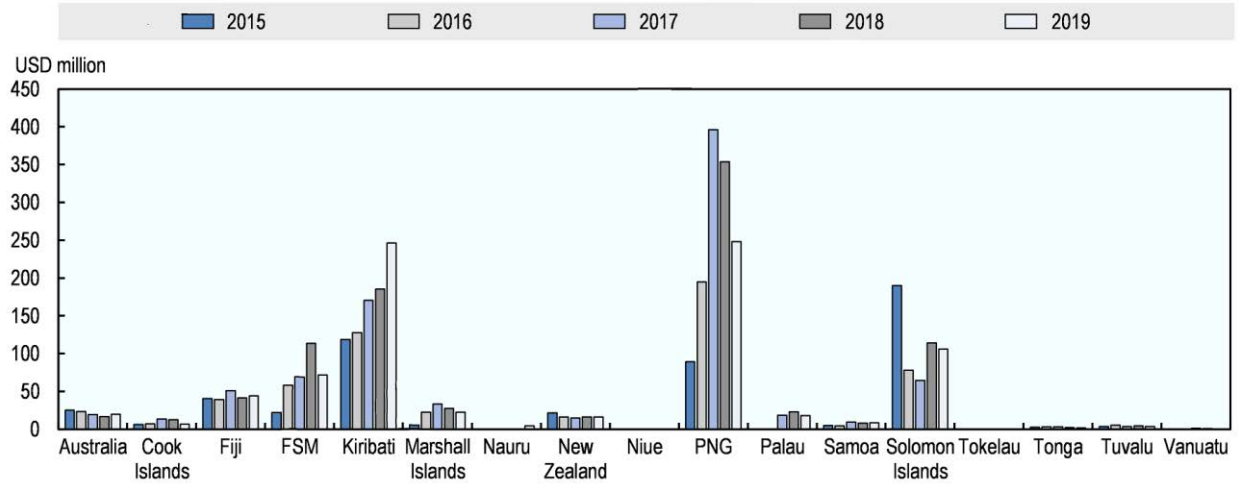
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Licence and access fee revenue (USD million)[a]	0.7	0.6	0.5	0.8	0.9	1.0	1.0	1.4	1.3	1.1
Onshore processing volumes (metric tonnes)[b]	4 261	1 873	2 725	2 209	1 344	1 329	5 702	7 284	5 107	5 539
Employment (number)[c]	414	395	415	325	327	327	387	273	246	346
Exports (USD million)[d]										
Japan[e]	0.021	0.014	0.023	0.005	0	0.757	0.592	0.229	0.062	0
United States[f]	0.34	0.34	0.18	0.01	0.00	0.52	0.73	0.45	0.63	0.30
Balance of payments (USD million)[g]	n.a.	n.a.	n.a.	2.4	1.4	4.9	4.1	5.8	5.7	5.4
Employment earnings (USD million)[g]	n.a.	n.a.	n.a.	0.7	0.4	1.6	1.2	1.6	1.6	1.6
Local purchases (USD million)[g]	n.a.	n.a.	n.a.	0.5	0.3	1.7	1.2	1.5	1.6	1.6

Note: n.a. = not available. a) Forum Fisheries Agency estimates. b) Volume processed refers only to longline/purse seine catch processed to some degree domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. c) Includes harvest, processing and ancillary services sectors, observers and government employees (artisanal sector not included). Based on the Forum Fisheries Agency's data collection project. d) Includes catch by nationally registered vessels that may not have been landed onshore. e) Japan Customs (https://www.customs.go.jp/toukei/info/index.htm) (excludes frozen whole tuna). f) National Marine Fisheries Service (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html). g) Derived using per tonne contribution.
Source: FFA (2022[21]), Economic and Development Indicators and Statistics: Tuna Fisheries of the Western and Central Pacific Ocean 2020", https://www.ffa.int/economic_indicators.

Fisheries play an important role in livelihoods, but the industry remains limited in size compared to those of other Pacific SIDS. As in many Pacific SIDS, the fishing sector plays a key role in Samoan society through its cultural, social and economic ties. In a way, the representation of fishing in Samoa's national accounts does not adequately reflect its socioeconomic importance, since it does not capture the links to post-harvest activities (e.g., processing or transhipment). In addition, beyond its contribution to the economy, the fishing industry in Samoa is also important for livelihoods, providing formal or informal employment and a source of food for many communities, including in times of crisis. However, the sector is smaller than in other Pacific SIDS, such as Kiribati, Papua New Guinea and the Solomon Islands, where offshore commercial fishing is a significant contributor to the economy. This difference is largely due to Samoa's geographic characteristics, including the size and location of its EEZ (Figure 1.5).

Figure 1.5. The activity of Samoa's tuna fisheries is relatively small compared to those of other Pacific countries

Value of tuna catch (2015-2019), in USD million



Note: The graphic presents the annual value of fleet catch in national waters by members of the Pacific Islands Forum Fisheries Agency (FFA). FSM refers to the Federated States of Micronesia and PNG to Papua New Guinea.
Source: FFA (2022[22]), "Value of WCPFC-CA Tuna Fisheries 2022", https://www.ffa.int/economic_indicators.

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The shipping sector represents around 0.4% of the country's GDP and includes activities related to port services, vessel operations and maritime transport. Samoa's international port, located in Apia, is the gateway for nearly all goods entering the country. It is also used by the fishing fleet (e.g. for transhipment or offloading), and by cruise boats and cable boats. In recent years, the volume of traffic in Samoa's international port has been limited by capacity constraints related both to lack of equipment (e.g. tugboats) and insufficient storage space. It has reached its capacity in terms of container space and has no dedicated dock for cruises, constraining potential traffic. In addition to the international port, two wharves (Aleipata and Asau), under the jurisdiction of the Samoa Ports Authority, are used for freight and passenger services. The Samoa Shipping Corporation, another state-owned enterprise, provides marine shipping and ferry services between Samoa's two main islands and American Samoa.

The renewable energy sector represents a very small share of Samoa's GDP. Although it accounts for only 0.2% of the country's GDP, the importance of renewable energy is expected to increase. Renewable energy represented 38% of Samoa's total energy generation in 2020 (with 24% in hydropower and 14% in solar power), but the government has committed to reach 70% in renewable energy use by the end of 2031 in its Low Emissions Development Strategy 2021-2030 (IRENA, 2022[23]).

1.3. Sustainability trends of Samoa's ocean economy

Samoa is highly exposed to natural hazards, including tropical cyclones, flooding, droughts and earthquakes. This reflects its position next to the Pacific Ring of Fire, which displays a high degree of tectonic activity and leaves Samoa vulnerable to earthquakes and tsunamis (World Bank, 2021[24]). Due to the El Niño Southern Oscillation, Samoa suffers from periods of drought and extreme rainfall (Kinoshita et al., 2022[25]). Generally, as with other low-lying SIDS, coastal flooding is common. Recent history has demonstrated its susceptibility to natural hazards. Samoa has suffered multiple cyclones, including major

events in 1990, 1991 and 2012, an earthquake and a tsunami in 2009, and drought in 2015 (Kinoshita et al., 2022[25]).

This has important implications for ocean economy sectors. Maritime transport, for example, can be severely disrupted if natural disasters physically degrade or destroy ports, which are naturally more prone to damage due to their position in low-lying coastal areas (Verschuur, Koks and Hall, 2020[26]). Disruptions at the Port of Apia, the only international port in the country, can have major economic and social implications, including by interfering with the safe delivery of emergency aid (ADB, 2023[27]). Tourism can also be severely affected by natural disasters. Destruction of critical infrastructure (e.g. roads, airports, telecommunications) in the immediate aftermath of a disaster can preclude the delivery of tourism services (Rosselló, Becken and Santana-Gallego, 2020[28]), and rebuilding requires time and resources. After the 2009 tsunami in Samoa, it took almost two years to restore damaged tourism infrastructure (Haque, 2011[29]). In the longer run, disasters can deter visitors and reduce a location's tourist appeal (Rosselló, Becken and Santana-Gallego, 2020[28]). As for the fisheries sector, the 2009 tsunami destroyed fishing equipment and infrastructure, impeding fishing operations (FAO, 2011[30]).

Natural disasters are less frequent than in Samoa's Pacific neighbours but have a relatively large economic footprint. Among Pacific Island countries, Samoa was ranked sixth in terms of the frequency of natural disasters over the 1980-2020 period (Kinoshita et al., 2022[25]), having experienced 10 such disasters in the past three decades, over a period where Papua New Guinea and Fiji experienced roughly 50 (Kinoshita et al., 2022[25]). Nevertheless, the economic damage in Samoa has generally outpaced that of its neighbours in the Pacific. Each of the two cyclones of 1990 and 1991 is estimated to have cost the Samoan economy more than 150% of its GDP, the highest ever recorded in the region (Kinoshita et al., 2022[25]). The 2009 earthquake/tsunami resulted in losses and damages equivalent to approximately 35% of GDP (Kinoshita et al., 2022[25]). This disproportionate impact indicates Samoa's broader socioeconomic vulnerabilities. Roughly 70% of its population and infrastructure are situated in coastal low-lying areas (Kinoshita et al., 2022[25]), increasing the risk of losses and damages. The possibility of repeated disasters could leave Samoa in a disaster-recovery cycle that would suppress GDP growth, enlarge fiscal and current account deficits, threaten debt sustainability[1] and result in economic decline and the failure of livelihoods (IPCC, 2022[31]).

The health of Samoa's marine environment is threatened not only by natural disasters but also by environmental pressures, including those related to ocean-based industries. Though it performs relatively well on aggregate measures of environmental quality (see Figure 1.2 and Figure 1.12), its marine environment is not immune to issues like waste and land-based pollution, over-exploitation of resources, poorly planned development activities and invasive species (Government of Samoa, 2013[32]). Tourism is often cited as contributing to ocean pollution, including pollution with plastics (OECD, 2022[33]). Samoa's total annual consumption of plastic products and packaging is estimated at roughly 6 830 tonnes (34.5 kg per capita), about 10% of which is mismanaged and potentially leaked to the ocean, largely due to a lack of adequate infrastructure (Asari et al., 2019[34]). Overfishing is also taxing Samoa's marine environment. The latest State of the Environment Report, released in 2013, identified overfishing in coastal areas and of specific types of tuna (i.e. older larger albacore stock) as salient issues (Government of Samoa, 2013[32]). The Global Fishing Index, which assesses the governance and sustainability of marine fisheries, notes that Samoa has "made limited progress restoring fish to sustainable levels" and that since much of its fish stocks (65%) are unassessed, their sustainability status is ambiguous (Minderoo Foundation, 2022[35]). Development and extraction activities in coastal areas (e.g. sandmining, coastal reclamations and construction), especially where they occur without proper vetting, have pernicious effects on Samoa's marine environment (e.g. increased risk of coastal erosion). Finally, the introduction, whether accidental or intentional, of alien invasive species threatens Samoa's marine and terrestrial ecosystems. Meanwhile, native invasive species, for example, the crown of thorns starfish, can destroy coral reefs (Government of Samoa, 2019[36]).

These stressors have tangible implications for ocean-related industries. Ocean-related industries, such as fisheries (e.g. due to dumped catch and net repairs) and tourism (e.g. due to a reduction in tourist appeal) can incur plastic leakage-induced economic costs or revenue losses.[2] The economic downside of overfishing is well acknowledged: globally, mismanagement of fisheries is estimated to result in economic losses of USD 83 billion (World Bank, 2017[37]). This demonstrates the synergies between averting and/or mitigating environmental pressures and improving the prospects of the ocean economy. The environmental threats are also indicative of the safeguards necessary for the ocean economy. Adequate enforcement of biosafety requirements is vital to curb the risk of introducing invasive species through maritime transport, while environmental impact assessments are crucial for ensuring that development respects the limits of the marine environment. It is worth noting that due to the lack of a systematic framework for measuring interdependency between the ocean economy and the marine environment, a comprehensive sense of the relationship between ocean-based industries and environmental pressures on Samoa's ocean is unavailable.

The shifting dynamics associated with climate change are intensifying risks for Samoa's ocean economy. By mid-century, Samoa is expected to face an increase in mean annual temperatures and the number of extremely warm days, a decrease in annual precipitation (although with no projected risk of drought hazard), a simultaneous rise in the intensity of extreme rainfall events, and the intensification of cyclones (in terms of wind speed and rainfall) (Kinoshita et al., 2022[25]). Marine ecosystems would be particularly affected. Increased carbon dioxide absorption would exacerbate ocean acidification; a rise in sea level would augment coastal erosion; and temperature increases would worsen coral bleaching (Government of Australia, n.d.[38]). The impact of these alterations, and others, on two ocean economy sectors, fishing and tourism, are synthesised in Table 1.3. According to projections, the expected economic losses related to climate change in Samoa amount to 3.8% of GDP, with the impact of tropical storms being paramount (Asian Development Bank, 2013[39]).

Table 1.3. The physical effects of climate change have implications for tourism and fisheries

Sector	Examples of climate change impacts
Tourism	1. Destruction or deterioration of such marine resources as coral reefs and tropical fish stocks, which boost tourist appeal 2. Destruction or deterioration of tourism-specific (e.g. hotels, airports) and general critical infrastructure (e.g. roads) due to more intense cyclones
Fisheries	1. Reduction of fish catch due to marine heat stress (estimated at 20% in the Northeast Pacific) 2. Declines in fish stocks related to ocean acidification 3. Geographical shifts in the distribution of fish stocks

Source: Kinoshita et al. (2022[25]) Samoa: Technical Assistance Report—Climate Macroeconomic Assessment Program, https://www.imf.org/en/Publications/CR/Issues/2022/03/21/Samoa-Technical-Assistance-Report-Climate-Macroeconomic-Assessment-Program-515505.

Investment in adaptation to climate change is critical to safeguard the potential of Samoa's ocean economy. This is made apparent by its high degree of climate change vulnerability and relatively low readiness for climate change: Samoa has a climate change vulnerability score of 0.487, ranking 128th globally (out of 182 countries), and a climate change readiness score of 0.428, ranking 88th globally (of 192 countries). A lower rank (higher score) implies more vulnerability and less readiness respectively[3] (Notre Dame Global Adaptation Initiative, 2023[40]). Meanwhile, the International Monetary Fund (IMF) posits that adaptation-related spending needs in Samoa—for transportation, flood mitigation, water and sanitation, the environment, agriculture and fisheries, and early warning systems, will total about USD 426 million over 2022-2026, or about 11% of GDP (Kinoshita et al., 2022[25]). Given the direct and indirect links between adapting to climate change and Samoa's ocean economy (e.g. how critical climate-resilient transport is for climate-resilient tourism), financing adaptation is essential for the performance of

ocean-related industries. Climate-proofing the transport sector is expectedly the costliest, and estimates suggest it will total USD 231 million from 2022-2026, more than half of Samoa's total spending needs for adaptation. Adapting agriculture and fisheries to climate change, by comparison, is estimated to cost USD 22 million (Kinoshita et al., 2022[25]).

Safeguarding ocean health also promotes climate change adaptation. Ecosystem-based approaches that leverage ecosystem services and biodiversity can promote climate change adaptation: for example, mangrove rehabilitation can act as a buffer against storm surges (Chong, 2014[41]). Given the pace and severity of climate change, however, the effectiveness of nature-based solutions is limited, for example in the ability of mangrove forests and saltmarshes to withstand the rise in sea levels (Seddon et al., 2020[42]). Their success in Samoa is predicated on an urgent assessment of the viability of the various ocean-based adaptation solutions. By including an ecosystem-based approach to adaptation in the Samoa Ocean Strategy (see Chapter 2), it has taken an important first step in this regard.

Adaptation to climate change is vital for long-term development, but its economic efficiency depends on the terms on which capital can be accessed. IMF simulations[4] reveal that financing adaptation not only yields net savings in averted disasters but also minimises the fiscal impact. In Samoa, adaptation financing equivalent to an additional 2% of its GDP between 2022-2027 would avert losses equivalent to 4.5% of 2021 GDP in the event of a representative natural disaster in 2027 (Kinoshita et al., 2022[25]). The reduction in recovery/reconstruction costs resulting from *ex ante* adaptation investments, meanwhile, would limit the impact on the debt-to-GDP ratio even if recovery and reconstruction were financed entirely through concessional loans (Kinoshita et al., 2022[25]). Nevertheless, the IMF estimates a gap in climate financing. Adequate support for adaptation, including from development partners, is indispensable for Samoa's resilience and to ensure economically optimal outcomes in the long run, including for its ocean economy.

Decarbonisation is vital for Samoa to minimise its economic vulnerabilities. While Samoa's greenhouse gas emissions have been consistently increasing since the 20th century, they still account for a negligible share of global greenhouse gas emissions (Climate Watch, 2023[43]). In its latest nationally determined contributions, Samoa has committed to reducing its emissions by 26% by 2030 (Government of Samoa, 2022[44]). This entails decarbonising the energy sector, the largest contributor to its greenhouse gas emissions (Climate Watch, 2023[43]), which would allow Samoa to shed a major economic vulnerability, its heavy reliance on fossil fuel imports. Due to its small size (and inability to leverage economies of scale to reduce unit costs), geographical remoteness, and low transport connectivity characteristic of SIDS (UNCTAD, 2014[45]), the dependence on fossil fuel imports renders energy costs particularly high. As of 2019, fuel imports accounted for 20% of its total imports and 8% of its GDP, ranking it third and sixth respectively among Pacific Island Countries (SPC, 2023[46]). This has adverse consequences on the economy, for example, through heightened costs of production and consumption, current account deficits and disproportionate foreign exchange spending on imports, and leaves it vulnerable to energy price shocks.

Decarbonising maritime transport is a key component of Samoa's low-carbon transition. As of 2019, energy and agriculture accounted for over 50% of Samoa's emissions, followed by waste and land use change and forestry (Climate Watch, 2023[43]). Emissions from the transport sector dominate energy-related emissions (Core CarbonX Solutions Private Ltd., n.d.[47]). Decarbonising transport, both maritime and terrestrial, is thus a core component of its mitigation priorities. Green maritime transport would not only boost the commercial viability of maritime transport operations, which are hamstrung by the exposure to high energy costs but also have positive economy-wide spillovers, given the centrality of maritime transport in SIDS economies (UNCTAD, 2014[45]). In practice and as elsewhere, however, green maritime transport is still nascent in Samoa[5] although initiatives are emerging to support the transition. In 2023, the government of Japan, in collaboration with the United National Development Programme, announced an allocation of USD 15.5 million to accelerate the electrification of transport and exploration of low-carbon propulsion systems in Samoa (UNDP, 2023[48]). At the regional level, Samoa is part of the Blue Pacific

Shipping Partnership, a coalition of six Pacific islands, which aims to mobilise financing for fully decarbonising shipping by 2050 (Doherty, 2019[49]).

Moreover, ocean-based resources can support climate change mitigation. Empirical results affirm that marine conservation, by reinforcing carbon sequestration, can advance climate change mitigation priorities (Jacquemont et al., 2022[50]). The ocean also offers opportunities to expedite decarbonisation. While wind currently accounts for a small share of Samoa's renewable energy mix, especially compared to solar, hydro and bioenergy, preliminary assessments and discussions of the viability of offshore wind are being led by Samoa's Electric Power Corporation. Likewise, wave or tidal energy, as well as floating solar, represent opportunities over a longer time horizon. For example, existing estimates of wave power and total costs suggest that while wave energy conversion in Apia is not economically viable, the south coasts may have sufficient wave power to support wave energy conversion (SPC, n.d.[51]). Nonetheless, the barriers – whether socio-environmental, regulatory and legal, infrastructure-related, or financial and economic – to the adoption of ocean energy technologies in island and remote coastal areas are well-known (OES, 2020[52]). Given Samoa's susceptibility to natural hazards, the viability of ocean energy technologies in the country will depend on their robustness and resilience to these hazards.

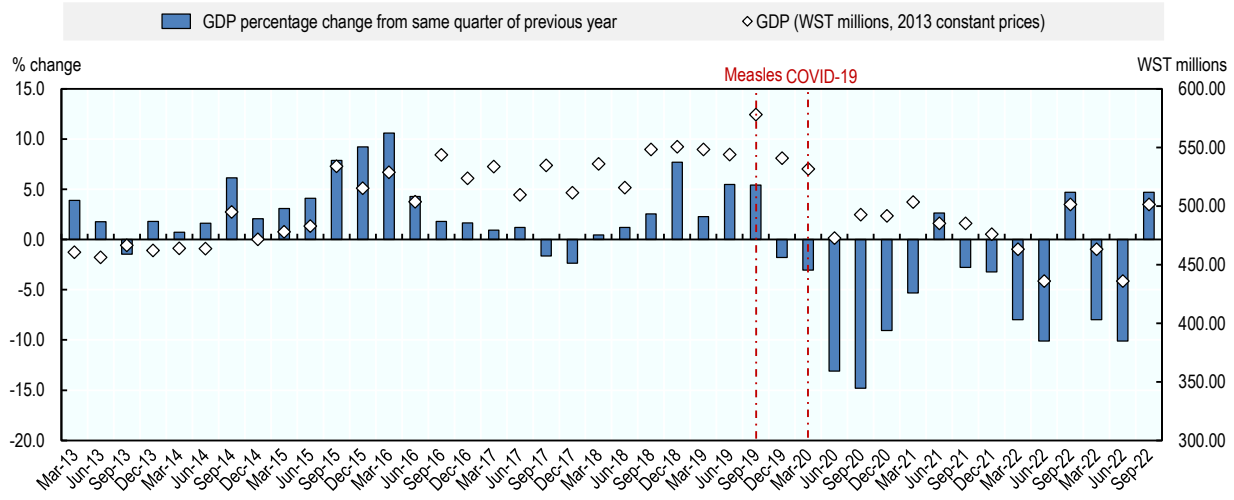
1.4. Samoa's ocean economy in the face of recent shocks

Samoa's economy contracted heavily during the COVID-19 pandemic, owing mainly to the suspension of international tourism.

Samoa was quite successful in mitigating the health repercussions of the pandemic. Drawing on its experience with the measles outbreak in late 2019, the Samoan government acted early and quickly to contain the pandemic, deploying a preventative strategy. The closing of its borders since March 2020 effectively prevented the virus from arriving on its shores, and prompt quarantines and lockdowns curtailed transmission (Yemoh and Taotofi, 2021[53]). Samoa recorded its first COVID-19 case in November 2020, but the first case of community transmission was only recorded in March 2022 (Westerman, 2022[54]). Despite challenges (e.g. vaccine hesitancy, sluggish vaccine rollout), Samoa had fully vaccinated roughly 80% of its population by late 2022 (Mathieu et al., 2021[55]). An effective health sector response to the pandemic was critical in Samoa, where the prevalence of chronic non-communicable illnesses, such as obesity, diabetes and cardiovascular disease (Neuendorf, Neuendorf and Yakub, 2021[56]), exacerbated the risks of severe illness from COVID-19.

However, Samoa's economy was hit hard by the COVID-19 pandemic. The Samoan economy contracted significantly after the onset of the global pandemic in March 2020. In every quarter of 2020, it experienced declines in GDP levels, compared to the same quarter in the preceding year (Figure 1.6). The magnitude of the contraction was largest in Q3-2020, with quarterly GDP falling by 14.8% compared to the same quarter in 2019. As a result, in 2020, Samoa was downgraded from upper middle-income, which it had recently attained in 2016, to lower middle-income status (OECD, 2021[57]). The economic impact of COVID-19 exacerbated that of the measles outbreak in late 2019. The two successive health shocks and the associated containment measures stagnated human and economic activity. Between Q4-2019 and Q1-2021 (inclusive), Samoa had six consecutive quarters of negative growth, and by the end of 2021, the quarterly GDP level had effectively reverted to end-2014 levels.

Figure 1.6. Two successive health shocks devastated the Samoan economy



Note: Real GDP at 2013 purchaser prices.
Source: Samoa Bureau of Statistics (2023[15]), National Accounts, https://www.sbs.gov.ws/national-accounts/.

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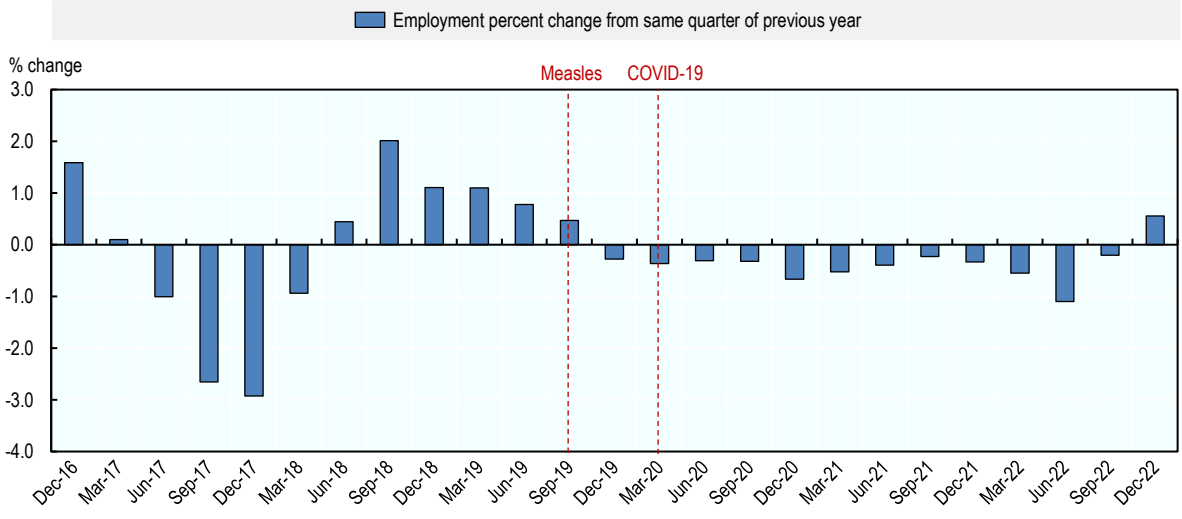
Echoing the decline in GDP, employment also fell due to COVID-19. After the onset of the pandemic, the slowdown in the economy led to substantial job losses and layoffs, with some fluctuation in different financial quarters. Each quarter from Q4-2019 through Q3-2022 inclusive saw a drop in employment relative to the same quarter in the previous year (see Figure 1.7). Wages were more resilient. For example, total average wages grew by 0.85% between March 2020 and March 2021. The increase in wages in the early months of the pandemic can be partly attributed to severance benefits in particularly hard-hit sectors (e.g. tourism), as well as additional income from fiscal stimulus packages, which helped avert further economic damage (Samoa Bureau of Statistics, 2020[58]).

Figure 1.7. Employment trends reflected the GDP contraction



Note: Real GDP at 2013 purchaser prices
Source: Samoa Bureau of Statistics (2023[59]), Employment Statistics, https://www.sbs.gov.ws/employment-statistics/.

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Despite some commonalities, not all countries in the Pacific were affected equally. In 2020, Samoa's GDP growth rate of -3.1% was middling, while Tuvalu had a positive GDP growth rate (1%) and the Fijian economy contracted substantially, by 17.2% (Asian Development Bank, 2022[60]). Samoa's economic contraction was particularly pronounced in 2021. Of its peer countries,[6] only the Cook Islands (-29.1%) and Palau (-17.1%) had a worse negative GDP growth rate than Samoa's (-7.1%) (Asian Development Bank, 2022[61]). Factors such as relative dependence on tourism receipts and commodity exports, the stringency of containment measures, and the adequacy and effectiveness of government support explain variations in the impact of COVID-19 on the Pacific Island countries (IMF, 2021[62]).

Samoa's reliance on tourism, one of its ocean economy sectors, underpinned its relative vulnerability to the COVID-19 crisis. Among Pacific Island countries, tourism-dependent economies (Fiji, Palau, Samoa, Tonga and Vanuatu) suffered the largest short-term output losses during the pandemic, followed by commodity exporters (Papua New Guinea, Solomon Islands) and more mixed economies (Kiribati, Marshall Islands, Micronesia, Nauru, Tuvalu) (IMF, 2021[62]). In Samoa, the closure of borders halted international arrivals and the associated revenue and brought the tourism sector to a standstill. Tourist arrivals during Samoa's typical peak tourist season (June-September inclusive) fell from nearly 74 540 in 2019 to 1 071 in 2020 and 662 in 2021 (UNWTO, n.d.[63]), with significant repercussions on tourism-related industries. As shown in Figure 1.8, the contribution of restaurant and accommodation activity to GDP and employment plummeted after March 2020. Estimates suggest that by March 2021, virtually all the resorts outside Apia had closed (Pacific Private Sector Development Initiative, 2021[64]). Overall, more than 70% of tourism jobs were adversely affected by job losses or reduction in work hours from COVID-19 (Pacific Private Sector Development Initiative, 2021[64]).

Figure 1.8. After borders closed, the accommodation and restaurant industries came to a standstill

Note: Real GDP at 2013 purchaser prices.
Source: Samoa Bureau of Statistics (2023[15]), National Accounts, https://www.sbs.gov.ws/national-accounts/; Samoa Bureau of Statistics (2023[59]), Employment Statistics, https://www.sbs.gov.ws/employment-statistics/.

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The shutdown of tourism had cascading consequences across the economy. During the pandemic, the lack of tourists not only reduced the demand for accommodation and food and beverage services but

also depressed the income of small businesses and local merchants for whom tourist demand was a key source of revenue. Stores in the vicinity of resorts shut down and monthly earnings of handicraft stalls plummeted. A high percentage of the small businesses that closed during the pandemic had links to the tourism sector (Connell and Taulealo, 2021[65]). This negative "multiplier effect" across the economy reflects the important linkages between tourism and other economic sectors and industries. In addition to accommodation and food and beverage services, other sectors, like transport, food processing, fishing and agriculture, and utilities are intimately associated with tourism (Honeck, 2012[66]). Fish vendors were affected by the drop in tourism, since demand from restaurants and hotels catering to foreign visitors ceased (Connell and Taulealo, 2021[65]).

The pandemic also directly depressed other ocean economy sectors, like fisheries and maritime transport. Maritime transport slowed, and paralleling global and regional trends, arrivals of cargo and passenger ships in Samoa dropped dramatically. Cargo vessel calls dropped by about 12% in 2020, and combined passenger and cargo vessel calls dropped by about 16% (UNCTAD, 2022[67]). Given the dependence of small island developing states on maritime transport for connectivity and trade, including the import of essential goods (UNCTAD, 2021[68]), the disruption had widespread socioeconomic consequences (e.g., shortages of inputs and necessities).

In developing countries, COVID-19 adversely impacted the offshore fisheries sector, due to input shortages, depressed demand both internationally and domestically, transportation and logistical challenges, lack of technical assistance and export restrictions (Alam et al., 2022[69]). For Samoa's tuna industry, travel restrictions and offload permitting issues resulted in tuna shipments being turned back from export destinations.[7] This resulted in a loss of revenue, especially since the economic downturn capped local demand for high-value products typically intended for foreign markets (Pacific Islands Forum Secretariat, 2021[70]). Structural issues, such as the lack of adequate cold storage facilities for fish products, worsened prospects. Measures to contain and/or limit the spread of COVID-19 meant that port inspections and observer activities were suspended, which increased the risk of illegal, unreported and unregulated fishing (Rheeney, 2020[71]) and more broadly, overfishing (see Section 1.3). The volume of tuna catch fell by over 30% between 2019 and 2022 (FFA, 2022[22]), reflecting a reduction in fishing in Samoa's EEZ (Government of Samoa, 2022[72]). Overall, the economic output (measured as GDP) of the fisheries sector declined by 12.1% in 2020 (compared to 2019) and by a further 1.4% in 2021 (compared to 2020) (Samoa Bureau of Statistics, 2023[15]). Likewise, employment in the sector fell by 6.6% in 2020 (compared to 2019), 25% in 2021 (compared to 2020) and 24.7% in 2022 (compared to 2021) (Samoa Bureau of Statistics, 2023[59]).

The socioeconomic fallout of the crisis was also significant. An online survey conducted by the United Nations in June/July 2020 demonstrated a general deterioration in societal welfare**.** Sixty-eight percent of Samoan respondents said they had lost income. Almost half of households had at least one member unemployed; meanwhile, 71% of respondents had trouble repaying debts because of the pandemic and related restrictions (United Nations, 2020[10]). School closures negatively affected educational outcomes: approximately 20% of students did not have access to education, one reason being the lack of access to online learning platforms (United Nations, 2021[73]). As elsewhere, the pandemic also amplified gender disparities, especially due to a rise in the incidence of domestic and partner violence and unpaid domestic labour (e.g. childcare) (UNESCAP, 2020[74]). Given impediments in accessing financial services, information and technology, and business networks, women-owned enterprises in Samoa lacked the tools required for resilience during the crisis (UNESCAP, 2020[74]).

The government's fiscal measures helped Samoans weather the storm. Drawing on support from development partners, the Samoan government deployed fiscal packages in two phases. The first phase, introduced in fiscal year 2020 and amounting to 3.1% of GDP, was aimed at businesses and households affected by the pandemic, and buttressed health, education, food security and public services (IMF, 2021[75]). The second phase, introduced in fiscal year 2021 and amounting to 4.2% of GDP, extended the measures of the first phase and introduced new mechanisms to support vulnerable firms and households

that the first batch of measures had not reached. The second phase also shored up community-based primary healthcare services and unemployment benefits (IMF, 2021[75]). Despite the fiscal stimulus, Samoa recorded a fiscal balance surplus in both 2020 (1.74% of GDP) and 2021 (5.37% of GDP) (IMF, 2023[76]), driven by improvements in tax administration and grant inflows (IMF, 2023[5]). As a result, Samoa's debt-to-GDP ratio declined from 44.29% in 2019 to 43.73% in 2020, followed, nevertheless, by an uptick in 2021 to 46.3% (IMF, 2023[76]).

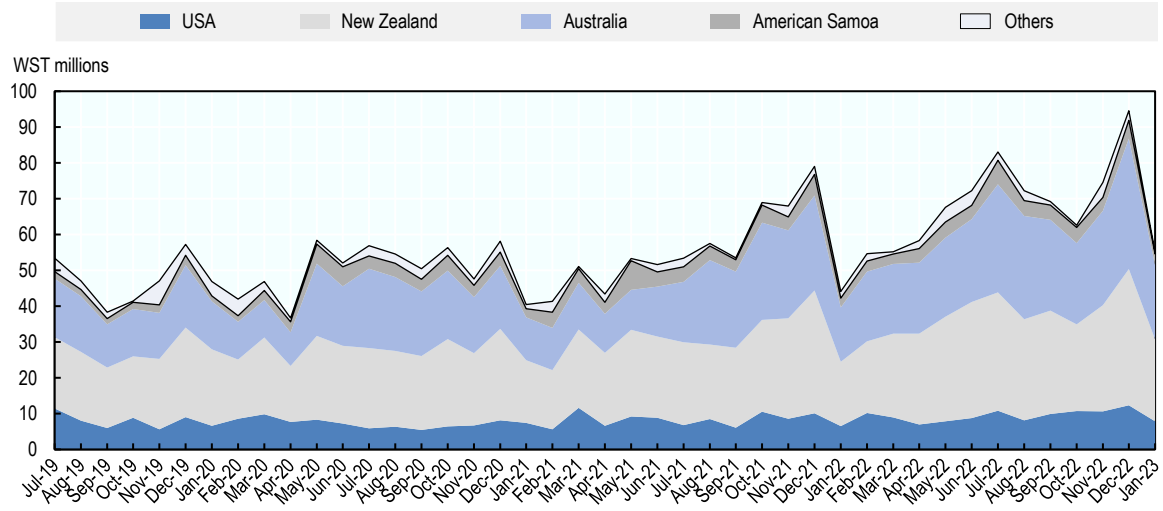
The government measures also specifically supported households and firms operating in the ocean economy. In 2021, tourism, one of the hardest-hit sectors, benefited from a government stimulus package of 5 million Samoan talas (WST), providing a much-needed capital injection to over 150 tourist operators (Samoa Global News, 2021[77]). Laid-off workers in the hospitality sector were offered short-term paid trainings, which helped enhance skills and mitigated labour market frictions during the crisis exit and recovery phase (UNESCAP, 2020[74]). Seafood exporters were offered partial insurance compensation (UNESCAP, 2020[74]).

Subsistence farming, and to a lesser degree fishing, provided an important safety net. Faced with job losses, many workers returned to their villages and pursued farming to preserve livelihoods. This reflects the strong dependence of the Samoan economy on subsistence agriculture, with over 60% of agricultural production being of a non-monetary nature (Australian Centre for International Agricultural Research, n.d.[78]). This safety net enabled households to meet immediate needs and alleviated food shortages and insecurity. Coastal fisheries were also an important source of livelihood during the pandemic, but played a lesser role, given the smaller number of Samoan households engaged in fishing rather than agriculture (Samoa Bureau of Statistics, 2021[79]).

Remittances also helped prevent greater social damage. The steadiness of remittance inflows was a vital financial buffer for Samoans and helped moderate the impact of the crisis. Despite the global economic downturn, and contrary to initial expectations, remittances remained resilient (Kpodar et al., 2021[80]). Between June 2020 and June 2022, monthly remittances grew by roughly 39% (see Figure 1.9). Much of this increase can be attributed to an uptick in remittances from Australia and New Zealand, reflecting the strong family ties between the two countries and Samoa (Le Dé and Jackson-Becerra, 2021[81]).

Figure 1.9. Private remittances, largely from New Zealand and Australia, surged during the pandemic

Private remittance inflows to Samoa by sending countries



Source: Central Bank of Samoa (2023[82]), Visitor Earnings and Remittances, https://www.cbs.gov.ws/statistics/visitor-earnings-and-remittances/.

StatLink https://stat.link/v3obq7

The pandemic exposed Samoa's socioeconomic susceptibility to environmental risks (see Section 1.3). The system-wide ramifications of the tourism shutdown revealed the pitfalls of reliance on the tourism sector, especially since climate change and natural disasters can heavily impede the sector's functioning. The role of maritime transport as an economic lifeline also became apparent, suggesting that future maritime transport service disruptions can have substantial socioeconomic repercussions. Dwindling tuna exports were a major contributor to the contraction of Samoa's fisheries sector during the pandemic. The risk and uncertainty of dependence on tuna fishing is especially germane to climate change, which is expected to adversely affect tuna biomass in the Pacific (Bell et al., 2021[83]).

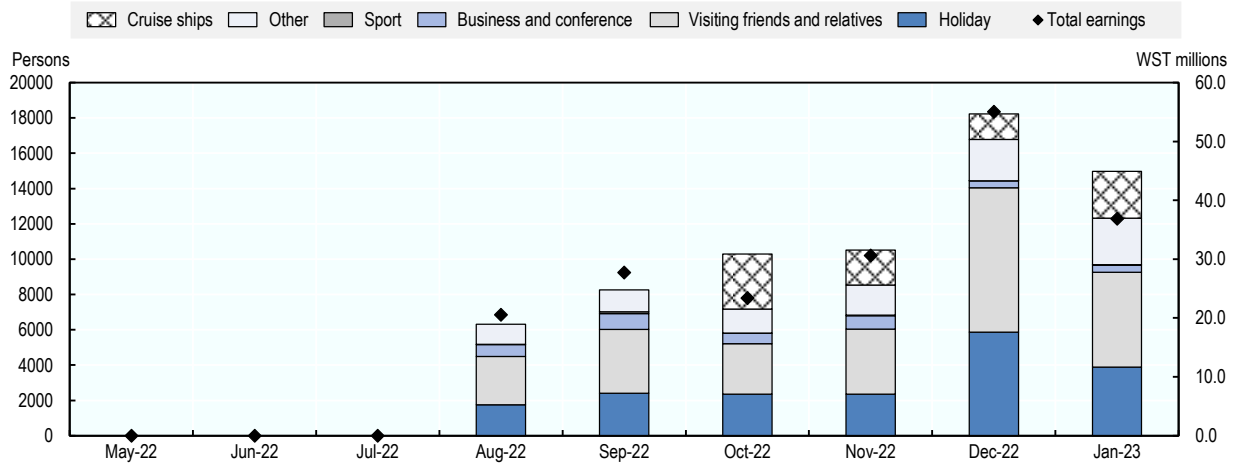
Despite the resumption of economic activity, Samoa's recovery has been stalled by recent crises.

Samoa is starting to recover from the COVID-19 pandemic. Samoa officially opened its borders in August 2022, a vital step in revitalising the tourism sector and its economy. With tourism leading the charge, signs of recovery are already emerging. As shown in Figure 1.6, Q3-2022 was only the second quarter of positive GDP growth since the measles outbreak in September 2019. Employment also exhibited a positive year-over-year change in Q4-2022 for the first time since Q3-2019.

Tourism activity in Samoa has resumed. Since the borders reopened, the number of visitors arriving in Samoa has steadily increased. As shown in Figure 1.10, in August 2022, Samoa had just over 6 000 visitors; by December 2022, this figure had surged up to nearly 17 000. Tourist earnings have consequently increased, rising to approximately WST 55 million by December 2022 (see Figure 1.10). The resurgence in tourism is driven by visiting friends and relatives, predominantly from Austria and New Zealand, followed by holiday-goers visiting Samoa. Both market segments present opportunities for rebuilding the tourism sector in the country.

Figure 1.10. The number of visitors and corresponding earnings have risen steadily since August 2022

International visitors by purpose of travel



Source: Central Bank of Samoa (2023[82]), Visitor Earnings and Remittances, https://www.cbs.gov.ws/statistics/visitor-earnings-and-remittances/.

StatLink https://stat.link/ah3fz6

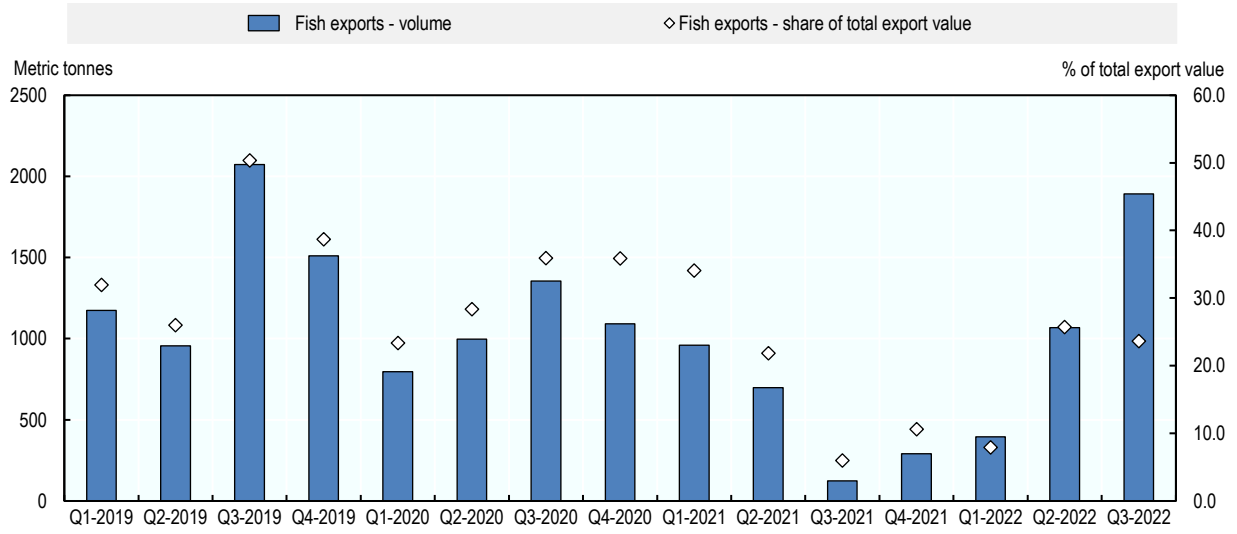
Nevertheless, roadblocks still exist for a full recovery of the tourism sector. Samoa opened its borders later than its peers in the Pacific (Fiji reopened to international travellers in December 2021), losing the first mover advantage, and was not able to benefit from the 2022 high season for tourism. As a result, recovery in the sector has been delayed and projections suggest a longer path to return to 2019 levels (IMF, 2022[84]). Given the impact of COVID-19, firms operating in the sector are also likely to be hamstrung by cash shortages and unpaid debt, and kick-starting tourism will require support. Through the Development Bank of Samoa, for example, which is especially active in the tourism sector (UNESCAP, 2020[74]), financial support can be channelled to tourism-related businesses to encourage their growth and eventually, their ability to resolve their debt obligations (UNESCAP, 2020[85]). Meanwhile, the Samoa Business Hub is well-placed to provide business advisory services to tourism operators, helping them craft effective strategies for recovery and rebuilding (UNESCAP, 2020[85]). The reopening of its borders, nevertheless, is an opportunity for Samoa to rebuild its tourism industry and contribute to a sustainable and resilient recovery. Key priorities include developing the sector's linkages to other ocean economy sectors, minimising tourism leakages, and factoring in environmental pressures (e.g. climate change, natural disasters and the adverse environmental impact of tourism).

Other ocean economy sectors, like fishing and maritime transport, are on the upswing, but pre-existing issues persist. The volume and value of fish exports have risen in recent quarters. After a significant drop beginning in the latter half of 2020, fish exports rebounded to 1 892 metric tonnes in Q3-2022, the highest since Q3-2019, compared to 123 metric tonnes in Q3-2021 (see Figure 1.11). As a consequence, the fish exports as a share of total export value, which had cratered during the pandemic, have inched closer to pre-pandemic levels. However, structural issues, such as the lack of post-harvest facilities and the concentration of export partners, limit the potential of the fisheries value chain. The upswing in the fisheries sector is matched by that in maritime transport. The reopening of borders has naturally been followed by an increase in cargo and passenger vehicle traffic. Nevertheless, the issues posed by Samoa's lack of maritime connectivity endure. The Liner Shipping Connectivity Index measures how well countries are connected to global shipping networks, using five variables: number of ships, their

container-carrying capacity, maximum vessel size, number of services and number of companies that deploy container ships in a country's ports (UNCTAD, 2022[86]). The index shows that while Samoa's connectivity, in terms of ship size and schedule capacity, increased between Q2-2006 and Q2-2021, the number of direct calls and shipping lines declined over the same period (UNCTAD, 2022[86]). Yet, as noted in Section 1.5, the pandemic highlighted an opportunity for Samoa to function as a shipping hub and benefit from economic gains from its maritime transport sector.

Figure 1.11. Fish exports are picking up

Volume of fish exports and the share of fish export value in total export value



Source: Central Bank of Samoa (2023[87]), Foreign Trade Report, https://www.cbs.gov.ws/statistics/foreign-trade-report/.

StatLink https://stat.link/b6ox9f

The factors that contributed to Samoa's resilience during the pandemic also represent challenges for the recovery and rebuilding of its ocean economy. For example, while private remittances helped Samoans absorb the economic fallout of COVID-19, they are indicative of the high rate of labour migration, in which seasonal work schemes are an important driver. In 2022, Samoa ranked top globally on a global index for human flight and brain drain that captures the economic impact of human displacement[8] (The Fund for Peace, 2022[88]). Labour shortages have hampered business and the provision of public services. The recovery of tourism has been bogged down partly by staff shortages. Likewise, while agriculture was an important source of livelihood during the pandemic, its lesser importance relative to fishing is an indication of the more modest potential of Samoa's fisheries sector by comparison with its Pacific peers, due to its smaller EEZ.

Samoa has faced a complex set of crises during and since COVID-19, complicating its recovery. From the outset, Samoa's recovery was set back in December 2020, by significant flooding and landslides associated with Tropical Cyclone Zazu, which did not make landfall (Pacific Islands Forum Secretariat, 2021[70]). This is estimated to have cost the economy at least 1.5% of GDP, undercutting the positive effect of the lifting of social restrictions in December 2020 (IMF, 2021[75]).

The global economic downturn and inflation surge also dampened Samoa's economic prospects. In particular, the impact of the Russian invasion of Ukraine in 2022 on global food and energy markets amplified the upward pressure on food and energy prices (IMF, 2022[84]). Given Samoa's reliance on imports, this translated into steady increases in 2021 and 2022 in the cost of imported food, construction

materials, household items and fuel in the country (Central Bank of Samoa, 2022[89]). By the end of October 2022, headline inflation in Samoa had reached 11.3%, significantly higher than the medium-term target of 3% (Central Bank of Samoa, 2022[89]). The effect of rising global commodity prices has been felt across the Pacific, although forecasts of annual inflation for 2022 suggest stronger price pressures in Samoa than in most other Pacific Island Countries (IMF, 2022[84]). Rising inflation – and the resulting increase in production costs, erosion of real incomes, and negative terms-of-trade shock – has impaired Samoa's economic recovery. Compared to its forecasts in early 2022 (just over 0%), the IMF's estimate, in late 2022, of real GDP growth in Samoa was significantly lower (roughly -5%) (IMF, 2022[84]). In fact, among Pacific Island countries, Samoa had the third-largest downward revision in economic projections to account for the war in Ukraine (IMF, 2022[84]).

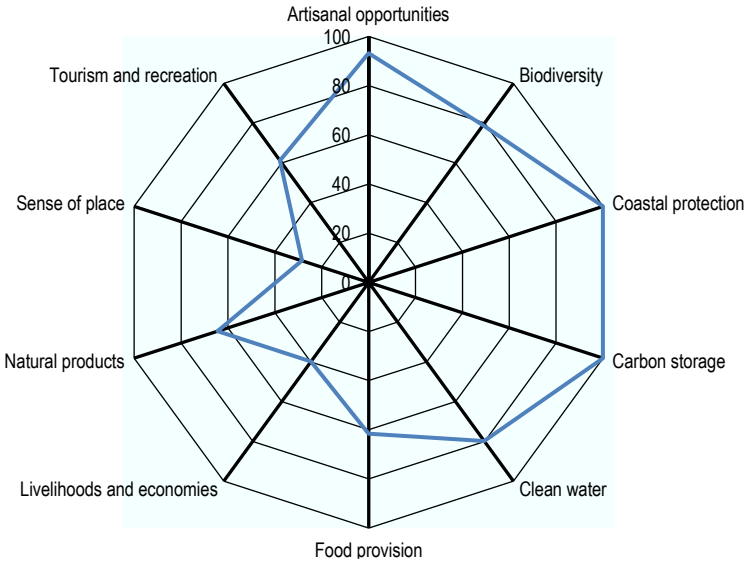
The most recent forecasts point to an economic recovery from 2022 onwards. Having reached its peak in late 2022, inflation in Samoa is showing signs of easing. Inflation decreased from 11.3% in November 2022 to 11% in December 2022. The Central Bank of Samoa expected that inflation would fall to 10% by June 2023, with additional, albeit gradual, reductions thereafter (Central Bank of Samoa, 2023[90]). This easing of price pressures underpins expectations that Samoa's economy will recover in 2023 and 2024. While estimates vary, forecasts indicate real GDP growth in 2023 (4-5%) and 2024 (3.5%).[9] Looking ahead, expectations are that GDP growth will be above trend in fiscal year 2025 (IMF, 2023[91]).

1.5. Potential of Samoa's ocean economy to spearhead economic growth and sustainable development

A sustainable ocean economy in Samoa can drive improvements in environmental, economic, and social outcomes. The Ocean Health Index, a composite indicator of the extent to which the ocean delivers specific benefits without compromising its ability to do so in the future, gives Samoa an above-average score of 71 (global average 69) for 2021. Samoa performs very well on sub-indicators for coastal protection, carbon storage, clean water and biodiversity (Figure 1.12), illustrating its success in advancing marine environmental quality. It performs less well, however, on sub-indicators for livelihoods and economies, food provision, sense of place and tourism (Figure 1.12), suggesting that the socioeconomic potential of the ocean economy is not yet fully tapped. Going forward, maximising the social and economic benefits that its ocean resources can deliver for its people without jeopardising its environmental successes is a reasonable course of action.

Figure 1.12. Samoa is above average in sustainably generating economic, environmental and social value from the ocean

Samoa's performance on the different dimensions of the Ocean Health Index



Note: A higher score indicates better performance along the dimensions measured (100=highest, 0=lowest).
Source: Halpern et al. (2012[92]), "An index to assess the health and benefits of the global ocean", https://doi.org/10.1038/nature11397.

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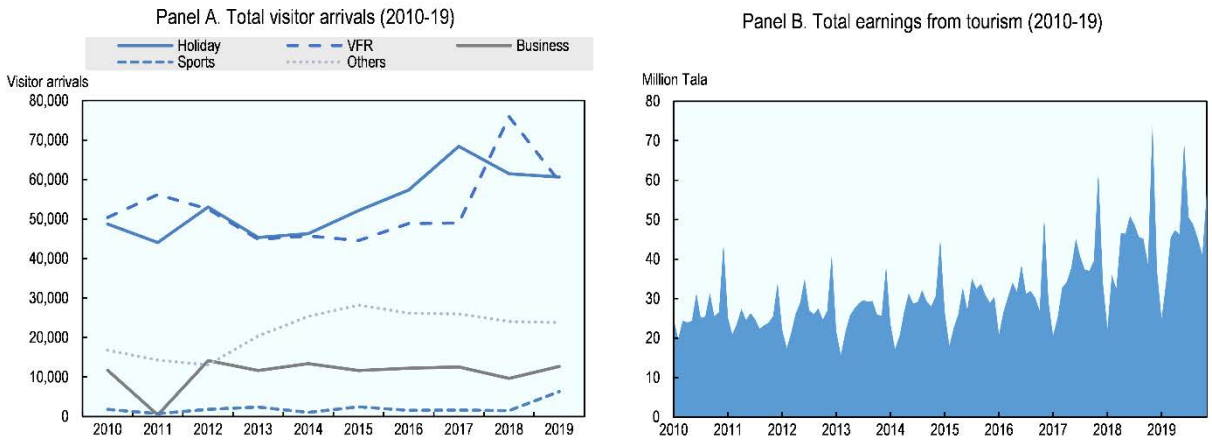
Several sectors of the ocean economy offer opportunities for Samoa's development. In its long-term development strategy, *Samoa 2040*, the government identified four priority areas with the potential to spearhead the country's economic development over the next two decades (Government of Samoa, 2021[93]). They include tourism and fishing, two industries of the ocean economy considered to be operating below their economic potential, due to various constraints and barriers. The strategy also identified maritime shipping as one area where linkages to the fishing industry could be further tapped for economic growth.

The growth of the tourism industry in recent years speaks to its potential to contribute to future economic growth. Before the COVID-19 pandemic, Samoa's tourism industry was steadily growing. Tourist arrivals increased by 4% per year on average in the 20 years preceding the pandemic. The increase was driven by the rise in holiday visits and visits to friends and relatives, which peaked in 2017 and 2018 respectively (Figure 1.13). On the other hand, the number of visitor arrivals for business trips or other purposes remained relatively stable between 2015 and 2019.

Figure 1.13. Tourism grew steadily in the decade before COVID-19, driven by holiday visits and visits to friends and relatives



Note: In panel A., VFR=Visiting friends and relatives. Panel B presents earnings from tourism on a monthly basis.
Source: Samoa Tourism Authority (2023[94]), Tourism Statistics, https://www.samoatourism.org/section/19/statistics.

StatLink https://stat.link/s3ega0

Thanks to its linkages with other ocean economy sectors, tourism can expedite Samoa's recovery. Tourism has important linkages to other economic sectors, and indirectly supports industries such as agriculture, transportation and retail (OECD, 2022[33]). These interdependencies create economic flow-on effects that can generate additional jobs and income for Samoa's population, as well as increased tax revenue for the government. For instance, farmers supplying produce to hotels, resorts and restaurants are likely to benefit from increased demand after the reopening of borders and an increase in international visitors. Retail and transportation businesses, including maritime passenger services, could also generate additional revenue from the rising tourist demand, providing a welcome boost to a still-recovering economy.

The government views the tourism industry as a driver of long-term growth beyond the recovery stage. The country's long-term development strategy, *Samoa 2040*, notes that, under an opportunity scenario, the implementation of targeted measures could help double visitor arrivals (from fewer than 200 000 before the pandemic to 400 000 in 2040) and increase total tourist spending (from around WST 500 million to WST 1.7 billion over the same period) (Figure 1.14). On the supply side, these measures include initiatives to develop the skills required by the tourism industry, the improvement of air services connecting Samoa to major tourist markets, and the use of public funding to unlock private investment. In the long term, the potential of tourism in Samoa will depend in large part on the evolution of the demand in key source markets, such as New Zealand, Australia and China, itself dependent on these countries' economic growth (Asian Development Bank, 2018[95]). Cruise tourism is an area in which the government sees significant potential. Although Samoa is not as important a cruise destination as some of its neighbours, it could benefit from the growth of cruise tourism observed in the Pacific region in the decade before the COVID-19 pandemic. Between 2012 and 2017, for example, the number of New Zealanders taking international cruises grew by 65%. Vanuatu was able to take advantage of this growing market and saw the number of cruise passenger visitors increase by 69% and 28% between 2014-2015 and 2015-2016 respectively, attracting more than 250 000 cruise passenger visitors in 2016.

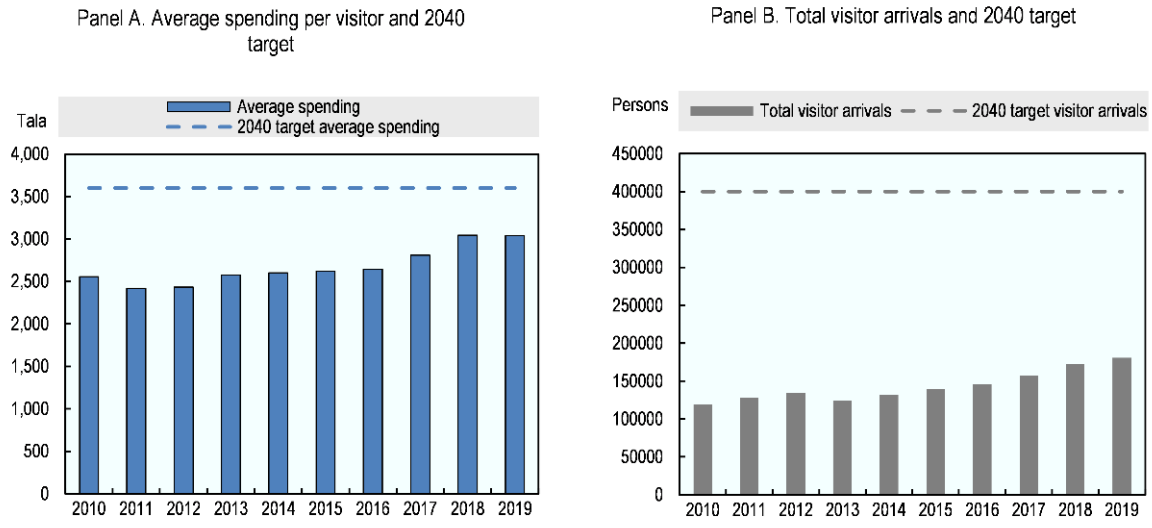
While the pre-COVID volume of tourism in Samoa was still sustainable in comparison to some of its neighbours, ensuring that growth is managed sustainably is crucial. Among Pacific SIDS, Samoa occupies a mid-tier position in terms of the ratio of tourist arrivals to residents. With a population of less than 20 000, Palau has the highest ratio, with 5.24 international tourist arrivals per resident (World Bank, 2023[19]). Samoa's ratio of 0.85 situates it in the middle of the pack, below Fiji (1.05) and Tonga (0.89), but

on par with Vanuatu, and above Tuvalu (0.32), Micronesia (0.16) and the Marshall Islands (0.14). Assuming a constant population, the Samoan government's strategic plans to double tourist arrivals by 2040 would raise this ratio to 1.89, meaning that annual international tourist arrivals could potentially exceed the number of residents by a factor of two.

It is important to ensure that tourism development aligns with Samoa's long-term economic, social and environmental objectives. A sustainable ocean economy approach requires considering the social and environmental costs associated with rapid growth in tourism arrivals. This is particularly relevant for cruise tourism, which is known to have a significant environmental impact on its destinations (Asian Development Bank, 2020[96]). Pollution, overcrowding and strain on local resources can negatively impact residents' quality of life, the natural resources they rely on for subsistence and the long-term appeal of the destination for tourists. To mitigate these adverse effects, it is essential that Samoa adopt a sustainable tourism approach focused on attracting high-value tourism. By concentrating on value-added tourism offerings, in line with its sustainable ocean management approach, Samoa can better preserve its natural and cultural heritage and ensure that the benefits of tourism reach local communities. Developing eco-tourism, community-based tourism and cultural experiences can empower local communities, promote environmental conservation and create a distinctive brand identity for Samoa in the global tourism market. More broadly, as a sector with strong relationships with multiple value chains (e.g. food and beverages), tourism could help embed sustainability considerations across the economy (OECD, 2022[33]).

In addition to increasing the number of visitors and their average spending, Samoa could aim to better link its tourism industry to the labour market. Before the COVID-19 pandemic, the tourism industry represented less than 15% of total employment in Samoa, as compared to more than 30% in countries where tourism receipts accounted for a similar or lower percentage of GDP, such as Fiji, Niue and Vanuatu (UNESCAP, 2020[97]). This suggests that there may be room to improve the impact of the Samoan tourism industry on local employment, which would also help maximise its contribution to socio-economic development and poverty reduction. The *Samoa 2040* strategy mentions that under the opportunity scenario, the tourism industry would provide the majority of the additional jobs created in the economy (Government of Samoa, 2021[93]).

Figure 1.14. The economic contribution of Samoa's tourism industry could be increased.



Note: The 2040 target reflects the opportunity scenario from the *Samoa 2040* strategy.
Source: Samoa Bureau of Statistics; Government of Samoa (2021[93]), Samoa 2040, https://www.mof.gov.ws/wp-content/uploads/2021/03/Samoa-2040-Final.pdf.

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Despite the socioeconomic importance of Samoa's fishing industry, its potential is limited by structural factors. Fisheries represent an important economic activity and a valuable source of income for the populations and governments of Pacific SIDS. Their EEZs provide more than 30% of the world's tuna catch (Conservation International, n.d.[98]), and license fees for foreign distant-water fishing vessels generate substantial economic gains in the region. Although Samoa's own licence and access fee revenue from tuna fisheries doubled between 2010 and 2017, reaching USD 1.4 million (before plateauing a little above the USD 1 million mark between 2017 and 2020), it remains small compared to other Pacific SIDS with larger EEZs, such as Micronesia (USD 73 million), Kiribati (USD 131 million) or Tuvalu (USD 30 million) (FFA, Pacific Community, 2021[99]). The expansion of Samoa's fishing industry is also reliant on the availability and sustainable management of the fish stock in the Pacific region, which could be impacted by climate change and the migratory patterns of pelagic species (World Bank, 2021[100]).

Pivoting the fisheries sector to value-adding activities and import substitution could increase its contribution to the economy. Due to a combination of high trade costs, lack of adequate financing, and infrastructure and skills, the country currently lacks the capacity and facilities to process most of its fish catch and ensure that it meets the quality standards for export to key markets. As a result, most of the tuna caught in Samoa's national waters is processed in countries with processing and packing facilities that are accredited to export to key markets (e.g. in the nearby United States territory of American Samoa), depriving the country of significant economic benefits. As part of its long-term development strategy, the Samoan government sees opportunities to increase the value of fish exports by introducing measures to increase the sector's access to finance and infrastructure (e.g. cold storage, processing and packing facilities, fish markets, etc.) (Government of Samoa, 2021[93]). Import substitution offers another opportunity to expand the contribution of the fisheries sector, especially to substitute imports of large quantities of canned tuna from neighbouring American Samoa.

Samoa's shipping industry could better capitalise on the country's central position in the Pacific. Although its lack of maritime connectivity (described in Section 1.3) has persisted in recent years, Samoa's central location in the Pacific could make it a natural hub for shipping and transport. The country has scope to expand its shipping services, including by leveraging the recent growth of the transhipment and cargo activity in Apia's international port. In the longer term, this also opens opportunities to expand onshore activities related to the tourism, fishing and transhipment industries (including restocking fuel and food supplies, or accommodation for crews for cruise ships and fishing vessels). Two recent examples illustrate Samoa's potential to take advantage of its unique geographic location at the heart of the Pacific to become a shipping hub. First, during the COVID-19 pandemic, the Fiji Water company started using Samoa (rather than Auckland, in New Zealand) as its transhipment base to export to the United States market. Around the same time, Alcatel Submarine Networks, one of the world's leading submarine cable companies, decided to use Apia's international port as its regional hub to store its submarine cable supply for its operations in the Pacific. Despite these positive developments, the shipping industry in Samoa faces several constraints, including limited infrastructure, high operating costs and competition from other Pacific SIDS.

In coming years, several emerging sectors could open new economic opportunities. Among them, renewable energy, marine biotechnology and aquaculture stand out as promising avenues for Pacific SIDS, although they are still in their infancy in Samoa and making them attractive to investment would require addressing existing constraints. As outlined in Section 1.3, renewable energy offers prospects for reducing Samoa's reliance on imported fossil fuels and promoting energy independence. Similarly, aquaculture has potential for both domestic consumption and export, although several key factors such as transportation costs, cold chain logistics and availability of a skilled workforce would have to be considered to determine the cost-competitiveness of this activity. Lastly, marine biotechnology also holds promise for the development of innovative products, such as pharmaceuticals and cosmetics derived from marine organisms. The Scientific Research Organization of Samoa, a state-owned scientific research entity, is

currently creating a marine research division which will, among other things, conduct research on marine organisms in collaboration with the Ministry of Agriculture and Fisheries.

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Notes

[1] Compared to a no-disaster counterfactual, IMF modelling suggests that natural disasters and climate change would, in the long run, reduce GDP growth by 1.3 percentage points and enlarge fiscal and current account deficits by 3.5 percentage points of GDP on average each year (IMF, 2021[75]). IMF simulations also suggest that a representative natural disaster in Samoa in FY2022 (with median-level impacts) would augment debt-to-GDP ratio by 21%, assuming new debt is used to finance reconstruction (IMF, 2021[75]).

[2] See Mittempergher, Raes and Jain (2022[103])for estimates of the economic cost in the case of Antigua and Barbuda.

[3] For reference, Switzerland, considered the least vulnerable (rank 1), has a vulnerability score of 0.255. Meanwhile, Singapore, considered the readiest (rank 1), has a readiness score of 0.804.

[4] The simulations are based on the IMF's Debt-Investment-Growth and Natural Disasters model. Model specifications and calibrated parameters are elaborated in Kinoshita et al. (2022[25]).

[5] Globally, much of the "greening" in the maritime transport sector, in the short run, is expected to be driven by energy efficiency gains while in the medium to long-run, renewable fuels (notably advanced biofuels and e-fuels, are expected to drive decarbonisation (IRENA, 2021[102]).

[6] Peer countries include Nauru, Kiribati, Tuvalu, Vanuatu, Papua New Guinea, Solomon Islands, Federated States of Micronesia, Tonga, Marshall Islands, Fiji, Palau, Niue.

[7] OECD analysis shows that globally, while demand for high-value species (e.g. bluefin tuna) faltered during the pandemic, demand for canned products increased (OECD, 2020[104]).

[8] This index covers displacement for both economic and political reasons (voluntary or involuntary).

[9] The World Bank projects real GDP growth of 4% and 3.5% in 2023 and 2024 respectively (World Bank, 2023[101]) . Meanwhile, the IMF expects an uptick of 5% in GDP in fiscal year 2023 (IMF, 2023[91]).

2 Governance and policy tools for Samoa's sustainable ocean economy

The Government of Samoa has crafted an integrated approach to ocean management through the development of the Samoa Ocean Strategy (SOS) and the National Ocean Steering Committee (NOSC). This chapter explores how these elements provide a foundation for policy coherence and co-ordination in pursuit of a sustainable ocean economy. It also elucidates challenges, some stemming from pandemic-related disruptions, which hamper the potential of the SOS and the NOSC. The chapter then situates the SOS and the NOSC in Samoa's economic, social and environmental context, as well as its broader policy landscape, to assess policy alignment and identify drivers of and roadblocks to successful implementation.

Key messages

- The Samoa Ocean Strategy (SOS) provides the foundation for a coherent approach to ocean governance. Informed by extensive stakeholder consultation, it is an inclusive instrument and representative of the diversity of ocean uses and pressures. It also includes provisions for a co-ordinating mechanism and a marine spatial planning tool, both of which foster an integrated approach to ocean management.
- The COVID-19 pandemic delayed the roll-out of the SOS and obstructed the functioning of the National Ocean Steering Committee (NOSC). As a result, several core features of the strategy, such as costing, the timeline for delivery, monitoring and evaluation, remain undefined or underdeveloped. Rectifying these shortcomings, which can hinder implementation and effectiveness, is a key priority.
- The SOS is situated in a broader context of ocean-relevant policy frameworks in Samoa, which include the national development plans, as well as sector-specific policies. The SOS has clear implications for these instruments and vice versa. This underscores the need to strengthen the articulation between these planning instruments, which remains tenuous or ambiguous, to allow for adequate consideration of the linkages between sectors and between the economic, environmental and social dimensions of the sustainable ocean economy. Reinforcing integration across policy frameworks can also help implement SOS successfully.

A holistic approach to governing the ocean economy is essential, given its vastness and diversity. Effective ocean governance requires managing the wide array of ocean uses – for tourism, fisheries and maritime transport in the case of Samoa – and the variety of pressures on the ocean, including climate change and marine pollution (see Section 1.3). This means that different agencies, with differing policy objectives, have mandates related to the ocean (OECD, 2020[1]). Without proper co-ordination, ocean governance risks being ad hoc and siloed.

Ocean governance needs to account for the interlinkages between different ocean-based sectors, as well as between economic, environmental and social considerations. Cross-sectoral interactions can range from antagonistic, in which sectors have competing interests, to synergistic, in which they have mutual interests (Klinger et al., 2018[2]). For example, in Samoa, both cruise liners and cargo vessels call at its only international port, Apia, which means that managing sectoral competition for the port's limited space and capacity is an important undertaking. Meanwhile, infrastructure improvements at the port (e.g. for climate change adaptation) can benefit both the tourism and maritime transport sectors, making such efforts a policy priority. The economic, social and environmental dimensions of the ocean economy are also closely linked. As outlined in Table 1.3 (Chapter 1), the impact of climate change, such as the deterioration of coral reefs, can diminish Samoa's tourist appeal, reflecting the inextricable link between the economic potential of marine tourism and environmental quality (Schuhmann et al., 2019[3]). On the other hand, tourism can have adverse consequences on the marine environment, for example on coastal water quality (Kurniawan et al., 2022[4]).

Appropriate institutional arrangements and well-designed policy frameworks are indispensable for a coherent approach to ocean governance and the successful implementation of ocean-related policies.[1] Through national strategies and plans, countries can lay out a long-term vision for a sustainable ocean economy, accounting for the aforementioned interlinkages, with clear milestones to monitor progress and adequate resources to finance the implementation (see Chapter 3). Meanwhile, appropriate institutional arrangements, such as inter-ministry co-ordination mechanisms, can help to promote coherent, integrated management of ocean resources. Given the multitude of actors involved in the use and management of oceans, including relevant stakeholders and their perspectives in the design of strategic

frameworks and institutional arrangements is crucial. Clear articulation between planning instruments, effective co-ordination across ministries and adequate stakeholder engagement can also facilitate implementation, building legitimacy and a common understanding of ocean-related policies.

2.1. The Samoa Ocean Strategy: A framework for ocean governance

Launched in October 2020, the Samoa Ocean Strategy (SOS) is a unified vision for the management of Samoa's ocean resources. The SOS is composed of three principal elements: prioritised thematic areas, threats and integrated management solutions (hereafter Solutions). The *six prioritised thematic areas* reflect what Samoa values in the ocean and serve as guiding principles for the SOS. Prioritised thematic areas include offshore waters, maritime safety and security, species of special interest, marine coastal ecosystems and species, food security and ocean knowledge. Factors that jeopardise the thematic areas are classified, as threats. In total, there are *13 threats*, which can be grouped into six categories (Table 2.1).

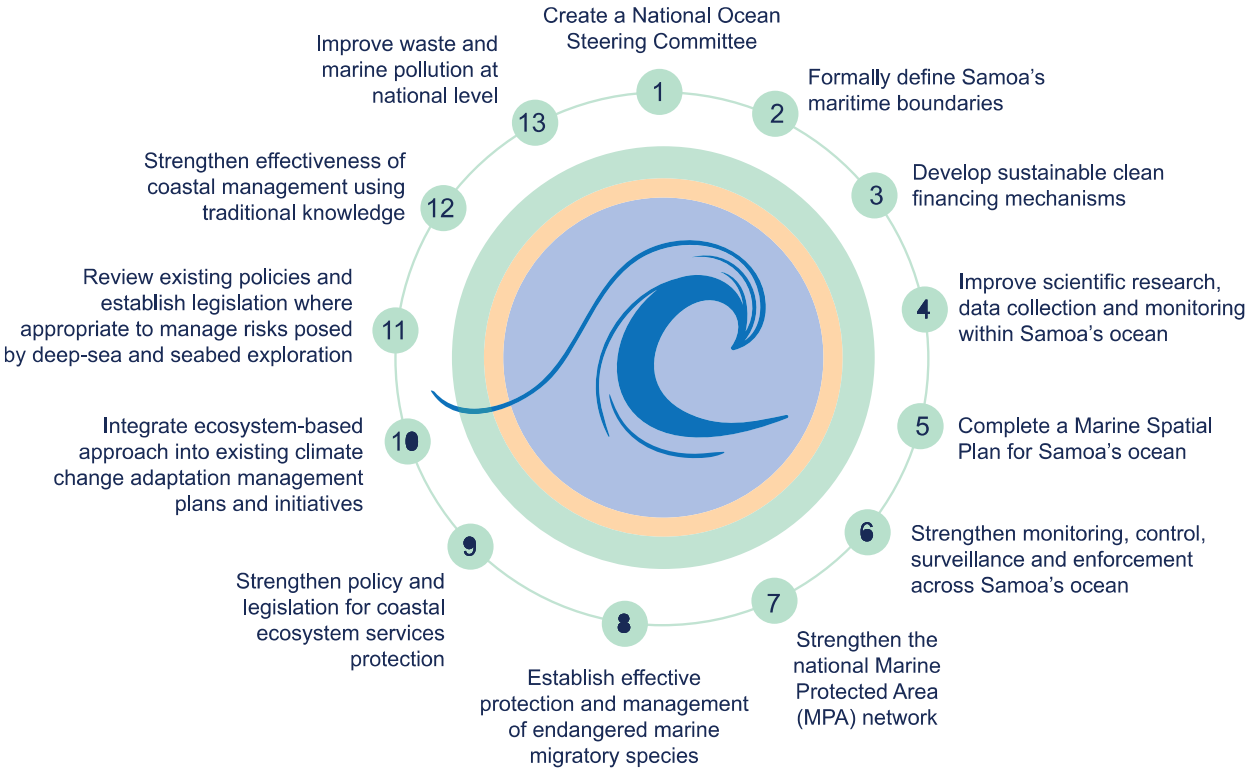
Table 2.1. The SOS lists 13 threats, in 6 categories

Category	Threats
Fishing	Unsustainable extraction, fishing equipment and methods
	Illegal, unregulated and unreported fishing activities.
Pollution	Land-based pollution
	Pollution from vessels, ports and dry docks
Unsustainable development	Local mangrove forest clearing
	Unsustainable sand mining development
	Unsustainable coastal development
	Potential for unregulated deep-sea mining
Climate change	Coastal erosion
	Coral bleaching
Knowledge and data	Limited integration of traditional knowledge
	Limited modern ocean science
Invasive species	Intentional and unintentional introduction of invasive species

Source: Government of Samoa (2020[5]), *Samoa Ocean Strategy 2020-2030: Integrated Management for a Healthy and Abundant Future of Samoa's Ocean*, https://www.samoaocean.org/.

To advance the prioritised thematic areas and avert the threats, the SOS proposes 13 Solutions, grouped under six strategic priorities. The Solutions, illustrated in Figure 2.1, are broken down into *objectives* and *goals*. While the Solutions indicate general aims, the objectives and goals reflect more specific aims and milestones, with the objectives covering a shorter time horizon and the goals a longer one.[2] For each goal, the SOS proposes indicators against which to monitor and evaluate progress. In this way, the Solutions provide a roadmap for achieving the ambitions of the SOS.

Figure 2.1. Integrated management solutions address risks to the health of Samoa's ocean



Source: Adapted from Government of Samoa (2020[5]), *Samoa Ocean Strategy 2020-2030: Integrated Management for a Healthy and Abundant Future of Samoa's Ocean*, https://www.samoaocean.org/.

The SOS is well-placed to address the environmental threats and vulnerabilities affecting Samoa and to enable sustainable use of its ocean resources. As elaborated in Section 1.3, Samoa is highly exposed to natural hazards, including climate change. Meanwhile, environmental degradation (e.g. plastic pollution, overfishing and destruction of marine habitat) jeopardises its ocean resources and the potential of its ocean economy. The SOS's prioritised thematic areas and threats reflect these environmental issues. In particular, the threats identified by SOS (e.g. pollution, unsustainable development and climate change-related coastal erosion) are clearly rooted in the need to safeguard the health and resilience of Samoa's ocean and marine ecosystems). Through the Solutions, which include objectives like strengthening a national marine protected area (MPA) network and fortifying legislation for coastal ecosystem services, the SOS provides an actionable framework to address Samoa's environmental and climate-related concerns.

Although it recognises the socioeconomic value of the ocean, the SOS does not articulate a comprehensive vision of how to harness the ocean economy for resilient and inclusive long-term growth. In defining the prioritised thematic areas, the SOS acknowledges the value of the ocean to its people is dictated by the ocean's "ecological and socio-economic attributes" (Government of Samoa, 2020[5]). One of its thematic areas, food security, is a crucial consideration for advancing Samoa's socioeconomic welfare, especially given its economic context, where reliance on food imports has left it susceptible to external shocks (see Section 1.4). However, the SOS, and in particular, the integrated management solutions, do not explicitly define a vision for ocean-led economic growth.

The early phase of implementation of the SOS was disrupted by COVID-19, delaying foundational objectives, including costing the SOS. Achieving the SOS's objectives and goals within the original timelines has been challenging, given the abrupt halt in human and economic activity during the health crisis. The SOS stipulates that a science strategy is to be developed by 2022, but work on its formulation

is only now under way. It is not clear when its objectives and goals will be completed, and a clear picture of the resource needs and possible financing sources. Estimates of the cost of implementing the SOS and a corresponding business plan were expected to be finalised by 2021, according to the document, but no such estimates or plan yet exist, presenting a bottleneck for its implementation.

Nevertheless, the SOS is an opportunity to address gaps, redundancies and contradictions in Samoa's ocean governance. In Samoa, as in the South Pacific region generally (Vince et al., 2017[6]), sector-based silos and fragmentation have historically hampered effective governance of ocean resources and ocean-related policies. A 2009 review of ocean governance in Samoa, for example, noted that the Lands, Surveys, and Environment Act of 1989,[3] its primary environmental legislation, is principally focused on terrestrial environmental law, leaving gaps in the regulation of marine resources (Solofa, 2009[7]). Likewise, legal overlaps, for example between the Ports Authority and the Ministry of Agriculture and Fisheries (MAF), have led to operational conflicts between government institutions (Solofa, 2009[7]). The SOS, which acknowledges the importance of ensuring alignment and avoiding duplication (Government of Samoa, 2020[5]), is an important step in remedying these shortfalls.

The SOS development process and the Solutions that Samoa is currently implementing constitute meaningful progress towards an integrated approach to ocean management. The development of the SOS was rooted in a "multi-stakeholder and consultative approach" (Government of Samoa, 2020[5]), making it inclusive and reflective of diverse ocean uses and pressures. Likewise, the National Ocean Steering Committee (NOSC), which was created in 2021, represents a formal institutional set-up for policy co-ordination and implementation of the SOS (Solution 1). Meanwhile, the marine spatial plan (MSP) (Solution 5), due for completion in 2023, is commonly recognised as an effective framework for reducing sector-based silos and fragmentation (see UNESCO-IOC (2021[8])). The sections below elaborate on stakeholder consultations during the development of the SOS, the NOSC, and the MSP.

Stakeholder consultations have been instrumental in formulating the Samoa Ocean Strategy (SOS).

The development of the Samoa Ocean Strategy has involved extensive stakeholder consultations. Identifying and formulating the different elements of the SOS relied on insights and perspectives from stakeholders. In total, five national consultations were carried out to inform the SOS. The first was an internal government consultation process, which brought together representatives from different line ministries. The purpose of this consultation was to inform and define the structure and scope of the SOS and its development. Thereafter, two national consultations were held not only with government stakeholders, but also with local and international non-governmental organisations, regional organisations, academia, and local civil society groups. Industry or business organisations, however, were not directly consulted. Finally, community representatives from Upolu and Savai'i were consulted to ensure that the priorities of the SOS reflected those of the different communities. Recognising the importance of continued engagement, the early stage of SOS implementation, notably the design of the MSP, has entailed additional stakeholder consultations (see below).

The consultations have been critical in fostering the broad-based support and legitimacy needed for effective implementation. Given the importance of customary land rights and village-level governance in Samoa, the consultations have been particularly important for generating buy-in from communities for the SOS. These consultations have allowed the Samoan government to navigate contentious issues such as MPAs and to balance trade-offs (e.g. food security and overfishing). The value of community engagement in Samoa is encapsulated by its climate change adaptation efforts, where village-level endorsement and ownership has facilitated effective action (Latai-Niusulu, Binns and Nel, 2019[9]). Interviews with stakeholders revealed how initiatives to move human settlements inland were often spearheaded by communities that were witnessing the impact of climate change first-hand. As for cross-sectoral buy-in, inputs on the SOS were gathered from stakeholders operating in Samoa's key ocean-

based sectors: fisheries (e.g. the MAF), tourism (e.g. Samoa Tourism Authority), and maritime transport (e.g. Samoa Ports Authority and Samoa Shipping Co-operation). In principle, such consultations allow for attention to sector-specific concerns and the building of consensus, but in practice, fully integrating all concerns was challenging.

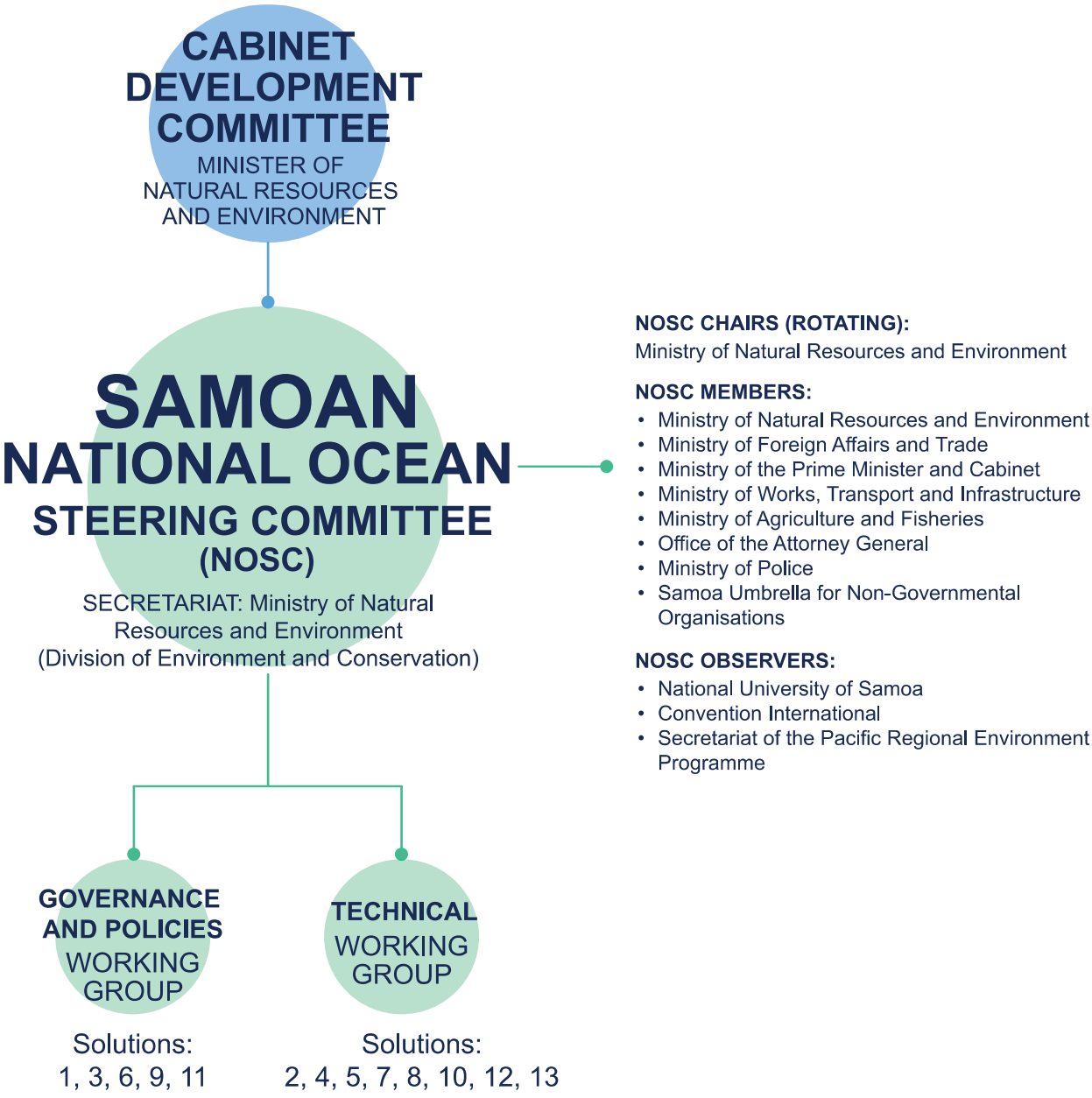
In addition to achieving buy-in, stakeholder engagement can also enhance coherence and a balanced consideration of different objectives. OECD (2016[10]) highlights stakeholder engagement as one of the pathways for better ocean planning and management, while noting that the design and scale of stakeholder consultation, as well as the tools used, determine its success. The OECD Recommendation on Policy Coherence for Sustainable Development also underscores the value of stakeholder engagement, including across different levels of government, for generating sustained support and for ensuring policy coherence at all levels of government (OECD, 2019[11]). Stakeholder consultation is particularly suited to capturing the distributional effects of ocean-related policies and their aggregate effects on social exclusion and inequity (Cavallo, Bugeja Said and Pérez Agúndez, 2023[12]). This is key for promoting an ocean economy that is not only economically and environmentally viable but also socially sustainable.

The National Ocean Steering Committee is an important vehicle for policy co-ordination and successful SOS delivery.

As a part of the SOS (Solution 1) and to facilitate its implementation, Samoa has established the NOSC. The committee has a high-level advisory and decision-making role in co-ordinating and implementing the SOS (Government of Samoa, 2021[13]). It is tasked with overseeing the strategic direction of the SOS and any periodic revisions that may be warranted for policy alignment. The committee also serves to ease co-ordination challenges, by clarifying the ocean-related roles and responsibilities of different institutions, supporting the relevant agencies in implementing the SOS Solutions, and facilitating communication between relevant stakeholders. It is also within the committee's remit to monitor and evaluate the progress of the SOS, as well as to assess its financial and human resource needs.

The NOSC includes government and non-government stakeholders. The committee is co-chaired by the Ministry of Foreign Affairs and Trade (MFAT) and the Ministry of Natural Resources and the Environment (MNRE), and the chairing responsibilities rotate every six months. The NOSC chair leads co-ordination with all national institutions on SOS-related matters and monitors and reports biannually to the Cabinet Development Committee on the progress of SOS objectives and goals. In addition to the co-chairs, the NOSC executive membership is composed of senior officials from five government entities and the Samoa Umbrella for Non-Governmental Organisations (SUNGO). The NOSC also has several observers, in an advisory capacity. Internal co-ordination in the NOSC is conducted by the Division of Environment and Conservation of the MNRE, which functions as the Secretariat of the NOSC.[4] The structure of the NOSC is illustrated in Figure 2.2.

Figure 2.2. The NOSC includes an array of members and observers



Source: Adapted from Government of Samoa (2021[13]), Terms of Reference for the National Ocean Steering Committee.

The NOSC has set up two working groups, the Governance and Policies Working Group and the Technical Working Group. Each is involved in delivering the SOS and is mandated to provide technical support for the Solutions. Their recommendations serve as the basis for decision making by the NOSC. Table 2.2 summarises the membership of each working group and the Solutions for which each is responsible.

Table 2.2. The working groups provide technical support for implementing the Solutions

Working Group	Members	Solutions
Governance and Policies	Ministry of Natural Resources and Environment; Ministry of Foreign Affairs and Trade; Ministry of Prime Minister and Cabinet; Ministry of Works, Transport and Infrastructure; Ministry of Agriculture and Fisheries; Ministry of Finance; Samoa Tourism Authority; Conservation International; Secretariat of the Pacific Regional Environment Programme; Ministry of Police; Samoa Fire and Emergency Services Authority	Create the NOSC
		Develop sustainable ocean financing mechanisms
		Strengthen monitoring, control, surveillance and enforcement across Samoa's ocean
		Strengthen policy and legislation for coastal ecosystem services protection
		Review existing policies and establish legislation where appropriate to manage risks posed by deep-sea and seabed exploration
Technical	Ministry of Education, Sport and Culture; Ministry of Works, Transport and Infrastructure; Ministry of Communications, Information, and Technology; National University of Samoa; Ministry of Natural Resources and Environment; Ministry of Agriculture and Fisheries; Ministry of Foreign Affairs and Trade; Samoa Tourism Authority; Ministry of Women, Community and Social Development; Ministry of Police; Samoa Fire and Emergency Services Authority; Conservation International; Secretariat of the Pacific Regional Environment Programme; SUNGO	Formally define Samoa's maritime boundaries
		Improve scientific research, data collection and monitoring within Samoa's ocean
		Complete an MSP for Samoa's ocean
		Strengthen the national MPA network
		Establish effective protection and management of endangered marine migratory species
		Integrate an ecosystem-based approach into existing climate change adaptation management plans and initiatives
		Strengthen effectiveness of coastal management using traditional knowledge, innovation and marine science
		Improve waste and marine pollution management at the national level

Source: Authors' research based on Government of Samoa (2021[13]), Terms of Reference for the National Ocean Steering Committee.

The NOSC's operations were curtailed by the COVID-19 pandemic. The terms of reference for the committee indicate that NOSC meetings were to be held monthly for the first six months of the SOS implementation. Thereafter, meetings were expected to be held quarterly. However, government officials indicate that the NOSC has only met four times since its inception, with no meetings in 2022, due to pandemic-related lockdowns. Meanwhile, each working group has only met twice since being established. As the NOSC meetings are intended to serve as a platform for strategic discussions, monitoring and review, and decision making, and the working group meetings are vital for technical guidance, the lack of regularity and consistency in meetings has inevitably delayed the implementation of the SOS.

Nevertheless, the NOSC has the potential to drive policy co-ordination and ensure that stakeholders work in concert towards common goals. As shown in Box 2.1, multiple actors govern or operate in ocean domains from different angles, highlighting the importance of a mechanism to promote policy coherence and co-ordination. Since its membership includes most government and non-governmental entities operating in Samoa's ocean economy, the NOSC is well-placed to function as a co-ordinating body. NOSC members include most of the ministries with a core ocean-related role, such as the MNRE, MAF, and the Ministry of Works Transport and Infrastructure (MWTI). Some ministries not within the core NOSC body are represented in the two working groups of the NOSC (e.g. the Ministry of Women, Community and Social Development and the Ministry of Education, Sport and Culture). The inclusion of non-governmental stakeholders (e.g. SUNGO and the National University of Samoa) in the NOSC builds co-ordination and legitimacy beyond government entities. Government entities with activities related to the ocean, such as the Ministry of Customs and Revenue and the Ports Authority, are not included in the NOSC and its technical working groups. While these bodies are not strictly necessary for NOSC's integrated ocean management, ensuring proper co-ordination with them is vital for policy coherence and successful implementation. Likewise, the NOSC does not include representatives from industry or business organisations (e.g. Samoa Chamber of Commerce and Industry), but its terms of reference do

specify encouraging participation from private institutions in the working groups as part of the committee's roles and responsibilities. Engaging the sector is a key element of integrated ocean management since it builds legitimacy and facilitation of good practices across ocean-related businesses (Winther et al., 2020[14]).

Box 2.1. Many government and non-government actors operate in the Samoan ocean economy

Ocean-related mandates relevant for marine spatial planning

In a recent legal and policy review of ocean governance in Samoa, Ram-Bidesi et al. (2021[15]) noted seven ministries whose policy-making and regulating mandates have a strong ocean component, with particular relevance for marine spatial planning. They include the Ministry of Natural Resources and Environment, the Ministry of Agriculture and Fisheries, the Ministry of Works, Transport and Infrastructure, the Ministry of Customs and Revenue, the Ministry of Foreign Affairs and Trade, the Ministry of Finance and the Ministry of Prime Minister and Cabinet. The relevant functions of these ministries are summarised in Table 2.3.

Table 2.3. Multiple ministries have ocean-related responsibilities and competencies

Ministry	Notable ocean-related responsibilities
Ministry of Natural Resources and Environment	1. Sustainable management and development of Samoa's natural resources 2. Environmental conservation (terrestrial and marine biodiversity) 3. Technical focal point for disaster risk management and climate change 4. Sanitation and waste management
Ministry of Agriculture and Fisheries	1. Management and development of inshore and commercial fisheries 2. Aquaculture management and development 3. Quarantine and biosafety 4. Promotion of climate and disaster resilience by developing agricultural and fisheries practices and technology
Ministry of Works, Transport and Infrastructure	1. Lead implementing agency for the transport sector and focal point for the National Infrastructure and Strategic Plan 2. Ensuring the safety and security of marine transport 3. Provision of efficient and effective road and drainage network for Samoa 4. Implementing environmental safeguards through its development consent process
Ministry of Customs and Revenue	1. Oversight of customs service (e.g. process movement of goods and people, audit international trade agreements to ensure compliance)
Ministry of Foreign Affairs and Trade	1. Management of Samoa's trade and foreign relations, including cross-government co-ordination to ensure engagement and compliance with international maritime, fisheries, oceans and environmental treaties 2. Definition of maritime boundaries and administration of the Maritime Zones Act 1999
Ministry of Finance	1. Mobilisation and allocation of all government-funded agencies through annual budget cycles 2. Development planning and monitoring and evaluation, including in ocean-relevant sectors 3. Aid co-ordination, including for climate finance and climate resilience-related projects
Ministry of Prime Minister and Cabinet	1. Screening, co-ordinating and monitoring national policies across government 2. As Secretariat to the Cabinet, key implementing agency for the environment sector

Source: Adapted from Ram-Bidesi et al. (2021[15]), Law and Policy Review in Support of Marine Spatial Planning in Samoa, http://rio-samoa.mnre.gov.ws/sites/default/files/Legal%20report%2021March2022.pdf.

Other actors involved in the Samoan ocean economy

Other line ministries also have roles in Samoa's ocean economy. The Maritime Division of the Ministry of Police, for example, carries out enforcement activities related to illegal fishing within Samoa's exclusive economic zone (EEZ). The Ministry of Education, Sports and Culture increases awareness of ocean issues by developing school curricula and promoting ocean-related cultural practices and traditions. The Ministry of Women, Community and Social Development approaches economic development in ocean-related sectors from the perspective of gender equality and social inclusion, by providing input in developing national policies and plans. This is especially important in the fisheries sector, where the role of women is undervalued and under-recognised (OECD, 2020[1]). As the lead government agency for the review and redesign of district development plans, the Ministry of Women, Community and Social Development has an important role in facilitating ocean action at the community level.

In addition to government ministries, the key actors in Samoa's ocean economy include state-owned enterprises, civil society and the private sector. The Samoa Ports Authority oversees port infrastructure and ensures that it meets the country's economic and social requirements (Samoa Ports Authority, 2023[16]). Ports, and consequently the Ports Authority, occupy a central role not only in maritime transport (whether domestic or international) but also in cruise tourism and fisheries. Meanwhile, the Samoa Tourism Authority provides policy advice on sustainably developing the tourism sector and organises co-ordination and tourism promotion (Samoa Tourism Authority, 2015[17]). Civil society actors and NGOs have a critical role in advocating for specific issue areas, marine conservation specifically (e.g. the Samoa Conservation Society) and advancing the ocean-related priorities of specific population groups. Private sector entities, for example in the tourism sector (e.g. accommodation, food and beverages), are vital in the functioning of ocean-related industries.

The NOSC's monitoring and evaluation function is also critical, but further clarification is warranted. The NOSC terms of reference explicitly charge the committee to undertake monitoring and evaluation of the SOS and also indicate that progress should be reported to the Cabinet Development Committee every six months. Meanwhile, the SOS outlines milestones and corresponding indicators for each of its goals. However, neither the NOSC terms of reference nor the SOS elaborates on the specifics of this monitoring and evaluation function. For example, monitoring is rooted in "a continual and systematic collection of data on specified indicators" (OECD, 2011[18]); but it does not specify which ministry or agency is responsible for collecting data on which SOS indicators. Also, the terms, monitoring, evaluation, and review, are used collectively in the NOSC terms of reference, although their scopes and consequently, what they require in resources and capacity, are different (OECD, 2011[18]). Clarifying the monitoring and evaluation framework and processes for the SOS would better equip the NOSC to support the SOS and achieve its objectives.

Marine spatial planning is a notable step towards integrated ocean management.

Marine spatial planning is an important component of the Samoa Ocean Strategy. One of the 13 Integrated Management Solutions identified by the Samoa Ocean Strategy, marine spatial planning provides a comprehensive, integrated approach to managing marine resources designed to balance ecological, economic and social objectives and minimise conflicts between different uses. Developing the MSP involves a public process combining analytical work and public consultations to map the use of marine resources and to establish permitted uses and restrictions based on a zoning of the ocean space. More than 60 countries already use a marine spatial planning approach to manage their ocean economies. In Samoa, the MSP process began in 2019, is led by the government and is supported by technical assistance and funding from the European Union Global Climate Change Alliance Initiative and the International Union for Conservation of Nature's Oceania Regional Office.

The first public consultations, between August 2021 and March 2022, aimed to raise awareness of the MSP process and gather insights from ocean stakeholders. The consultation process was led by an MSP national consultation team appointed by the government of Samoa, comprised of government officials, representatives from SUNGO, Conservation International's Samoa office as well as a local MSP project co-ordinator. The first consultation process, which suffered some delays due to the COVID-19 pandemic, engaged with 2 597 representatives from village communities and key national sectors. Of community representatives consulted, 96% and 78% identified subsistence and artisanal fishing for coastal marine species respectively as the most important ocean activities. Tourism and recreational activities were the second main economic activities for community and business operators. Additionally, 69% of the community groups consulted saw climate change as the greatest environmental challenge facing the sustainability of the ocean and its natural resources.

The information from communities and sectoral practitioners made it possible to spatially map human activity in Samoa's ocean, including areas for subsistence and commercial fishing, aquaculture, community swimming, sand mining and tourism. The consultations also helped identify areas of high conservation value, areas of significant economic importance and areas where conflicts between different uses could arise. Representatives of the fisheries sector expressed concern that setting up offshore ocean management areas could threaten the sustainability and vulnerability of their operations because of the loss of fishing areas. This illustrates the importance of clearly identifying and mitigating the costs and impact of MSP measures for the stakeholders in Samoa's ocean economy.

Public consultation on the draft MSP will provide further opportunity to ensure the inclusion of ocean economy stakeholders. Based on the information collected in the first consultation, a draft MSP will be developed to geolocate the potential ocean management areas, as well as other ocean areas, according to their proposed use (development, conservation, restoration, etc.) and restrictions. The draft ocean spatial plan will be reviewed by the public during the second phase of MSP national consultations. As part of the third and last stage of the national consultation process, the authorities will carry out specific activities to increase awareness among the general public of the location of the different ocean management areas and their respective uses and restrictions.

The valuation of Samoa's marine ecosystem services conducted as part of the MSP gave initial insight into the economic benefits of sustainably managing ocean resources. Small island developing states like Samoa are highly dependent on their marine ecosystems for economic and social development. These ecosystems offer numerous services, such as fisheries, tourism, carbon sequestration and protection against natural hazards. However, they face increasing pressures from climate change, overfishing, pollution and other human activities. To address such challenges, some small island developing states (SIDS) are using the valuation of marine ecosystem services as a tool to understand the economic benefits of conserving their natural resources. Table 2.4 provides a summary of the seven key marine ecosystem services evaluated in this exercise: subsistence fishing; commercial fishing; sand and aggregate mining; tourism; coastal protection; carbon sequestration; and marine research, education and management. The findings of the valuation indicate that a significant portion of Samoa's ecosystem service benefits come from international tourism (between USD 28.93 million and USD 84.54 million), subsistence and commercial fishing (over USD 40 million), costs averted related to storm flooding protection (from USD 2.85 million to USD 7.53 million) and foreign aid for ocean-related projects (approximately USD 25 million).

Table 2.4. By assigning monetary values to ecosystem services, the valuation exercise can inform policy and planning processes for sustainably managing Samoa's oceans

Annual economic value of marine and coastal ecosystem services in Samoa in 2019 prices

Sector	Ecosystem services benefits	Net annual value 2019 adjusted (in USD million)
Fisheries	Subsistence fishing	18.30 – 19.30
	Domestic coastal fishing	19.01 – 20.68
	Sea cucumber	0.05
	Deepwater bottom fishing	0.08
	Offshore tuna	2.96 – 3.89
	Nearshore pelagic troll fishing	0.06
	Marine aquarium	n.a
	Mariculture	n.a.
Mining	Sand and aggregate	0.01
	Deep-sea minerals	n.a.
Tourism	International tourism	28.93 – 84.54
	Domestic tourism	11.29
Regulating services	Coastal protection	2.85 – 7.53
	Carbon sequestration	0.06
Foreign aid and investment	Research, education and management	24.80

Source : Ram-Bidesi et al. (2022[19]) Samoa Marine Ecosystem Service Valuation Report, https://www.samoaocean.org/_files/ugd/47d1fd_6350b34c958e4bc69ed1150b1c5b002d.pdf.

The findings of the valuation of Samoa's ecosystem services will inform the marine spatial planning process. First, the valuation provides a basis to rationalise the need to preserve important areas for ecosystem service provision. Secondly, it can help evaluate trade-offs between different uses of marine resources in the MSP, helping decision makers determine the optimal balance between different uses. This could ultimately allow for a more effective allocation of resources and ensure the most efficient use of marine resources. Thirdly, the valuation of ecosystem services could help secure funding for the MSP from various financing mechanisms, some of which require a clear understanding of the economic benefits of conservation and management actions. Up-to-date information on the valuation of its ecosystem services could help Samoa improve its access to funding and financing for implementing the MSP.

2.2. Situating the Samoa Ocean Strategy in the country's broader policy landscape

Besides the Samoa Ocean Strategy, an array of policy instruments supports the sustainable management and development of Samoa's ocean economy. The SOS serves as an overarching vision for a resilient and sustainable ocean future, but it operates within a more extensive policy landscape addressing various aspects of the ocean economy. This multi-layered policy context includes cross-sectoral planning instruments like the national and district development plans, and sector-specific policies and strategies designed to address unique challenges in specific areas of the ocean economy, like environmental protection, tourism, fisheries and maritime transport.

Aligning the SOS and development and sectoral plans is vital for policy coherence. Policy integration across sectors and different levels of governance is an important element of policy coherence[5]. The Solutions have important implications for the growth and development of Samoa's ocean-related sectors and vice versa. Increasing monitoring, control, surveillance and enforcement in Samoa's oceans (Solution 6) affects the fisheries sector by curbing illegal, unreported and unregulated (IUU) fishing; maritime

transport, through compliance obligations; and tourism through stronger coral reef protection that preserves its appeal. Capturing synergies and balancing the trade-offs between different sectoral priorities, as well as between environmental, economic and social objectives, requires clear articulation of the different planning instruments.

Better integration of the SOS and the national development and sectoral plans is essential for the success of SOS implementation. In Samoa, budgetary allocations are guided by and directly linked to the priorities set out in the Pathway for the Development of Samoa (PDS) and sector-specific plans. Costing and budget appropriations are carried out for specific outputs at the sector/ministry level (see Government of Samoa (2022[20])). Government officials and development partners in Samoa often cite the PDS or sector plans as being indicative of their programmes. Ensuring that the SOS is reflected in them is critical for achieving its objectives. Development partners' efforts are guided by Samoa's development and sectoral plans, and robust integration of the SOS and the planning instruments is needed to ensure that donor support is aligned with Samoa's ocean-related priorities, especially since official development assistance currently does not fully target the priorities of SOS (see Chapter 3).

Samoa's national and district development plans set out its vision for development and need to be aligned with the Samoa Ocean Strategy.

Samoa's development aspirations are captured by its national development plans and more recently, district-specific planning instruments. *Samoa 2040: Transforming Samoa to a higher growth path* outlines Samoa's long-term development vision. The PDS, meanwhile, governs its development plan in the medium term, from fiscal year 2021/2022 to fiscal year 2025/26 (see Box 2.2) (Global Partnership for Effective Development Co-operation, 2022[21]). The PDS and *Samoa 2040* are considered complementary, with the medium-term PDS guiding annual programmes and budgetary decisions and the longer-term vision functioning as a forward-looking strategic statement (Government of Samoa, 2019[22]). In addition to national-level planning, the government of Samoa promotes a decentralised approach to and community-level ownership of development planning through the district development plans. This approach charges each district with identifying medium-term district-specific priorities, with an annual disbursement of 1 million Samoan talas (WST) to support them.

These planning instruments lay out Samoa's ocean-related economic ambitions. Two of the four transformative economic opportunities identified by *Samoa 2040*, tourism and fishing (and agriculture), depend on ocean resources (Government of Samoa, 2021[23]). The PDS echoes this focus on tourism and fishing, espousing the importance of revitalising tourism (Key Priority Area 8) and improving the productivity of the fisheries and aquaculture sector (Key Priority Area 7) (Government of Samoa, 2022[24]). The PDS also reiterates the importance of consolidated infrastructure management (Key Priority Area 21), which covers maritime transport, especially for reducing production costs, market access and domestic connectivity (Government of Samoa, 2022[24]).

Box 2.2. Samoa's national development vision is defined by two planning instruments

Samoa 2040*: Transforming Samoa to a higher growth path*

Samoa 2040 charts the country's economic growth and development agenda over the next two decades. Recognising the challenges posed by its geography, as well as its vulnerability to shocks, the document identifies four transformative economic opportunities for prosperity in Samoa:

1. **Tourism:** Samoa's natural endowments (including its coastal and marine environments) and its cultural traditions are assets for its tourism sector. However, overcoming the impact of the COVID-19 pandemic (e.g. border closures), as well as structural issues, such as its lack of infrastructure, is critical for realising the full potential of the tourism sector.
2. **Agriculture and fishing:** High trade costs, among other factors, have limited the export potential of Samoa's agriculture and fisheries sector. Shifting to import substitution and exploring niche export markets present viable opportunities for the future.
3. **Digital economy:** Expanding connectivity and developing the information and communications technology skills of the workforce can unlock opportunities in e-commerce and trade in services and entrepreneurship, helping Samoa to mitigate the constraints of its remote location and boost economic productivity.
4. **Labour mobility:** Given its small size, there may be an upper limit in the demand for domestic labour. Labour mobility can provide access to employment internationally, as well as to training and skills that can support the domestic economy upon their return home.

***Pathway for the Development of Samoa* (2021/22 to 2025/26)**

The Pathway for the Development of Samoa, with a focus on human development, is organised into five key strategic outcomes (KSO). Each strategic outcome is broken down into key priority areas. The five strategic outcomes and key priority areas are synthesised below.

1. **Improved social development (KSO 1):** Key priority areas include: alleviating hardship; improved public health; quality education; people empowerment; and a skilled workforce.
2. **Diversified and sustainable economy (KSO 2)**: Key priority areas include: community development; agriculture, fisheries and aquaculture productivity; tourism revitalisation; business innovation and growth; increased labour mobility; and macroeconomic stability.
3. **Security and trusted governance (KSO 3)**: Key priority areas include: empowered legislation; improved accountability; dynamic global relations and partnerships.
4. **Secured environment and climate change (KSO 4)**: Key priority areas include: building climate resilience; effective environmental protection and management frameworks; enhanced conservation and sustainable use of natural resources; and sustainable energy development enhanced.
5. **Structured public works and infrastructure (KSO 5)**: Key priority areas include: responsive public utility services; innovative information, communication and technology use; and consolidated infrastructure management.

Source: Government of Samoa (2021[23]), *Samoa 2040: Transforming Samoa to a Higher Growth Path*, https://www.mof.gov.ws/wp-content/uploads/2021/03/Samoa-2040-Final.pdf; Government of Samoa (2022[24]), *Pathway for the Development of Samoa FY2021/2022-FY2025/26*, https://www.mof.gov.ws/wp-content/uploads/2022/02/Pathway-for-the-Development-of-Samoa.pdf.

They also reinforce the importance of ocean health, echoing the priorities of the SOS. Both *Samoa 2040* and the PDS address environmental stressors affecting the ocean (e.g. climate change, IUU) and recognise the intimate relationship between ocean health and ocean-related economic ambitions (e.g. nature's value in facilitating tourism growth). In fact, Key Priority Area 17 of the PDS (Enhanced Conservation and Sustainable Use of Resources) explicitly refers to the Samoa Ocean Strategy as the guide for the "sustainable and integrated management of [Samoa's] ocean and its resources" (Government of Samoa, 2022[24]), lending additional authority to the SOS.

The SOS Solutions could be better linked to the development plans' socioeconomic priorities. In principle, all planning instruments should align with Samoa's national development plans, but gaps remain in practice. The PDS was released after the SOS, and the previous development plan, the *Strategy for the Development of Samoa 2016/17-2019/2020* (SDS), was considered a point of reference for developing the SOS,[6] and the SOS maps its Solutions to the SDS's Priority Areas. This mapping, however, predominantly shows linkages to SDS's Priority Area 4 (Environment). This conceals some of the fundamental interdependencies between the Solutions and the ocean-related socioeconomic ambitions of the development plans. Marine Protected Areas (SOS Solution 7), for example, can have positive outcomes of fisheries yields (Cabral et al., 2020[25]), thus improving the performance of the fisheries sector (SDS Priority Area 1 – Economic, Key Outcome 4 – Agriculture and Fisheries Productivity Increased). The SOS, however, does not make this link explicit. Moreover, the SOS only maps the Solutions to the Priority Areas of the SDS, which are quite broad (Economic, Social, Infrastructure and Environment). Mapping to the Key Outcomes of the SDS would be a more meaningful way to highlight synergies between the two policy frameworks.

Strengthening these linkages would emphasise that the development plan and the SOS go hand in hand. This is important for policy coherence because it could encourage co-ordination between the two ministries that lead work on the different planning instruments, the MNRE for the SOS and the Ministry of Finance for the development plans. Also, as noted earlier, clearer linkages could facilitate the implementation of the SOS because the development plan plays a central role in Samoa's policy landscape and is the basis of budgetary allocations and development partner engagement.

Sectoral plans inform granular priorities of ocean-relevant sectors and are important bases for SOS integration.

At the sector level, Samoa's government has industry-specific strategies and policies to promote sustainable development and management of its ocean economy. Sectoral policy tools and instruments can play a crucial role in helping increase the contribution of Samoa's blue economy to sustainable development. In the interviews conducted as part of the fact-finding mission, the country's main development partners praised the quality and level of detail of Samoa's sector plans and strategies. This section outlines the policy framework for Samoa's ocean-related sectors, evaluating their alignment with the SOS.

The expiration of many of Samoa's policy tools related to its ocean sectors at the turn of the decade offers an opportunity to incorporate lessons learned from recent crises and to align new policies with the recently launched SOS. Most sector-specific policy tools and instruments developed around that time incorporate a focus on the recovery of ocean-related sectors from the COVID-19 pandemic, as well as a concern for climate change and disaster preparedness. However, few explicitly refer to the SOS as a framework for alignment. This is consistent with the interviews conducted with key actors of sectors related to Samoa's ocean economy, which showed that although most stakeholders are aware of the SOS and have been engaged during its development, they do not perceive it as a framework guiding their sector plans and strategies. Even the SOS does not make apparent its relevance for the sectoral plans: despite mapping its Solutions to the outcomes of the National Environment Sector Plan, it does not provide a reference for the other ocean-relevant sector plans, such as the Agriculture and Fisheries Sector Plan.

While this partly reflects the SOS's focus on marine conservation and preservation, rather than the development of ocean-related economic activities, it could also hold back the implementation of the strategy in the long run. Aligning forthcoming sector policy tools with the SOS is thus crucial for achieving Samoa's sustainable development ambitions while ensuring the protection and conservation of its marine ecosystems.

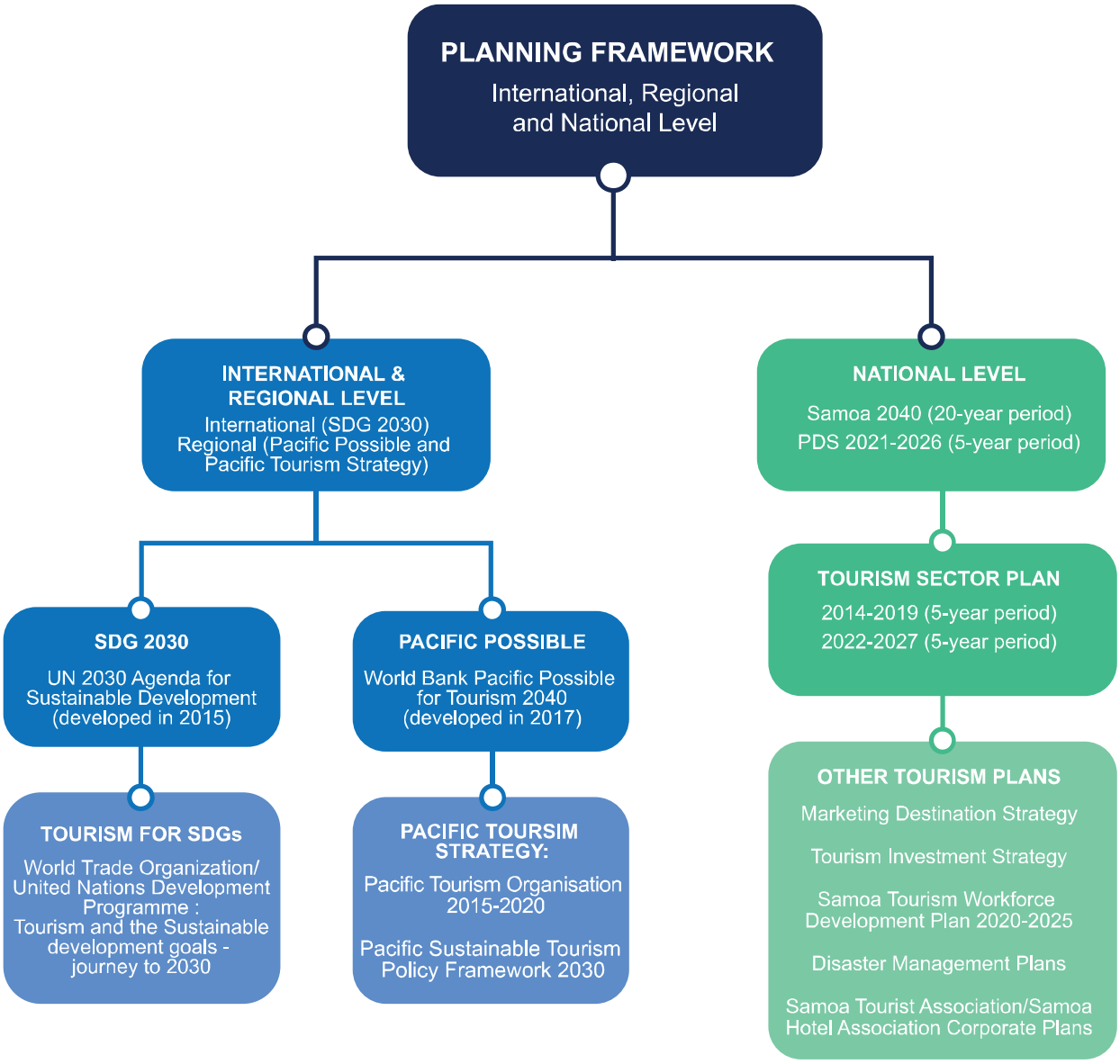
Tourism

Samoa's policy framework acknowledges the vital importance of tourism in the nation's economy, consistent with its medium- and long-term development strategies. These strategies emphasise the growth potential of the tourism sector and stress the need to maximise its contribution to Samoa's economic development. Ensuring alignment and linkages between Samoa's tourism-related policies and the SOS is key to ensuring that the tourism sector contributes to the sustainable management of ocean resources and avoids detrimental impacts that outweigh its positive contributions.

The recently launched Samoa Tourism Sector Plan (STSP) 2022-2027 outlines a pathway for the industry's recovery from the COVID-19 pandemic. The priorities of the STSP 2022-2027 reflect the pandemic's context and focus on restarting tourism operations and achieving resilient and sustainable growth in the tourism industry. The STSP outlines six programmatic areas: (i) marketing and research, (ii) product development, (iii) transport, infrastructure and access, (iv) investment and the business enabling environment, (v) human resource development and training and (vi) climate change and disaster preparedness. As part of efforts to revive and grow the tourism industry sustainably, the STSP 2022-2027 calls for the establishment of a Samoa Tourism Resilience Asset Protection Facility, which could provide the necessary financing and technical support for the tourism and hospitality sector. The funding requirements of the facility, amounting to WST 202.83 million, could be financed from a combination of domestic sources, aid from bilateral and multilateral development partners and direct investment from the diaspora.

Although the STSP's vision and goals align with Samoa's main development-related policy frameworks, it does not explicitly refer to the Ocean Strategy. The STSP is closely aligned with the PDS, the Samoa 2040 strategy, and other regional and international policy frameworks (Figure 2.3). The development of the STSP also incorporated the main lessons learned from the implementation of the previous tourism sector plan (2014-2019), including the need to address gaps in human resource development, investment and business enabling environment, and marketing and research. On the other hand, the STSP does not directly link to the Samoa Ocean Strategy, and in future, clarifying the link between the STSP and the SOS could facilitate co-ordination and implementation.

Figure 2.3. The Samoa Tourism Sector Plan 2022-2027 articulates with key national, regional, and international policy frameworks



Source: Adapted from Samoa Tourism Sector Plan 2022-2027, (Government of Samoa, 2021[26]), https://www.mof.gov.ws/wp-content/uploads/2023/02/Tourism-Sector-Plan-2022-2027.pdf.

The STSP stresses the need to address the current and future effects of climate change on the tourism industry. Compared to its predecessor, the updated STSP includes climate change and disaster preparedness as an additional programmatic area, to ensure that the sector receives adequate support to prepare for emergencies including natural disasters and pandemics. One of its priorities is the development and launch of a National Tourism Climate Change Adaptation Strategy 2021-2025, updating the previous plan for 2012-2017. The STSP also calls for the development of Business Continuity Plans and Disaster Response Plans in the medium to long term, to ensure the tourism industry is prepared for emergencies.

The government has also started rolling out new policy tools to promote marine-based tourism and to revive the Samoan tourism industry. In November 2022, the Samoa Tourism Authority published the Samoa Cruise Tourism Strategy 2022-2027, a five-year plan to increase cruise tourism and harness its

potential to support the recovery of the tourism industry and contribute to Samoa's economy. This focus was accompanied by broader efforts to support tourism, including the launch of a Samoa Destination Marketing Strategy in 2021 to increase visitor arrivals and spending.

Fisheries and aquaculture

Samoa has developed a set of policies to manage its fisheries resources sustainably. It also participates in regional negotiations and agreements, in particular for managing tuna stocks in the Pacific Ocean. Overall, Samoa's policy and governance framework shows a strong commitment to sustainable management of fisheries, protection of the maritime environment and community involvement. The sector faces major challenges, however, including limited resources to implement and enforce policies, for example, to counter IUU fishing and address climate change.

The 2016 Fisheries Management Act lays out the foundations for governance of the fisheries sector. A key objective of the Fisheries Management Act is to regulate and control the conservation, sustainable management and development of fisheries, as well as the licensing of Samoan and foreign fishing vessels. It also defines the functions of the MAF and its Fisheries Division, which include: liaising with communities and sector stakeholders at the national, regional and international levels on issues affecting fisheries resources; advising government agencies and communities on sustainable management of coastal fisheries; establishing, operating and maintaining government facilities for fishing and related activities; and monitoring the impact of initiatives in other sectors and their impact on fisheries. The SOS acknowledges the foundational nature of the Fisheries Management Act and specifies that it shares the same precautionary approach and values for the sustainable management of fisheries resources.

The government recently launched an Agriculture and Fisheries Sector Plan (AFSP) for 2022-2027, which provides strategic direction to the efforts of the government in the sector. The drafting of the AFSP to replace the previous one (covering 2016-2020) was carried out in consultation with farmers and fishermen, the private sector and civil society organisations, and with technical and financial support from the International Fund for Agricultural Development and the World Bank. Launched in January 2023, the new AFSP aims to provide all stakeholders in the agriculture and fisheries sectors with a clear vision of the government's agenda in the next five years. It recognises the importance of agriculture and fisheries for both livelihoods and economic development and defines five strategic focus areas: (i) resilient and sustainable food, agriculture, fisheries and aquaculture systems; (ii) food and nutritional security; (iii) rural transformation; (iv) private sector capacity and export contributions; and (v) the enabling environment for the development of the sector. The AFSP also acknowledges that the development of agriculture and fisheries is supported by a variety of intersecting national policies, including the SOS.

The Samoa Fisheries and Aquaculture Policy 2022-2032 aims to translate the strategic directions laid out in the AFSP into a roadmap with concrete action points. This new policy tool, launched in October 2022, outlines a series of actionable goals directly relevant to the sustainable management of Samoa's ocean, including: promoting sustainable practices for the management of coastal fisheries; securing a fair share of benefits from offshore fisheries; increasing aquaculture production; enhancing the evidence base for the management of marine resources; improving monitoring, surveillance and enforcement; and developing the necessary policy and governance framework. A key objective of the new policy is to enhance the management of the Samoa EEZ fishery resources with more efficient measures for controlling the harvesting, processing and marketing or exporting of fish caught within the zone. The Samoa Fisheries and Aquaculture Policy acknowledges the important role played by community-based fisheries management approaches, which are used by more than 120 coastal villages throughout the country (of a total of 360 villages) and commits to continuing efforts on stock enhancement of key species.

In addition to these sector-wide policy instruments, the MAF has initiated the development of several issue-specific policies related to Samoa's fisheries. With support from the Food and

Agriculture Organization, the MAF held the first workshop of the Samoa Agriculture and Fisheries Climate Change Policy in March 2023, to address the impact of climate change on the fisheries sector. Once finalised, the policy will provide a framework for climate-resilient and sustainable management of the sector. Meanwhile, the MAF is also collaborating with the Pacific Islands Forum Fisheries Agency to update the Samoa Tuna Fisheries National Monitoring, Control and Surveillance Strategy, which expired in 2020. The purpose of this strategy is to ensure that Samoa has adequate monitoring, control and surveillance capacity to prevent and eradicate IUU fishing activity. In both cases, the development of these policy instruments is conducted in close consultation with relevant stakeholders, in particular fishing communities, industry representatives, government agencies and relevant regional co-ordination bodies.

Beyond its national policy framework, Samoa is an active member of, and party to, several regional bodies and agreements dealing with coastal and offshore fisheries management. These include the Western and Central Pacific Fisheries Commission, which manages the tuna stocks in the Pacific Ocean and allows countries in the region to negotiate catch limits and other conservation measures for tuna. Samoa is also a member of the Forum Fisheries Agency, which provides a platform for Pacific Island countries to collaborate on offshore fisheries management issues, including in such areas as policy co-ordination, legislative harmonisation, monitoring, surveillance and enforcement. Furthermore, as a member of the Pacific Community, Samoa benefits from the activities and support of its Secretariat in areas such as fisheries stock assessments, information-sharing, monitoring, research and technical advice.

Maritime transport

The government of Samoa recognises the importance of maritime transport for the country's economic development and has drafted a policy framework to promote the sector's growth. Maritime transport is a critical enabler of Samoa's blue economy, connecting it to global markets, and is thus also crucial for the development of its other ocean-related industries, such as fisheries and tourism.

The MWTI has the mandate to ensure safe, secure and viable transport modes and infrastructure assets in Samoa. The functions of the MWTI are set out in the 1977 Ministry of Transport Act, which gives MWTI the functions to: advise the minister on the development of an efficient transport policy for Samoa; undertake research into all aspects of transport, including the economics of transport; and advise the minister on investment in transport. The MWTI also administers the Shipping Act of 1998, which regulates shipping in Samoa's national waters and enforces various international maritime conventions. The portfolio of the MWTI also includes several ocean-relevant state-owned enterprises, such as the Samoa Ports Authority, established by the 1998 Port Authority Act to declare, control and regulate activities within ports and approaches to ports; the Samoa Shipping Corporation, which provides freight and passenger services between Samoa's two main islands, Savai'i and Upolu, and American Samoa; and Samoa Shipping Services, whose main purpose is to place Samoan seafarers on foreign vessels.

The government is in the process of finalising its new five-year Transport Sector Plan, which will replace the one for 2014-2019. The new sector plan seeks to establish a sector-wide approach for co-ordinated and cohesive planning framework for all aspects of transport, including maritime transport. It will serve as a roadmap for the government's pipeline of transport projects, focusing on sustainable development of the transport sector, improving connectivity, enhancing safety and security and promoting economic growth.

Maritime transport is only mentioned by the SOS as part of environment-related considerations. The SOS signals maritime transport as an area that needs enhanced monitoring and surveillance to control the spread of invasive or alien species in Samoa's ocean and reduce pollution from vessels. It also calls for the decarbonisation of maritime shipping as a priority for Samoa to deliver its nationally determined contributions under the Paris Agreement.

Marine protection and sustainable management

Marine protection and sustainable management are crucial for the ocean economy of Samoa and other Pacific SIDS. The ocean provides numerous benefits to the economy and livelihoods of Samoans, including food, tourism and transport. Unsustainable exploitation of marine resources can cause long-term damage to marine ecosystems and threaten the ocean economy. Protecting and sustainably managing marine resources can help ensure their availability in the long term and maintain the ocean's ecological integrity.

Samoa has taken significant steps towards marine protection and sustainable management in its ocean strategy and the current marine spatial planning. As discussed in Section 2.1, the SOS recognises the need for integrated, ecosystem-based approaches to marine management and outlines a vision for the conservation, protection and sustainable management of the ocean's resources. The MSP process aims to provide clarity on the use of marine resources and facilitate their sustainable management. The SOS and MSP complement the existing framework of laws and regulations directly relevant to Samoa's ocean economy and marine protection efforts, as described in the MSP law and policy review (Rose, 2022[27]).

The Lands, Surveys and Environment Act of 1989 makes provision for the conservation and protection of the environment, including establishing National Parks and other protected areas. The act is directly relevant to marine protection and sustainable management, providing a legal framework for the establishment of marine protected areas in Samoa's marine environment. Key stakeholders have sought for some years to replace and repeal the aspects of the act most relevant to MSP by passing the Environmental Management and Conservation Bill.

The prevention of pollution to the marine environment is governed by the Marine Pollution Prevention Act 2008. It also defines the responses to marine pollution incidents emanating from vessels, and other matters related to international marine pollution conventions. Preventing and responding to marine pollution, especially from shipping, is a key element of sustainable marine governance and is essential to the success of marine protection efforts in Samoa.

The Marine Wildlife Protection Regulations 2009, amended in 2018 by the Marine Wildlife Protection Amendment Regulations, support the conservation of Samoa's marine biodiversity. They provide protection specifically for threatened and endangered marine species. The 2018 amendment also added a National Marine Sanctuary. The regulations are an important component of Samoa's marine legislation, particularly for the protection of threatened and endangered marine species, such as marine mammals, sharks, turtles and spawning aggregations.

The Waste Management Act 2010 provides the institutional and governance arrangements for general and hazardous waste management in Samoa, as well as the implementation of international conventions in national law. Preventing degradation of marine environments caused by waste and pollution, whether from on-island or other sources, is a key element of sustainable marine governance and thus an important aspect of marine protection and sustainable management.

An Environmental Management and Conservation Bill, still awaiting a parliamentary vote, would represent a major reform in Samoan environmental law. Plans to develop and pass the new bill to update Samoa's current environmental policy framework date back several years. If passed, it would complete the existing policy framework on key aspects of marine protection and sustainable management, helping to increase the number of protected area categories and establishing categories specific to local marine contexts. This includes high-value ecological zones such as mangroves, and categories that allow for co-management and decentralised governance of marine coastal and offshore protected areas. The Environmental Management and Conservation Bill would also implement commitments made under the Convention on Biological Diversity and its protocols on biosafety and biosecurity. It would also repeal the

National Parks and Reserves Act 1974, which currently enables the creation of various types of protected areas, and most of the environmental aspects of the Lands, Survey, and Environment Act 1989.

The government is also updating its National Environment Sector Plan (NESP), which expired in 2021. The NESP is a critical framework guiding Samoa's environmental management efforts. The update will be assisted by the drafting of a State of Environment report, led by the MNRE, with support from the Secretariat of the Pacific Regional Environment Programme. The State of Environment report will provide an overview of the status of Samoa's environment, including climate and disaster risk reduction, culture and heritage, built environment, environment governance and natural environment. The report's key recommendations will form the basis for the NESP update.

In general, the SOS is aligned with Samoa's broader environment and climate policy landscape. The strategy explicitly maps its Solutions to relevant national plans, such as the NESP, as well as international commitments (Aichi Targets, voluntary commitments to Sustainable Development Goal, or SDG, 14). The SOS also incorporates action items from the country's Nationally Determined Contributions to the Paris Agreement. Since adaptation planning in Samoa is decentralised and conducted at the sector and community level, no up-to-date national planning instrument for adaptation is available as a point of reference for the SOS.[7] However, it does recognise the importance of marine ecosystems for climate change adaptation (e.g. Solution 10: Integrate Ecosystem-Based Approach into existing climate change adaptation plans and initiatives). Any future changes in the environment and climate change policy landscape (e.g. development of a national adaptation strategy) should remain consistent with the SOS.

Mineral and non-living marine resources

The Pacific SIDS are home to some of the world's most biodiverse and fragile marine ecosystems. These are not only vital for supporting the livelihoods of coastal communities but play a crucial role in the economies of these island states. With increasing global demand for critical metals and minerals used in technologies like batteries and wind turbines, interest in exploring and exploiting deep-sea mineral and non-living resources has grown. The potential environmental and social impacts of such activities have sparked concern among Pacific SIDS, Samoa included.

Samoa's ocean economy is reliant on its marine resources. As the SOS notes, mineral resources have been located in the seabed of Samoa's EEZ in the past, although studies done in the 1990s concluded that seabed mining was not economically viable. While exploitation of mineral and non-living resources in the deep-seabed is sometimes mentioned as a potential source of revenue for Pacific SIDS, Samoa has been careful to consider the potential impact on the marine environment, and its far-reaching implications for Samoa's ocean economy and coastal communities. Deep-sea mining in recent years has been recognised as presenting significant risks to marine ecosystems, including the destruction of seafloor habitats and the discharge of toxic chemicals.

To address such concerns, Samoa has established a policy framework that prioritises the sustainable management and conservation of its marine resources. The SOS identified unregulated deep-sea mining as a potential threat and emphasised the need for the country to follow best practices for seabed exploration and ensure policies are developed to preserve the biodiversity of deep-sea ecosystems. In this sense, the SOS aligns with Samoa's international obligations, such as those under the 2012 Noumea Convention for the protection of the natural resources and environment of the South Pacific Region and the United Nations Convention on the Law of the Sea. Among its numerous objectives, the SOS expects all the seafloor and seamounts in Samoa's EEZ to be mapped by 2024, and their ecology to be understood and integrated by 2027 into decision making on the management of Samoa's ocean. Samoa has also recognised the importance of engaging in international discussions on the governance of deep-sea mining to ensure that the potential benefits are weighed against the risks.

At the 2022 United Nations Oceans Conference, Samoa and several other Pacific SIDS called for a moratorium on deep-seabed mining, citing the need for further scientific research on their potential

environmental and social impact. Samoa's decision is consistent with the precautionary principle outlined in its ocean strategy, which recognises the need for caution in the face of uncertainty about the potential impact of new activities, particularly those that could have significant and irreversible consequences. One of the key challenges in assessing the potential impacts of deep-sea mining is the lack of scientific knowledge about the deep-sea ecosystem. The deep sea is one of the least explored and understood environments on Earth, and the potential impacts of deep-sea mining activities are largely unknown. This uncertainty has led to concerns about the potential long-term impact of such activities on the marine ecosystem and the livelihoods of coastal communities.

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Notes

[1] This reflects the literature on integrated ocean management (see OECD (2016[10]), Winther et al. (2020[14])), as well as guidelines for promoting policy coherence (see e.g. OECD (2019[11])).

[2] Solution 6, for example, calls for strengthening monitoring, control, surveillance and enforcement across Samoa's ocean. One of its objectives is, "By 2022, key government officers and community members are identified and trained in monitoring and enforcement (Government of Samoa, 2020[5])". Another of its goals is, "By 2030, effective monitoring is in place to reduce IUU occurrence in Samoa's Ocean by 50% compared to 2020 levels (including all coastal, offshore and migratory species)" (Government of Samoa, 2020[5]).

[3] See Section 3.2 for additional details on this legislation.

[4] Unlike the chairing responsibilities, the role of Secretariat is not rotated between MNRE and MFAT.

[5] See OECD Recommendation on Policy Coherence for Sustainable Development (OECD, 2019[11]).

[6] As there is no shift in policy priorities between the SDS and the PDS, alignment with one should, in principle, imply alignment with the other.

[7] Samoa published a National Adaptation Programme of Action in 2005, but has since adopted a bottom-up approach to adaptation planning, with priorities embedded in sectoral plans rather than in an updated national adaptation plan (Kinoshita et al., 2022[28]).

3 Financing Samoa's sustainable ocean economy

This chapter offers an overview of Samoa's financing landscape as it relates to the ocean economy. It emphasises the need to tap into a diverse range of financing sources (public, private, domestic and external) to support Samoa's aspirations of building a sustainable ocean economy. Additionally, the chapter explores the role of official development assistance (ODA) in cultivating a sustainable ocean economy and the potential benefits and challenges associated with adopting innovative financing mechanisms in the Samoan context.

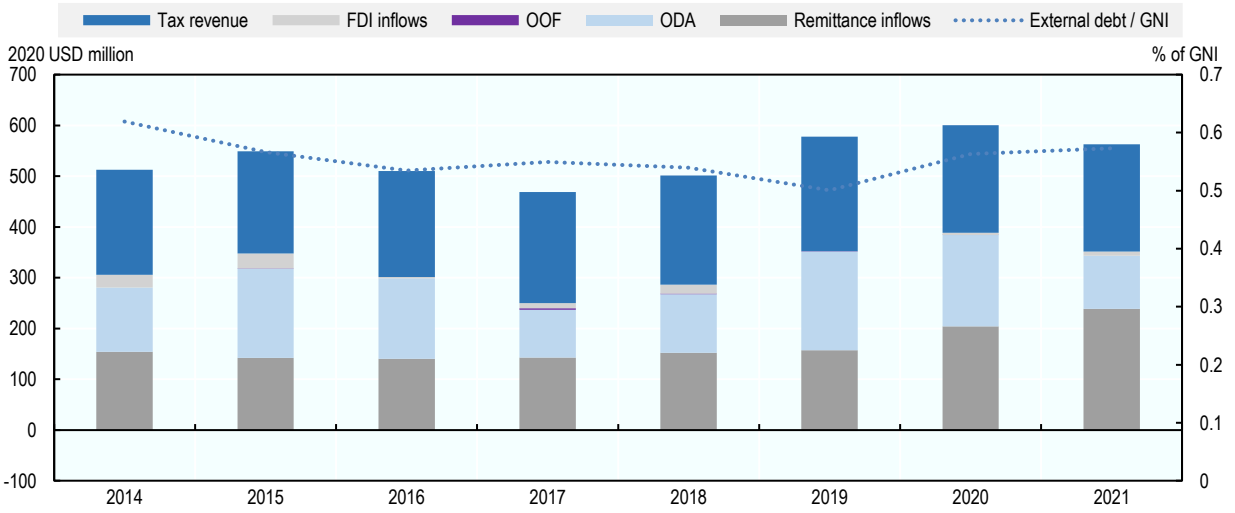
Key messages

- Public finance is a major source of finance for Samoa's investments, but the country's limited fiscal space calls for careful prioritisation in a resource-constrained environment.
  - Tax revenues serve as a major source of finance for the government's investments, and there is room to explore new instruments (e.g. sustainable tourism taxes) to raise additional financing to implement the Samoa Ocean Strategy (SOS).
  - Since it is classified as being at high risk of debt distress, Samoa has little room to take on more public debt, which could translate into reduced opportunities for public investment. Strategic investments in climate resilience, including for ocean-related assets, can help provide fiscal relief in the long term.
  - Official development assistance (ODA), including for the sustainable ocean economy, is relatively high but could be better targeted to support the implementation of the SOS.
- Private finance, including remittances, can be a major source of financing, but the enabling environment for private investment needs to be strengthened.
  - While remittance flows are growing and a source of financing, they require continued international labour mobility, which is a risky proposition given the labour shortages in Samoa.
  - Although Samoa is recognised as a regional best practice leader in transparent and fair business regulations, structural challenges typical of small and remote economies limit the scope for private investment.

Maximising scarce resources will be key to financing the Samoa Ocean Strategy (SOS) and developing Samoa's ocean economy. A better alignment of the scarce financing with ocean-related investment needs will be vital for unlocking the potential of Samoa's ocean economy. The government is developing a financing plan for the SOS, and a holistic assessment of all sources of finance could identify financing gaps and reveal opportunities.

Samoa's financing landscape reflects the challenges of the economies of small island developing states (SIDS), such as a lack of diversification and limited prospects for international trade and investment. Samoa relies heavily on remittances and official development assistance (ODA), which, in 2021, accounted for 28% and 12% of its finance mix, respectively (Figure 3.1). Samoa's public debt is at a relatively moderate level, especially in comparison to peer SIDS countries, but its high exposure to natural disasters and external shocks leaves it at high risk of external and overall debt distress (World Bank and IMF, 2021[1]). While structural limitations constrain the government's ability to raise additional finance for the SOS, ODA and remittances could be better channelled into investment in the ocean economy. New tax instruments (e.g. sustainable tourism taxes) and financing mechanisms like blue bonds and insurance schemes could also be introduced to finance marine conservation.

Figure 3.1. Samoa's financing landscape is highly dependent on remittances and official development assistance



Note: Tax revenues are calculated by multiplying the tax-to-gross domestic product ratio indicated in the Government Finance data of the Samoa Bureau of Statistics by the USD-denominated gross domestic product data in the World Development Indicators database. FDI = foreign direct investment; OOF = other official flows; ODA = official development assistance; GNI = gross national income

Source: Authors' calculations based on OECD (2023[2]) Creditor reporting system database, https://stats.oecd.org/Index.aspx?DataSetCode=crs1; World Bank (2023[3]), World Development Indicators database, https://databank.worldbank.org/source/world-development-indicators# ; Samoa Bureau of Statistics (2022[4]), Government Finance Statistics, https://www.sbs.gov.ws/government-finance-statistics/.

StatLink https://stat.link/yoiqcl

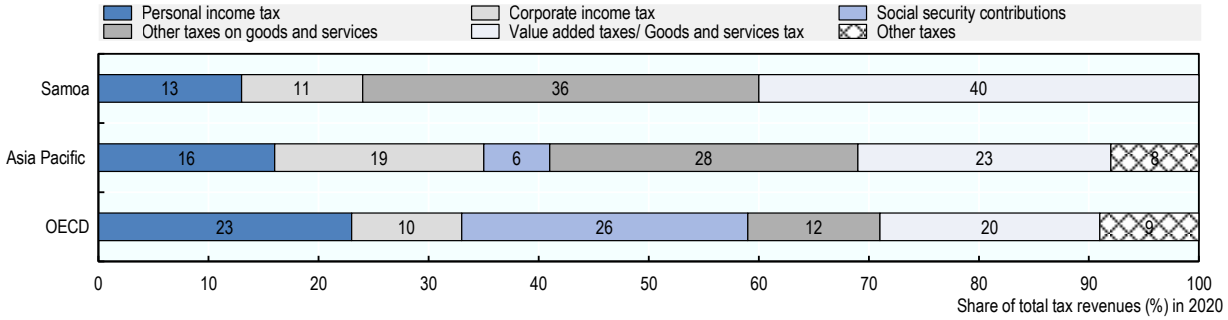
3.1. Public finance

Tax revenues are a major source of finance for the government

Tax revenues, which account for the largest share (54%) of Samoa's finance mix, have shown considerable resilience during the COVID-19 pandemic. After reaching a peak in 2019, tax revenues experienced a moderate decrease in 2020 and 2021. Despite the slight decline in absolute volumes, tax revenues demonstrated remarkable stability during the pandemic, partially due to improvements in tax administration (IMF, 2023[5]). As a result, the tax-to-gross domestic product (GDP) ratio rose from 23% in 2015 to 26% in 2020. This is almost 6 percentage points above the Asia and Pacific average of 19%, but in line with the SIDS average of 25% (OECD, 2022[6]).

Compared to other countries in the Asia Pacific region, Samoa derives a relatively large share (40%) of tax revenues from value-added goods and services taxes (OECD, 2022[6]). On average, value-added tax (VAT) income is less significant for ODA-eligible SIDS (27% of total tax revenues, on average), due to policy and administrative challenges limiting VAT revenues and because some SIDS have not yet adopted VAT (OECD, 2022[7]). In Samoa, however, VAT revenues are sizable and expected to increase, due to the phased roll-out of the web-based Tax Invoice Monitoring System, which started in July 2020 and contributed to improved tax compliance (IMF, 2021[8]).

Figure 3.2. Samoa relies heavily on value-added goods and services taxes



Note: The OECD average is based on 2019 data.
Source: OECD (2022[6]), Revenue Statistics in Asia and the Pacific 2022, https://doi.org/10.1787/db29f89a-en.

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Previous assessments of Samoa's financing landscape made recommendations to broaden the tax base and improve tax compliance. The development finance assessment carried out in 2019, by the United Nations Development Programme, highlighted the need to broaden Samoa's tax base, for example by reviewing the current system for personal income tax as well as tax exemptions for different businesses and organisations. The assessment further made suggestions to improve tax compliance through web-based electronic tax filing and payment systems, as well as the application of audit systems to more effectively target underreported taxable income and tax evasion (UNDP, 2019[9]). The Tax Invoice Monitoring System roll-out shows the government's responsiveness to these recommendations. The International Monetary Fund (IMF) advised Samoa to consider introducing new tax measures and expanding existing ones to incentivise and finance climate action. This included an increase in excise taxes on kerosene and liquefied petroleum gas, and taxing electricity at the standard VAT rate of 15%, which could help to incentivise climate change mitigation (IMF, 2022[10]).

Additional tax revenues can be used for value-adding and sustainability-enhancing investments. Introducing sustainable tourism taxes would be a way to leverage the revenue-generating potential of the tourism industry, which was identified as a key driver for economic growth in Chapter 1. An increasing number of countries are introducing tourism taxes as a way to invest in infrastructure and sustainability initiatives. Thailand recently announced plans to introduce an entry fee of 300 Thai Baht (USD 8) for international travellers, which is expected to generate more than USD 115 million in additional revenue (Klurman, 2023[11]). User fees for marine protected areas can also be explored as part of the marine spatial planning process described in Chapter 2. In addition to raising tax revenues to finance ocean-related investments, these instruments can serve the purpose of regulating the use of and sustainably managing Samoa's marine ecosystem. Tsvetanova and Seetaram (2018[12]) suggest that consumers who pay tourism taxes have a greater awareness of environmental problems and are more willing to pay to reduce the negative impact and correct externalities.

At high risk of debt distress, Samoa has little room to take on more public debt

The IMF-World Bank debt sustainability analysis classifies Samoa as at high risk of external and overall debt distress. While the debt level itself is moderate, the rating reflects Samoa's high exposure to natural disasters and external shocks (World Bank and IMF, 2021[1]). Public and publicly guaranteed debt amounted to 54% of GDP in fiscal year 2020, comprising central government debt (46.7% of GDP) and central government-guaranteed state-owned enterprise debt (7.1% of GDP). Public debt includes government guarantees (7% of GDP in fiscal year 2020), of which more than half originated from the Credit Line Facility of the Central Bank of Samoa, which was used to support state-owned enterprises (mainly

the Development Bank of Samoa), following the aftermath of the natural disasters and to promote inclusive economic growth in the targeted priority sectors (World Bank and IMF, 2021[1]). According to IMF projections, the debt-to-GDP ratio is expected to trend upward over the next 20 years. In the absence of grant financing for reconstruction, an additional near-term natural disaster comparable to historical magnitudes would accelerate these trends and could permanently increase the debt-to-GDP ratio by up to 20-25 percentage points (IMF, 2022[10]).

Samoa's public debt is almost entirely held by external lenders (Table 3.1). Only 0.1% of the country's public debt is borrowed domestically from the Unit Trust of Samoa, a public financial institution that acts as an investment vehicle for local and overseas Samoans. External public debt is divided roughly evenly across multilateral and bilateral creditors. The largest creditors are the EXIM Bank of the People's Republic of China (39.7%), the International Development Association (30.4%) and the Asian Development Bank (20.1%) (Ministry of Finance, 2022[13]).

Table 3.1. Multilateral development banks and China are among the main lenders to Samoa

Public debt breakdown as of September 2022

	Amount (Samoan Tala)	Share (%) of total debt
Multilateral	**482.1**	**52.9**
Asian Development Bank	182.7	20.1
European Investment Bank	2.4	0.3
International Development Association	277.4	30.4
International Fund for Agricultural Development	2.6	0.3
Organisation of the Petroleum Exporting Countries	17	1.9
Bilateral	**427.8**	**46.9**
EXIM Bank (China)	361.7	39.7
Japan International Cooperation Agency	66.1	7.3
Domestic debt	**1.3**	**0.1**
Unit Trust of Samoa	1.3	0.1
Total debt	**911.2**	**100.0**

Source: Samoa Ministry of Finance (2022[13]), Quarterly Public Debt Bulletin, https://www.mof.gov.ws/wp-content/uploads/2022/12/QDB-Sept-22.pdf.

The level of debt service payments is relatively low, due to a large share of concessional loans. Most of the external debt consists of highly concessional loans from multilateral and bilateral donors, with interest rates ranging from 0.45% to 1.5% in 2022. External debt obligations that do not fall into this category are semi-concessional loans from China's EXIM Bank (at 2%) and non-concessional loans from the Organization of the Petroleum Exporting Countries (OPEC), at a 3.98% annual interest rate. The cost of existing debt amounts to an average interest rate of 1.4% per annum (Ministry of Finance, 2022[13]). In 2021, total debt service amounted to 1.9% of gross national income, down from 2.8% in 2020 and 3.5% in 2019 (World Bank, 2023[14]). The reason for this decline is that under the G20 Debt Servicing Suspension Initiative, Samoa qualified for suspension of debt service payments owed to bilateral creditors, i.e. China, Japan and the European Union, which helped to free up fiscal space to contain the effects of the pandemic. Debt servicing resumed in the latter half of 2022.

The need for prudent public debt management constrains the fiscal space immediately available to the government for large-scale public investment and expenditure, including for the ocean

economy. Having made efforts to decrease the public debt burden to keep in line with its medium-term debt strategy (Samoa Ministry of Finance, 2022[15]), which sets a public debt target of 50% of GDP, the government has contracted no new loans since December 2017 and is expected to maintain a cautious stance in the foreseeable future. The implementation of the Ocean Strategy and other investments for the ocean economy is therefore likely to prioritise the use of concessional sources of finance, as well as a greater mobilisation of private sector resources and the identification of new financing sources.

As part of a medium to long-term fiscal strategy, Samoa would benefit from prioritising public investments and expenditures enhancing climate resilience. Once public debt falls below the target levels set in the government's debt management strategy and additional debt can be taken on again, the evaluation of investment needs will need to take into account the long-term socioeconomic and fiscal impacts of climate adaptation. In light of Samoa's high vulnerability to climate change, crucial investments in climate resilience (for example to implement sectoral adaptation plans in tourism, agriculture and fisheries) may contribute to the country's long-term debt sustainability (see Section 1.3). The IMF estimates that investing an additional 2% of GDP in adaptation for the next five years would save Samoa about 4.5% of 2021 GDP in output losses if a natural disaster of typical magnitude were to occur in 2027 (IMF, 2022[10]).

ODA plays an important role in Samoa's finance mix but could better target the sustainable ocean economy and align with the SOS

Samoa has higher levels of ODA per capita than its peers. ODA totalled USD 105 million (12% of GDP) in 2021, compared to an average of 6% of GDP in all Pacific SIDS from 2014 to 2020. Samoa's small population and remote location mean that any infrastructure projects have high per capita costs, which is reflected in the amount of ODA the country receives in per capita terms. In the median year from 2010 to 2020, ODA receipts amounted to the equivalent of USD 660 per Samoan citizen, more than three times higher than the USD 192 per capita in all Pacific SIDS, and an order of magnitude larger than the USD 32 per capita among all recipients of ODA. ODA commitments peaked in 2019 and 2020, at USD 194 million and USD 180 million respectively, before falling again close to pre-COVID levels in 2021.

ODA offered significant relief to Samoa's budget pressures during the COVID-19 crisis. Although more than half of ODA is dedicated to project-type interventions, which made up 54% of ODA commitments in 2021, budget support has grown considerably, from 6% in 2018 to 20% in 2020 and 31% in 2021. In 2021, all ODA commitments took the form of grants, in line with a trend observed since 2017. The only donor to provide ODA loans was the IMF, which committed USD 22.5 million in 2020.

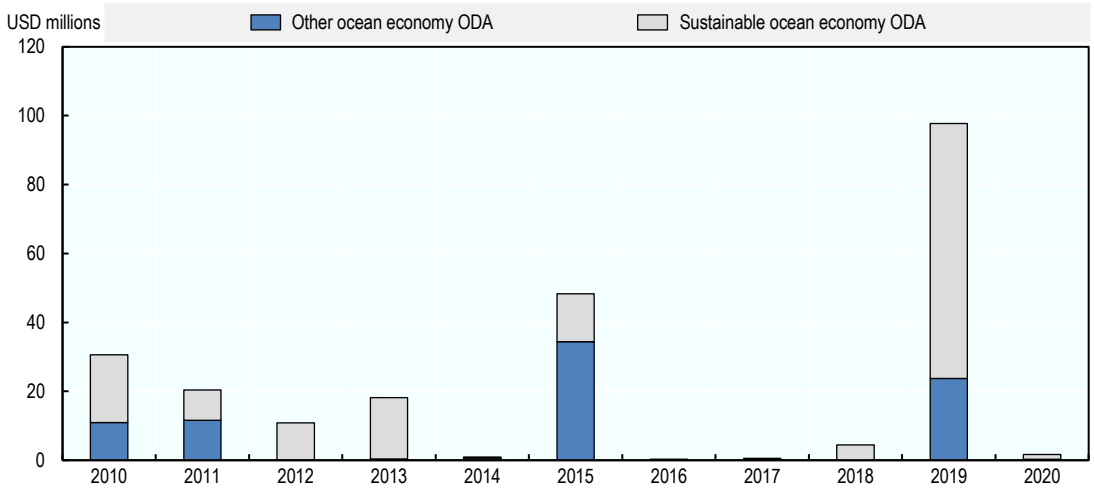
ODA is highly concentrated among a few donors and in social sectors. The largest donors are Australia (USD 31 million in 2021), New Zealand (USD 31 million), European Union institutions (USD 15 million), the Asian Development Bank (USD 12 million) and Japan (USD 9 million). Together, these donors accounted for 94% of total ODA commitments to the country. The public sector is the largest channel for ODA, receiving 45% of commitments in 2021. It is followed by multilateral organisations (27%), teaching and research institutes and think tanks (13%) and civil society (7%). Between 2019 and 2021, health and education received the highest amounts of ODA, making up 24% and 21% of all sector-allocable ODA commitments, while general budget support was 14%. In the same period, economic infrastructure accounted for 16% of sector-allocable ODA, most of which (84%) targeted transport infrastructure.

ODA targeting Samoa's ocean economy (ocean economy ODA) stands at moderate levels but is highly volatile. On average, Samoa received USD 21 million of ocean economy ODA per annum between 2010 and 2020, representing more than 15% of its total ODA. This compares to 8.5% in all Pacific SIDS, 13.7% in all SIDS, 1.2% in all upper middle-income countries and 1.5% globally. However, these numbers are driven by a few large investment projects, particularly two projects to upgrade and improve port infrastructure in Apia, respectively funded by the Asian Development Bank in 2019 and the Government of Japan in 2015.[1] The volatility observed in Samoa's ocean economy ODA is also partly explained by the fact that ocean economy ODA figures are based on commitments, which record the face value of the

activity at the date a grant or loan agreement is signed (whereas actual disbursements are often spread out over several years).

Samoa receives a larger share towards its sustainable ocean economy compared to peer countries. Roughly two-thirds (65%) of Samoa's ocean economy ODA from 2010 to 2020 explicitly integrated marine conservation and/or sustainable economic activities relating to the ocean (i.e., sustainable ocean economy ODA) (Figure 3.3). This figure compares to 63% in Pacific SIDS, 57% in all SIDS, and 55% globally. With 10% of overall ODA targeting its sustainable ocean economy, Samoa receives more assistance towards this sector than its peer group of Pacific SIDS (5%). However, this result is partly driven by the 2019 Asian Development Bank Project to improve the port of Apia, which includes measures to adapt the infrastructure to rising sea levels. Excluding this project from the analysis reduces the share of sustainable ocean economy ODA in Samoa's overall ODA to 6% in line with its peer group of Pacific SIDS.

Figure 3.3. A relatively large share of ocean economy ODA in Samoa targets the sustainable ocean economy



Note: 2020 constant prices
Source: Authors' calculations based on OECD (2023[2]) Creditor reporting system database, https://stats.oecd.org/Index.aspx?DataSetCode=crs1.

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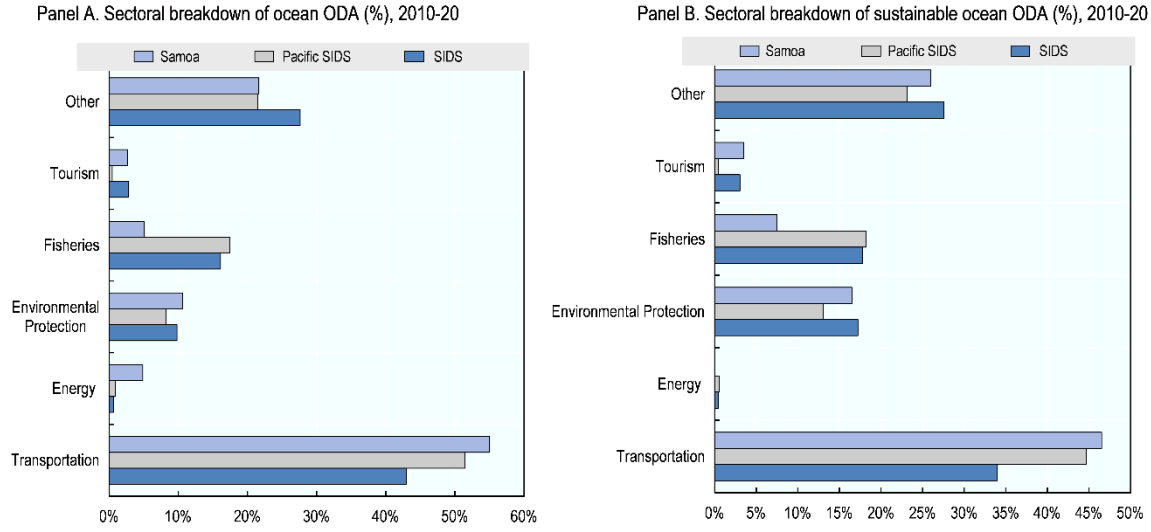
In terms of sectoral allocation, Samoa's ocean economy ODA primarily targets transportation (55% of the total), followed by environmental protection (11%), fisheries (5%), and energy (5%) (Figure 3.4). The relatively large share of ODA invested in the transportation sector is representative of general patterns in other Pacific SIDS (52%). On the other hand, Samoa receives a smaller share of ocean economy ODA for fisheries compared to other Pacific SIDS (18%), which may be explained by the small size of its exclusive economic zone, as described in Section 1.5. Samoa's large share of ODA to the energy sector (5% as compared to 1% in other Pacific SIDS) was driven purely by the investment into a single project of USD 11 million by the OPEC Fund for International Development. However, since this project funded the construction of petroleum tanks and a fuel barge, it is not within the scope of ODA for a sustainable ocean economy. Lastly, the tourism sector received a very small share (<1%) of ocean economy ODA, suggesting that there is scope to expand donors' support in this area, especially in light of the government's intention to expand this sector.

Figure 3.4. A majority of ODA for the ocean economy flows to the transportation sector



Source: Authors' calculations based on OECD (2023[2]) Creditor reporting system database, https://stats.oecd.org/Index.aspx?DataSetCode=crs1

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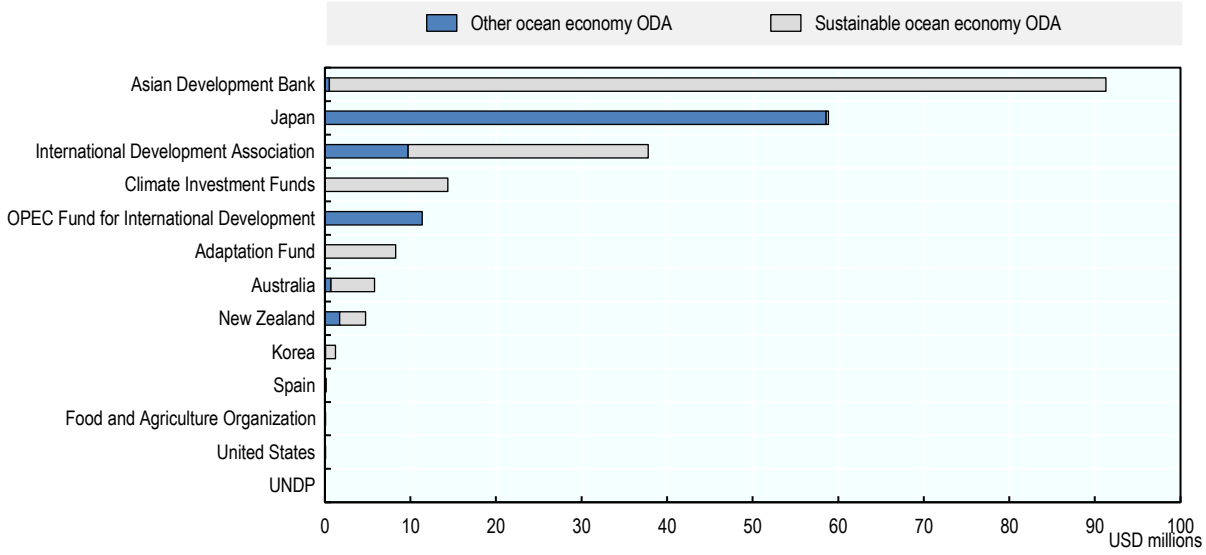
Samoa's ocean economy ODA is highly concentrated, with the three largest providers contributing 80% of the total. The five largest providers of ocean economy ODA towards Samoa from 2010 to 2020 were the Asian Development Bank with USD 91 million (39%), Japan with USD 59 million (25%), the International Development Association with USD 38 million (16%), the Climate Investment Funds with USD 14 million (6%), and the OPEC Fund for International Development with USD 11 million (5%) (Figure 3.5). The five largest providers of sustainable ocean economy ODA were the Asian Development Bank with USD 91 million (60%), the International Development Association with USD 28 million (19%), the Climate Investment Funds with USD 14 million (10%), the Adaptation Fund with USD 8 million (6%), and Australia with USD 5 million (3%). The largest three contributors thus amounted to 89% of sustainable ocean economy ODA. It is noteworthy that 70% of ocean economy ODA and 94% of sustainable ocean economy ODA were contributed by multilateral providers of development assistance.

Despite relatively high levels of ocean economy ODA, there is room to more explicitly focus donor support on the ocean economy. Interviews with donors in Samoa found that they do not explicitly factor in ocean economy-related considerations into their ODA projects and that they do not consider the SOS a framework for aligning their ODA support with Samoa's sustainable development priorities. Samoa has a well-functioning donor co-ordination mechanism, led by the Ministry of Foreign Affairs and Trade, which facilitates and streamlines communication between the government and donors. Anchoring the SOS in these mechanisms could help to increase the momentum around the SOS and more systematically mobilise financial and technical support for its implementation.

Figure 3.5. The largest donors of ocean economy and sustainable ocean economy ODA to Samoa are multilateral development banks and Japan



Note: Sum of ODA commitments over the 2010-2020 period; figures in 2020 constant prices.
Source: Authors' calculations based on OECD (2023[2]). Creditor reporting system database, https://stats.oecd.org/Index.aspx?DataSetCode=crs1

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Several SOS priorities, such as tourism and the fight against land-based pollution, receive comparatively limited ODA and would benefit from an increased donor focus. ODA to curb land-based pollution of the ocean is very small in volume. Only 0.2% of ODA in Samoa has been directed at curbing land-based pollution of the ocean. This compares to 0.6% in all Pacific SIDS. Similarly, Samoa received only USD 440 000 (0.03% of overall ODA) towards management of plastics and solid waste management during the 11 years from 2010 to 2020. At 0.3% of ODA, this figure is much larger in all Pacific SIDS, even though overall volumes in this area are low throughout the region. As noted in Chapter 1, Samoa's tourism sector has a relatively low impact on local employment compared to peer Pacific SIDS countries. Additional donor support for skills development could help increase linkages between the tourism sector and the labour market and enhance the impact on socioeconomic development and reduce poverty.

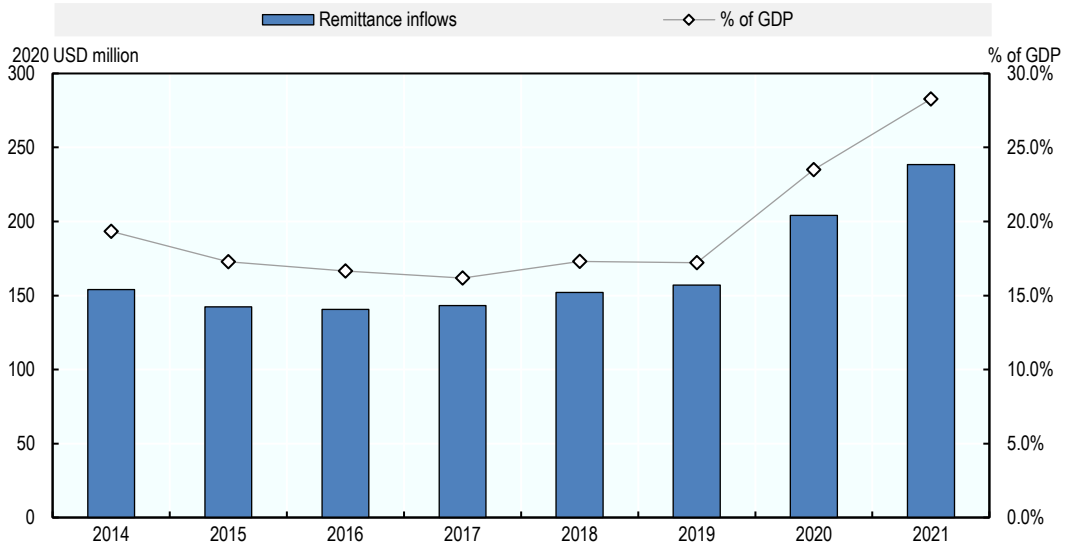
Donor support for capacity development for the SOS will play a crucial part in its implementation. The European Union's support for marine spatial planning with technical support from the International Union for the Conservation of Nature exemplifies how donors can help develop local skills and knowledge to facilitate the implementation of the SOS. ODA for capacity development in 2021, estimated using a methodology developed by the OECD (Casado Asensio, Blaquier and Sedemund, 2022[16]), totalled USD 16 million (16% of ODA). In general, ODA for capacity development has been volatile, ranging from USD 5 million in 2014 (4% of total ODA) to USD 28 million in 2012 (25%). The fluctuations are driven by single large projects in water and transport infrastructure, which include technical assistance in policy and administrative management. If investment in local capacity is to have a lasting impact, capacity needs to be internalised and retained in local institutions. Donors can co-operate with local partners and regional institutions to ensure continued capacity development even after their assistance is phased out.

3.2. Private finance

Remittances are a major source of financing, but labour mobility also generates socio-economic challenges

Samoa has a stark reliance on remittances, which have increased steeply from 19% in 2014 to 28% of GDP in 2021. Contrary to concerns that inflows would decline over time, remittances have proved to be a steady and even increasing source of financing. Remittance flows increased especially sharply during the pandemic to an all-time high of USD 239 million in 2021, after growing by 30% and 17% between 2019-2020 and 2020-21 (Figure 3.6).

Figure 3.6. Contrary to expectations, remittances increased sharply throughout the pandemic



Source: Authors' calculations based on World Bank (2023[3]), World Development Indicators database, https://databank.worldbank.org/source/world-development-indicators#.

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Samoa's largest sources of remittances are New Zealand (40% of remittances in December 2022), and Australia (39%) with smaller amounts from the United States (18%), of which 5% from neighbouring American Samoa (Central Bank of Samoa, 2022[17]). A detailed breakdown of the originating countries of remittance inflows can be found in Chapter 1. Under their labour mobility schemes,[2] Australia and New Zealand let Pacific workers seasonally migrate to access higher-paying jobs (e.g. in fruit and vegetable picking and packing, pruning, poultry farming, fishing, tourism, etc.). Transfers from migrants come in various forms besides traditional remittances. They can be recorded as tourism receipts, since migrants visiting relatives for family celebrations and church conferences constitute a substantial share of tourism in Samoa. Returning migrant workers often buy items abroad and bring them back to Samoa, which is effectively a hidden form of imports.

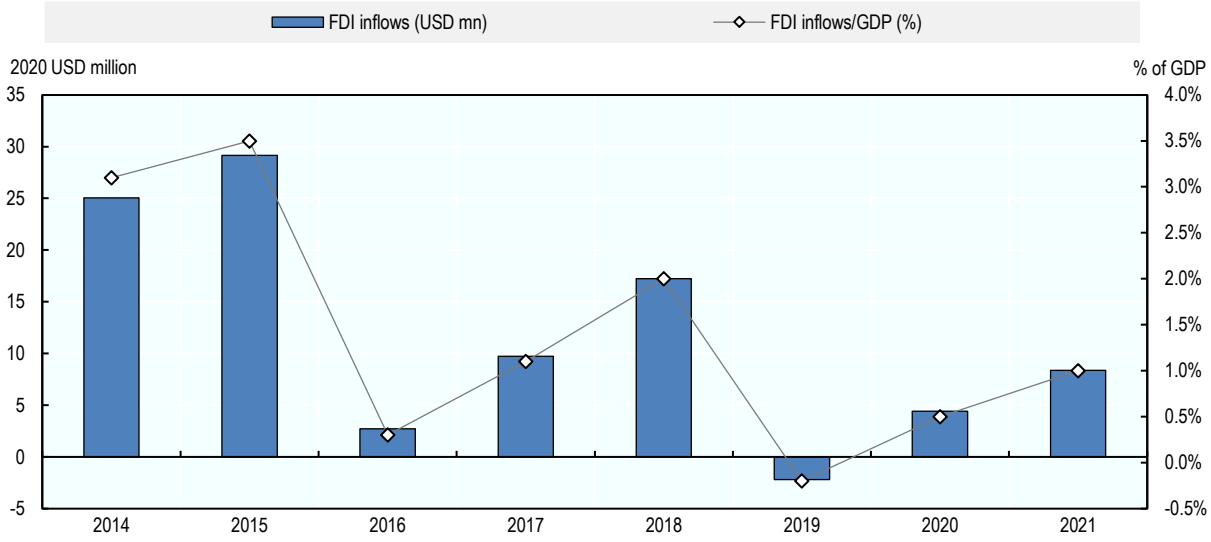
The social impact of labour mobility programmes is not without controversy, but the programmes can be used for capacity development of the migrant workforce. Although the seasonal worker schemes are intended to target unskilled and/or unemployed workers, in some cases, skilled and employed workers leave their jobs to join the programmes. These schemes have been found to lead to social problems, notably for dependents in Samoa without economic means. As a response, Samoa's

government launched the National Regional Seasonal Workers Programme Policy to come into effect in April 2023, which strengthens the selection criteria of unskilled workers, the terms of employment and working conditions and insists on the strict observation of social, cultural and moral values (Island Business, 2023[18]). Labour mobility programmes can also have a positive social impact, enhancing the skills of the migrant workforce and thereby contributing to the quality of labour. New Zealand introduced a development component in seasonal schemes, providing migrant workers with climate and agricultural training. Australia's Seasonal Workers Program has an Add-On Skills Training programme that is currently under review and focuses on topics such as first aid, English and information and technology skills (ILO, 2021[19]).

Structural constraints typical of SIDS limit private sector investment

Constrained by the small size of the economy and a challenging business environment, foreign direct investment (FDI) takes a subordinate role in Samoa's external finance. Net FDI inflows peaked at USD 29 million (3.5% of GDP) in 2015 but fell to a net outflow of USD 2 million in 2019, after which it rose again for two consecutive years, to USD 4 million in 2020 and USD 8 million (1% of GDP) in 2021 (Figure 3.7). In comparison, gross fixed capital formation in Samoa amounted to 33% in 2020 and 2021, suggesting that FDI makes a limited contribution to Samoa's capital formation. The Ministry of Commerce, tasked with the regulation and promotion of investment, lists tourism, fisheries, food processing, engineering (boat building and metal fabrication), as well as the textile and garment industries, as priority investment sectors (Government of Samoa, 2022[20]).

Figure 3.7. Foreign direct investment inflows to Samoa are small and volatile



Source: Authors' calculations based on World Bank (2023[3]), World Development Indicators database, https://databank.worldbank.org/source/world-development-indicators#.

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Limitations in attracting FDI reflect broader challenges in the general business climate and the constraints of small and remote economies in achieving economies of scale. Samoa's overall rank in the 2020 Doing Business Survey (ranked 98th, with a score of 62.1 of 100) was higher than other SIDS in the region (World Bank, 2020[21]), and Samoa is recognised as a regional best practice leader for its transparent and fair business regulations (US Department of State, 2022[22]). Accounting, legal and

regulatory procedures are all consistent with international norms. However, past assessments found that Samoa faces considerable challenges in access to credit (UNDP, 2019[9]), which are representative of the general constraints faced by SIDS. With four commercial banks operating on the island, the financial sector in Samoa is concentrated and undiversified. Despite the recent growth of the financial sector and several attempts to bring in innovative business solutions, the menu of financial services offered to the public is limited and inaccessible to low-income groups and small and medium-sized enterprises, particularly those in rural areas. In addition to commercial banks, state-owned financial institutions also play a significant role in providing a wide variety of financial services. These include the Samoa National Provident Fund, Development Bank of Samoa, Samoa Housing Corporation, Accident Compensation Corporation and Unit Trust of Samoa.

Donors support private sector development by assisting the government on simplified business laws and registration processes, as well as promoting greater access to finance for micro-, small and medium-sized enterprises. For example, the Pacific Private Sector Development Initiative, a collaborative technical assistance programme by the Asian Development Bank, Australia and New Zealand, developed a secured transactions framework – which allows lenders to accept non-land (movable) assets as security and works with the Central Bank of Samoa to develop a Samoa-domiciled and controlled credit bureau. The initiative also provided technical assistance to the Development Bank of Samoa aimed at strengthening the financial position of the bank, improving its operations and reorienting its role toward a private sector focus (PSDI, 2022[23]).

Building on existing partnerships, donors and their development finance institutions could help to promote private sector development in support of the SOS. This could include financial support and technical assistance for commercial and state-owned financial institutions, to provide loans and other assistance to local businesses in the fisheries and tourism sectors, and to ensure that social and environmental safeguards are in place to ensure alignment with the SOS. A pipeline of eligible projects could be identified in the context of the sector plans listed in Chapter 2 as being relevant to implementing the SOS (e.g. Samoa Tourism Sector Plan, Agriculture and Fisheries Sector Plan, Transport Sector Plan). An example to benchmark is the International Finance Corporation (IFC)'s support for the Bank of Qingdao. In 2022, IFC, in collaboration with the Asian Development Bank, Proparco and Deutsche Investitions- und Entwicklungsgesellschaft (DEG), provided a USD 150 million blue loan to the Bank of Qingdao, enabling the bank to provide USD 450 million in financing for 50 blue finance projects in China by 2025. In advance of this transaction, IFC worked with the Bank of Qingdao to develop business strategies and systems to optimise opportunities while managing risks associated with blue finance activities and to create the bank's first blue finance framework and taxonomy, which identifies 37 activities across seven categories (Liwei, Shiyu and Ziyi, 2022[24]).

3.3. Innovative finance

Innovative financing can complement the suite of financing instruments

The rising sustainable finance momentum opens new opportunities for ocean-related investments. In recent years, financial markets witnessed the exponential growth of sustainable finance and the emergence of diverse instruments based on green or social use-of-proceeds or sustainability targets. Investors are also showing a growing interest in blue finance, which are investments in projects that restore and protect the ocean environment and support sustainable ocean economic activities. According to a 2020 survey by Responsible Investor, nine out of ten institutional investors are interested in financing the sustainable ocean economy (Responsible Investor, 2020[25]). In parallel, there have been initiatives to develop principles and industry standards, to establish greater clarity around the definition and best practices of blue finance. The Sustainable Blue Economy Financing Principles (European Commission; WWF; WRI; EIB, 2018[26]), developed by the World Wildlife Fund, the European Commission, the European

Investment Bank and the World Resources Institute in 2018, outlined a high-level ocean-specific framework for responsible investment. In 2022, the IFC developed a guidance on IFC's implementation of Blue Finance (IFC, 2022[27]). This guidance identifies project eligibility criteria, translating general Blue Economy Financing Principles, such as the Sustainable Blue Economy Principles and the Sustainable Ocean Principles, towards guidelines for blue bond issuances and blue lending (Table 3.2).

Table 3.2. IFC guidelines provide a mapping of sectors and activities suitable for issuing blue bonds and loans

Green bond principles and green loan principles broad categories of eligibility

Blue Finance Area	Pollution Prevention and Control	Natural Resource Conservation	Biodiversity	Climate change	
				Mitigation	Adaptation
Water supply	***	**	**	***	**
Water sanitation	***	**	**	***	**
Ocean-friendly and water-friendly products	***			*	
Ocean-friendly chemicals and plastic related sectors	***			*	*
Sustainable shipping and port logistics sectors	***	*	**	***	*
Fisheries, aquaculture, and seafood value chain	***	**		*	*
Marine ecosystem restoration	**	***	***	*	*
Sustainable tourism services		**	**		
Offshore renewable energy production		*	**	***	

Note: *** denotes primary or direct effects; ** denotes secondary or direct effects; * denotes tertiary or derived effects. Dark blue denotes strong impact; medium blue denotes some impact; light blue denotes minor impact
Source: IFC (2022[27]), Guidelines for Blue Finance, https://www.ifc.org/content/dam/ifc/doc/mgrt/ifc-guidelines-for-blue-finance.pdf

A growing sense of urgency about the climate and development challenges has prompted several reform initiatives to fundamentally review and bolster the development finance system by massively scaling up resources to support climate and development objectives. Samoa is well placed to benefit from these initiatives, as they often highlight the specific financing needs of SIDS, which are highly vulnerable to climate change. The World Bank Group-IMF 2023 Spring Meetings centred on discussions of the Evolution Roadmap, which was published in January 2023, to propose a review of the World Bank's vision and mission, operating model and financial capacity. A key aim of the review is to expand the World Bank's current dual mission of eradicating extreme poverty and increasing shared prosperity to better support energy transitions in middle-income countries, address growing inequality between countries, and combat the cross-border dimensions of challenges such as climate change, state fragility and pandemics.

Proposals to reform the development finance system, if implemented, could unlock the resources to bring to scale innovative financing techniques for ocean-related investments. Concessional finance from donors is often necessary to adjust risk-return profiles of sustainable ocean economy projects to attract private investors. For many of the innovative instruments, credit enhancement in the form of guarantees or other loss-absorption techniques are vital to make the transaction commercially viable. Moreover, donors can also provide technical assistance to identify and prepare projects that would be eligible for investment through innovative instruments like the ones listed in the following sections.

Blue bonds could be included in the medium- to long-term financing plan of the SOS

Blue bonds are debt instruments that raise and earmark funds for investments like water and wastewater management, reducing ocean plastic pollution, marine ecosystem restoration, sustainable shipping, eco-friendly tourism or offshore renewable energy. Issuance of blue bonds requires the creation of a blue bond framework, which includes a typology of blue projects (categorising the types of eligible projects), as well as eligibility criteria for each sector. The framework also indicates how the blue impact of the projects will be tracked and reported. The proceeds raised from the sale of the bond can only be used to finance projects that fulfil the eligibility criteria outlined in the framework. In return for this commitment, issuers of blue bonds may be able to tap into a new investor base (e.g. impact investors) and sometimes benefit from lower interest rates (e.g. the greenium). TMBThanachart Bank Public Company Limited, a commercial bank based in Thailand, issued a blue bond in 2022, committing to use the funds raised to invest in so-called blue assets such as marine plastic recycling, water conservation and wastewater treatment projects. The USD 50 million bond was sold to IFC through a private placement. In January 2023, Cabo Verde launched a blue bond on its Blu-X sustainable finance platform, a regional platform for listing and trading sustainable and inclusive financial instruments. The issuance aimed to raise domestic, regional and global investment in Cabo Verde's rising ocean economy, while divesting capital from industries responsible for sea-level rise, pollution and other transgressions against ocean rights. In launching the bond, the government committed to using up to USD 1 million in proceeds (minimum USD 500 000) to supply affordable loans to microentrepreneurs and start-ups in coastal communities, and USD 1.5 million for structural investments in small and medium-sized enterprises operating in the maritime and fisheries sectors.

In Samoa's case, blue bonds may not be an instrument for immediate consideration, but they could be included in medium to long-term fiscal strategies. The government's hesitation to take on new debt, due to the debt sustainability constraints described above, rules out the sovereign issuance of blue bonds in the near term. There are also capacity constraints to design or implement blue bonds. On the corporate side, the pool of potential commercial issuers remains limited. The number of commercial lenders is small, and bond issuance by dominant state-owned players such as the Development Bank of Samoa, which could scale up lending for blue economy investments, would add to public sector debt. However, Samoa's government can consider incorporating blue bonds in its financing toolbox in the long term. Preparation for eventual issuances can include the predetermination of debt levels and terms and conditions at which the issuance of new debt instruments would become acceptable.

Benefits of blue bonds as a financing instrument include the opportunity to broaden and diversify the lender base, increasing the amount of capital that can be invested in the ocean economy. Emerging market borrowers often state that green and sustainability-labelled bonds help them gain access to new investors, including institutional investors from developed markets and impact investors. Colombia's first sovereign green bond in 2021 registered high levels of demand (resulting in an oversubscription of five times the amount at auction), which led to interest rates that were below those of conventional bonds (OECD, 2022[28]). While it is not likely that the interest rates paid on a commercial bond would be competitive with the concessional rates Samoa has currently access to, donor assistance, for example in the form of credit enhancement, could help to substantially lower borrowing costs compared to alternative solutions to non-concessional borrowing.

Preparing for the issuance of blue bonds in the medium- to long-term future involves putting into place a robust system of ocean governance, sustainable economic activities and sizable pipelines of loan projects. In the case of a sovereign issuance, the blue bond can only be effective and credible as a financing tool to enhance the sustainability of oceans if it is underpinned by an effective ocean governance framework, which includes strong institutions with mandates to protect the ocean and grow a sustainable blue economy, strategies and policies to protect ocean habitats and species, clear regulatory frameworks to define which types of economic activities are allowed in and adjacent to the oceans, and an

effective system of monitoring and enforcement (ADB, 2021[29]). The implementation of the SOS is therefore key to laying the foundation for a successful blue bond issuance. As a debt instrument requiring the repayment of principal with interest, blue bonds are best suited to finance projects that generate revenues. A financing strategy of the SOS could therefore include a mapping of eligibility criteria for sectors and projects that would lend themselves for the issuance of blue bonds in Samoa. This can include projects related to sustainable fishing, ecotourism, waste management and marine renewable energy. Conversely, blue bonds are difficult to use as a financing tool for marine protected areas that prohibit economic activities and other conservation activities that do not have a revenue base (ADB, 2021[29]).

Swaps could be considered as a contingency option in the event of an escalating debt situation in Samoa

Debt swaps may be less suitable as a financing instrument for Samoa's ocean strategy but could be included as a contingency option in the event of an escalating debt situation. Debt for nature (DFNS) and other swaps (e.g. climate or resilience swaps) offer countries in distress or at risk thereof opportunities for debt relief or restructuring in exchange for commitments to protect and conserve their oceans. Debt swaps are usually considered if countries are heavily indebted, and if they have exhausted other more favourable debt relief instruments (e.g. unconditional debt relief) (OECD, n.d.[30]). Creditors need to have an incentive to agree on a haircut on the debt they hold, which is often only the case when their prospects of getting repaid are low. While Samoa's public debt, at 54% of GDP, is not negligible, it is far lower than in the countries that recently underwent DFNS. Belize's public debt-to-GDP ratio, for example, stood at 123% in 2020, and in Barbados, which engaged in a DFNS with the Nature Conservancy in 2022, central government debt reached 142% of GDP in 2021.

DFNS can help government fund resilience when access to traditional grants or debt relief is limited. The IMF shows cautious optimism about DFNS, arguing that in the absence of other measures to invest in nature or climate action, DFNS present a welcome tool (Georgieva, Chamon and Thakoor, 2022[31]). To the extent that debt reduction exceeds the new spending commitments, borrowers get fiscal relief through budget savings. Swaps also create additional revenue for countries with valuable assets such as biodiversity or carbon sinks, by allowing them to charge others for protecting it and providing a global public good. According to the IMF, however, it is more effective to address debt and climate or nature separately. A climate-conditional grant, for example, finances climate action more efficiently than a complex and costly debt swap transaction. Swaps are also no substitute for broad-based debt restructuring for countries in debt distress. Recently, several SIDS countries engaged in DFNS transactions to free up resources to protect and conserve marine assets. In November 2021, Belize signed a debt-for-nature swap with the Nature Conservancy, which reduced its external debt by 10% of its GDP. In return, Belize agreed to spend about USD 4 million a year on marine conservation until 2041, and to double its marine-protection parks – spanning coral reefs, mangroves and the sea grasses where fish spawn – from 15.9% of its oceans to 30% by 2026. An endowment fund of USD 23.5 million will finance conservation after 2040 (Owen, 2022[32]).

Samoa can explore how to benefit from emerging opportunities in blue carbon, payment for ecosystem services and insurance

Carbon credit sales from additional sequestration and storage in coastal ecosystems, blue carbon, may provide a source of financial incentive for locally led climate change mitigation and adaptation. Coastal ecosystems like mangroves are increasingly being recognised as key assets in climate change mitigation and adaptation efforts. From a mitigation perspective, these ecosystems, despite the small area covered, store a high density of carbon (up to six times as much as tropical forests). This presents an opportunity to invest a relatively small amount in local communities, which can restore these areas and return large carbon sequestration and storage gains per unit of area. The most successful and oldest

mangrove-based carbon-crediting project, Mikoko Pamoja of Gazi Bay, in Kenya, has been issuing credits since 2010 under the Plan Vivo carbon standard. The project leverages the restoration of 117 hectares of mangrove forest to generate approximately USD 24 000 per annum to support community projects and development priorities.

The value of carbon credits depends on several factors, such as the risk of non-permanence, the geography, the co-benefits and the degree to which these benefits are represented in the price, and the carbon standard used. In general, the value ranges between USD 10 and USD 25 per ton of CO_2, although outliers exist below and above this range. Although the returns of carbon credits rarely cover the costs of the restoration efforts that underpin their generation, the co-benefits of the work far outweigh the revenue generated through credit sales. For example, coastal ecosystems deliver value through their productivity of fisheries resources, timber and non-timber forest products, and coastal asset protection against increasing storm pressures.

The drive to engage in carbon crediting is often to generate a fund that can be used to support target community development priorities, with the drive for restoration often being to increase climate change resilience and long-term food security through restoring ecosystem goods and services. However, carbon credit projects require robust systems for measurement, reporting and verification, which are necessary to measure and prove whether and by how much a mitigation project has reduced greenhouse gas emissions. Like many other SIDS, Samoa currently lacks the resources and capacity to set up these systems, and support from donors will be critical to enhance the feasibility of any blue carbon projects. Samoa received support from several development partners including the United Nations Climate Technology Centre and Network to access the Reducing Emissions from Deforestation and Forest Degradation-plus programme (UN CTCN, 2022[33]).

Payments for ecosystem services (PES) programmes can be used to conserve marine and coastal ecosystems. Under PES programmes, those who would benefit from the enhanced provision of ecosystem services make payments to resource owners to incentivise higher (or additional) ecosystem service provision. Potential buyers may include ocean-based industries (e.g. fishing, tourism, recreation and marine renewable energy), municipalities, and governments. For example, local hotels and tourism operators could pay for reef conservation due to the benefits associated with decreased beach erosion and species conservation (e.g. for scuba divers). Samoa is currently investigating the feasibility of a PES programme as part of the Green Climate Fund-supported Vaisigano Catchment Project (Samoa Observer, 2020[34]). The aim is to introduce a PES programme that would pay landowners for maintaining or enhancing the services that the Vaisigano catchment provides in terms of clean water, air, safeguarded biodiversity and forested slopes. In the pilot phase, to end in May 2023, landowners are being consulted to identify suitable watershed management activities and governance and financial distribution mechanisms to allow for the sustainable operations of the PES programmes. Based on the results of the pilot phase, the government of Samoa, with support from international donors, could explore options to implement and expand PES programmes to generate funding for different areas outlined in the Samoa Ocean Strategy.

Samoa could benefit more from insurance against natural disasters. Samoa already has access to several global and regional risk transfer instruments. Since 2015, it has been a member of the regional catastrophe insurance platform, the Pacific Catastrophe Risk Insurance Company, which is a parameter-based insurance cover against disaster hazards. Annual insurance premiums through 2023, of around USD 0.5 million a year, are mostly financed through the World Bank-funded Pacific Resilience Program, with the Samoan Government contributing a small share of the premiums that will increase over time. In 2020, the insured hazards were earthquakes and tropical cyclones, with coverage of up to USD 10.7 million. In the case of climate change-induced natural disasters, Samoa can also access the Asian Development Bank's Contingent Disaster Financing and the Asia-Pacific Disaster Response Fund. However, according to the IMF, public assets insurance could be extended to cover major infrastructure, and domestic private insurance can be further developed (IMF, 2022[10]). Under the 2001 Public Finance

Management Act (Samoa Ministry of Finance, 2001[35]), the government pays into an insurance fund to cover government buildings against fire, earthquake or other hazards on an indemnity value basis, but it excludes coverage of other public infrastructure assets, such as bridges or roads.

Attempts have recently been mounted to devise insurance mechanisms to incentivise coastal protection. The Nature Conservancy, in co-operation with insurers such as Munich Re, has explored insurance instruments for coastal ecosystems (Reguero et al., 2020[36]). The proposed insurance scheme would incentivise the restoration of coral reefs to harness their potential to mitigate coastal flood risks. The insurance buyer (e.g. governments), who would receive compensation against flood-related losses, is granted a reduction in premiums if an investment is made in coral reef restoration. The annual savings from reduced insurance premiums can be used to partially finance the upfront investment in the restoration project. In addition to expanding public and private insurance against the effects of climate change, insurance schemes could be designed to incentivise disaster risk reduction through nature-based solutions and the conservation of ocean assets. In this area in particular, Samoa could benefit if international donors covered a portion of the insurance premiums and/or provided technical assistance on setting up innovative insurance solutions. Samoa could also benefit from international initiatives to ensure financing for loss and damage to complement existing funds for climate disaster relief. The 27th Conference of the Parties to the United Nations Framework Convention on Climate Change concluded with a decision to set up a loss and damage fund to support countries particularly vulnerable to the adverse effects of the climate crisis. During its G7 Presidency, Germany also launched the development of a “Global Shield against Climate Risks” to expand the role of climate risk insurance and prevention, in close co-operation with the Vulnerable Twenty Group.

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Notes

[1] When these two projects are excluded from the analysis, annual ocean economy ODA to Samoa drops to USD 137 per annum and makes up 9% of overall ODA, roughly on par with the peer group of Pacific SIDS.

[2] Samoa participates in Australia's Seasonal Workers Program since 2011 and New Zealand's Recognised Seasonal Employer Scheme since 2007.

4 Opportunities and tools for fostering a blue recovery

This chapter highlights a set of cross-cutting and sector-specific opportunities to encourage sustainable development of Samoa's blue economy. The first subsection offers cross-cutting recommendations that apply broadly to Samoa's ocean economy, while the second subsection outlines sector-specific recommendations for sustainable tourism, fisheries, maritime transport and emerging sectors of the ocean economy.

Unlocking the potential of Samoa's ocean economy requires capitalising on both cross-cutting and industry-specific opportunities. Section 4.1 outlines a targeted set of cross-cutting opportunities, emphasising the importance of a systematic approach for effective policy making, with regular monitoring, evaluation and precise measurements of the ocean economy. It also urges addressing the constraints in place, such as limited fiscal space and the volatility of the labour market, to facilitate the development of the ocean economy. The sector-specific opportunities presented in Section 4.2 offer various opportunities for growth and diversification, recognising the promise that ocean-based industries hold for driving resilient and sustainable development. Sustainable tourism, for example, could offer Samoa substantial benefits if a holistic approach focusing on economic growth, social development and environmental conservation were adopted. Efforts to enhance the potential of the fisheries sector would have to include robust fisheries management to preserve the long-term sustainability of fish stocks, and investment to fortify the sector's resilience to external shocks. Maritime transport also offers considerable promise, both in terms of strategic development of onshore activities and the potential benefits of decarbonisation. Although they are still in their infancy, emerging sectors such as maritime renewable energy, marine biotechnology and aquaculture offer further opportunities for innovation and value adding.

To support these recommendations and add value to Samoa's ocean-related and development goals, the appraisal highlights two areas on which the next stages of the Blue Recovery Hub can concentrate. The Blue Recovery Hub can facilitate the mobilisation and alignment of financial and technical assistance to implement the SOS. By linking the environmental, economic and social components of the sustainable ocean economy, the Blue Recovery Hub can help reinforce the connection between the SOS and its economic vision for key ocean-related sectors (outlined in Samoa's national development plans and sectoral strategies).

4.1. Cross-cutting recommendations

Enhancing the contribution of the ocean economy to Samoa's long-term growth requires addressing constraints inhibiting the development of key sectors

One of the challenges Samoa faces in developing its ocean economy is the volatility of its labour market. Labour mobility programmes, like New Zealand's Recognised Seasonal Employer and Australia's Pacific Labour Scheme, provide valuable opportunities for Samoans to work abroad. In recent years, these programmes have boosted remittances to Samoa, providing additional income for its citizens. This increase in labour mobility, however, poses some challenges to Samoa's sustainable development, resulting in a loss of skilled and prime-aged labour force in key sectors of the economy. Coastal tourism, for example, sometimes has difficulty recruiting or retaining qualified staff.

Addressing this labour volatility and shortage requires the government to develop targeted measures to minimise the negative impact of these schemes on the labour market. This can be achieved through consultations with stakeholders of affected sectors to discuss possible mitigation or prevention measures. Improved monitoring of labour flows, policies incentivising the return of skilled workers and close collaboration with the authorities of host countries can also help ensure that labour mobility does not undermine the potential of Samoa's ocean economy.

Another significant constraint for Samoa's ocean economy is the lack of skilled labour and technical expertise specific to the blue economy. A blue economy vision will require balancing economic growth with the sustainable use of ocean resources. This, in turn, requires local professionals with specialised knowledge in areas like sustainable tourism, ecosystem-based management, biotechnology and marine spatial planning. Samoa has taken steps to develop local expertise in key ocean-related sectors (e.g. the decision of the Scientific Research Organisation of Samoa to create a marine

research division), but its public and private sectors compete with regional and international organisations to attract or retain qualified profiles.

Samoa's approach to marine spatial planning provides a model for building local capacity in its ocean-related sectors. As described in Section 2.1, Samoa is developing a marine spatial plan (MSP) financed by the European Union, with technical support from the International Union for Conservation of Nature. It could also explore opportunities to establish similar partnerships with other regional and international organisations, academic institutions and practice sector entities willing to provide technical assistance and capacity building to local practitioners and communities in key areas of the ocean economy. These collaborations could involve joint research projects, the exchange of expertise and the development of tailored training programmes focused on blue economy sectors and activities, along the lines of Jamaica's Blue Economy Training Programme (Box 4.1). Such technical support and capacity building could expand existing support for private sector development that Samoa already receives from its development partners, like Australia and New Zealand. These partnerships could target skills development in industries with growth potential, such as tourism, value-adding activities in the fisheries sector, and emerging sectors such as renewable energy. If this technical support is to be sustainable, it is crucial to ensure that it incorporates a long-term perspective. This can be achieved by fostering the development of local expertise through capacity development or by securing continued support from legacy partners to guarantee continuity and resilience in Samoa's ocean economy approach.

Box 4.1. Through a partnership with the World Bank and a local training institution, Jamaica is equipping local communities with skills that support the blue economy

The Jamaica Social Investment Fund's Blue Economy Training Programme supports capacity-building in the blue economy. The initiative is administered by Jamaica's Social Investment Fund, a government agency established in 1996 to mobilise resources and run projects to support community-based socioeconomic infrastructure and social services projects. The programme is a component of the fund's Alternative Livelihoods Skills and Development Project and provides skills development for young Jamaicans in areas relevant to the country's blue economy, such as boat and equipment handling and repairs, lifeguarding, scuba diving and underwater filming.

The training programme aims to empower local communities and ensure they contribute to, and benefit from, the growth of the ocean economy. The Blue Economy Training Programme, led by the government of Jamaica with support from the World Bank, involves a partnership with the RE School of Education and Technology, a local training institution. The 165 participants from the first cohort were recruited by the Community Development Committees in the communities. As a result, the training aims not only to contribute to job creation and economic diversification but also to equip communities with the expertise to manage, develop and use the country's ocean resources sustainably.

Source: High Level Panel for a Sustainable Ocean Economy (2021[1]), "Creating a Sustainable Ocean Economy", https://oceanpanel.org/wp-content/uploads/2022/06/Ocean-Panel-_Progress-Report-2021.pdf; Jamaica Special Economic Zone Authority (2020[2]) 165 Unattached Youth Graduate From JSIF's Blue Economy Training Programme, https://www.jseza.com/165-unattached-youth-graduate-from-jsifs-blue-economy-training-programme/.

Continued co-ordination with regional partners is another avenue for overcoming capacity constraints and developing Samoa's ocean economy. Although the economy of Samoa is closely linked to the ocean, an ocean economy approach, which emphasises the sustainable use of marine resources for economic growth, is a relatively new concept and requires specialised knowledge and skills not always available locally. Small island states like Samoa face financial challenges attempting to invest in emerging sectors of the ocean economy, such as marine biotechnology, aquaculture or marine

renewable energy, since they often require significant upfront investment that comes with considerable risk.

Pacific small island developing states (SIDS) have a long tradition of regional collaboration, which could play a critical role in pooling capacity and sharing knowledge on emerging ocean economy sectors and approaches. Regional conferences, workshops and training programmes on the ocean economy can help Samoa learn from the successes and challenges faced by other SIDS in the region. Such platforms can facilitate the sharing and joint implementation of best practices, innovative technologies and policy frameworks related to the sustainable use of marine resources. By pooling resources and expertise, Samoa could also participate in joint research initiatives that focus on marine biotechnology, marine renewable energy or climate resilience. Lastly, regional approaches could help overcome the challenge faced by many SIDS in attracting private investment in emerging industries, due to their small market size, which hinders economies of scale. Existing regional institutions (e.g., Secretariat of the Pacific Regional Environment Programme, Pacific Community, Pacific Island Forum) are well-placed to advance coordination and collaboration in this domain.

In its approach to ocean governance, Samoa stands to benefit from strengthening cross-sectoral linkages and better integrating economic, social and environmental goals.

The Samoa Ocean Strategy (SOS) lays the foundation for a holistic approach to ocean management, but some areas warrant additional integration and coherence. Extensive stakeholder consultations, including with local actors, have informed the formulation of the SOS, rendering it reflective of a diverse array of ocean uses and pressures. A central component, the National Ocean Steering Committee (NOSC), is a vital mechanism for co-ordinating ocean-related policy. The way national planning instruments relate to the Samoa Ocean Strategy is sometimes ambiguous or tenuous, however. The sector plans generally do not refer to the SOS or its Solutions, even though some were released after the SOS. The SOS maps its Solutions to the National Environment Sector Plan but does not outline links with other ocean-relevant sectoral plans. Although all policy frameworks in Samoa should, in principle, be aligned, interviews conducted for this report revealed that the SOS was not consistently and explicitly used in informing sectoral policies or development partner engagement. These gaps risk creating a disconnect between economic, social and environmental objectives that are articulated in different ways and to different degrees in each of the policy and governance frameworks.

Detailed articulation of the SOS and Samoa's national development plan can clarify links between environmental and socioeconomic objectives, and enable the implementation of ocean-related policies. Samoa's long and medium-term development plans occupy a central role in its policy landscape. They shape all other national and subnational policies, and inform development partners' priorities, which makes it critical to align the SOS with the national development plans. While the SOS does map its Solutions to the previous iteration of the national development plan (the Strategy for the Development of Samoa), this mapping is quite superficial and results in ambiguity over the link between the SOS and the development plan's socioeconomic priorities. The recent launch of a new five-year development plan (Pathway for the Development of Samoa) offers an opportunity to update this and explicitly articulate how the SOS is linked to the country's core development ambitions. This could be done by mapping the Solutions to PDS's Key Priority Areas, which are more precise and an apt basis for comparison than the SDS's Priority Areas (to which the SOS is currently mapped).

By systematically using the SOS as a basis for ocean-relevant policies and programmes, Samoa can promote an integrated approach to ocean governance (see Box 4.2 for two case studies). Akin to the Pathway for the Development of Samoa – which guides sustainable development ambitions broadly – the Samoa Ocean Strategy can serve as the foundation for ocean-related activities across sectors and jurisdictions. The completion of the MSP, including its eventual integration into Samoa's legal and regulatory frameworks, will mark a key step in mainstreaming the SOS across the government. The role

of the SOS could nonetheless be reinforced. Samoa is developing or updating many sector-specific policies directly relevant to its ocean strategy. In addition to explicit references to the SOS, the new policies would benefit from heeding the SOS and how its prioritised thematic areas, threats, and solutions relate to and affect the sector's goals and objectives. The SOS could also present an explicit mapping of its Solutions to the priority areas of sector-specific strategies, as it does for the National Environment Sector Plan.

Box 4.2. Samoa's policy framework for ocean management, like Norway's and Mexico's, can guide sectoral policy and legislation

The Norwegian Ocean Management Plans

Since 2006, Norway has developed a series of ocean management plans to manage different marine and coastal areas in its Exclusive Economic Zone.

Norway's experience with holistic ocean management provides several important lessons, including:

- **The importance of policy co-ordination:** Through two different co-ordinating forums (one focused on developing management plans and the other on generating the scientific basis for the management plans), Norway has brought together researchers and agencies from various sectors to promote a better understanding of different stakeholders' objectives and methods.
- **Role of sectoral policies and legislations:** The implementation of Norway's ocean management plans is carried out through sector-based policies (e.g. regulations). These policies are vital for operationalising the ocean management plans and ensuring the successful delivery of their objectives.

Mexico's Implementation Strategy for a Sustainable Ocean Economy

The *Estrategía para una Economía Oceánica Sostenible en México 2021–2024* outlines 13 priority areas vital for achieving a sustainable ocean economy.

Informed by the High Level Panel for a Sustainable Ocean Economy, five Transformations for a Sustainable Ocean Economy (ocean wealth, ocean health, ocean knowledge, ocean finance and ocean equity), the priority areas were selected after a review of existing policy instruments and a national consultation.

The Strategy is not designed to replace existing instruments or programmes but is a guide for policy action and initiatives relevant to a sustainable ocean economy, across different government agencies and institutions.

Source: High Level Panel for a Sustainable Ocean Economy (2021[1]), Creating a Sustainable Ocean Economy, https://oceanpanel.org/wp-content/uploads/2022/06/Ocean-Panel-_Progress-Report-2021.pdf; Government of Mexico (2022[3]), "Mexico announces the publication of its Implementation Strategy for a Sustainable Ocean Economy", https://www.gob.mx/sre/prensa/mexico-announces-the-publication-of-its-implementation-strategy-for-a-sustainable-ocean-economy?idiom=en.

In the aftermath of COVID-19, effective use of the NOSC can facilitate policy coordination. While there is some scope to bolster membership, the NOSC broadly includes all ministries relevant to the Samoan ocean economy. This includes the Ministry of the Prime Minister and Cabinet, which oversees the screening, co-ordinating and monitoring of national policy. The NOSC is hence an ideal platform for promoting common understanding and concerted implementation of ocean-related policies across different ministries, policy frameworks and the sectors under their jurisdiction. The inclusion of the Ministry of Foreign Affairs and Trade and the Ministry of Finance is also noteworthy given their role in aid coordination

for the country, meaning that they can serve as conduits for development partner support to implement the SOS.

Maintaining support from local communities is essential. The development and early stages of implementation of the SOS have featured extensive stakeholder consultation, including with local communities. This has enabled the government to craft an inclusive instrument that has won buy-in from stakeholders. The introduction of the district development programme enhances and builds on pre-existing domains of local ownership (e.g., adaptation planning, community-based fisheries management). As such, in addition to fostering social inclusion, continued engagement with local communities remains vital for policy legitimacy and thus a key driver of SOS implementation.

Successful delivery of the SOS requires costing, regular monitoring and evaluation.

Identifying resource needs and financing sources is indispensable for charting a course forward. SOS implementation is contingent on adequate financing and capacity. A costing exercise of the SOS, to assess the financing needs and revenue-generating or cost-saving potential of different policy areas, could help the government prioritise spending needs and expedite execution of the SOS. Going forward, a clear elaboration of the costs of implementation and the technical assistance needed is a priority.

Clarifying the timeline can facilitate realistic and successful delivery of the SOS. For each Solution, Samoa has outlined specific objectives and milestones, with a corresponding deadline for implementation. However, pandemic-related delays have disrupted progress, and several foundational objectives and goals have not been achieved by the proposed deadlines. Samoa's emergence from the pandemic, as programmes restart, offers an opportunity to reformulate the timeline for the SOS and to ensure that its milestones are realistic. Reissuing an updated timeline to stakeholders (e.g. constituents, government agencies and development partners), either with a revision of the SOS or through a corollary document, could present a clear understanding of the next steps and necessary inputs.

Regular monitoring and periodic evaluation are necessary to keep the SOS implementation on track. The SOS defines indicators to measure progress on its goals. These are generally relevant to the goals of the SOS, but it is not clear whether they rely on existing data or whether they require additional data collection, and which institution is responsible for them. Although the responsibility for monitoring and evaluation is assigned to the NOSC, no clear framework and process for monitoring progress and evaluating effectiveness has been set up (e.g. a data dashboard or annual evaluations). Addressing these shortfalls is important for Samoa to be able to identify and address impediments to the implementation of the SOS while ensuring that its actions effectively further the country's vision for its ocean. Samoa could benefit from benchmarking countries such as Portugal and Fiji. While Portugal has a dedicated section on monitoring, evaluation and review in its National Ocean Strategy (Government of Portugal, 2013[4]), Fiji has committed to a Monitoring, Evaluation and Learning process and is expected to release an annual report indicating progress along a set of verifiable key indicators (Republic of Fiji, 2020[5]).

Limited fiscal space, calls for a prioritisation of public investments and the efficient use of concessional finance

Limited fiscal space should be used to prioritise investments that enhance Samoa's climate resilience. Fiscal prudence, in line with Samoa's medium-term debt strategy and the International Monetary Fund-World Bank debt sustainability assessment, leaves the government little, if any, room to take on additional public debt, which could reduce opportunities for public investment in the near future. In light of Samoa's high vulnerability to climate disasters, however, public investment in climate resilience can mitigate concerns about long-term debt sustainability. There is a need for systematic integration of climate resilience considerations and sectoral and SOS-related adaptation plans into the public budgeting and investment process.

Official development assistance (ODA) offers significant relief for Samoa's budget pressures and should be used to enable investment in the ocean economy. Samoa already receives relatively high levels of ocean economy ODA, but donors could more explicitly align their support with SOS priorities. This could involve facilitating the aims of the SOS through support for capacity building and the advancement of ocean knowledge, as well as sectoral assistance for priority areas such as the sustainable management of fisheries, tourism, and land-based pollution, among others. Since donor support for Samoa is based on the government's stated policy priorities and requests for support, a prerequisite for better donor alignment with the SOS would be to explicitly and systematically incorporate the SOS into Samoa's aid co-ordination with both bilateral development partners and regional implementing partners.

By proactively identifying and implementing additional financing instruments, Samoa can advance its ocean-related ambitions. As recommended by the International Monetary Fund Climate Macroeconomic Assessment Program, Samoa can explore how to expand insurance coverage of key public assets. By building on existing programmes piloting payment for ecosystem services in Samoa, the government can consider how to expand, replicate and modify these programmes to align them with the SOS. It could also explore innovative financing mechanisms. In the mid to long-term, the government can consider blue bonds or loans, either issued by the sovereign government or by development finance institutions like the Development Bank of Samoa, to raise financing earmarked for ocean-related projects and assets. By closely following the development of the blue carbon market, including advances in measurement and verification methodologies, the government can also explore whether and how to apply blue carbon solutions in the Samoan context. Donor assistance, both technical and financial, can help ensure the commercial feasibility of these instruments and lay the groundwork to meet technical requirements (e.g. the development of a blue bond framework and eligible project preparation and identification, carbon measurement and valuation for blue carbon projects). Box 4.3 shows an innovative financing mechanism for marine conservation and protection.

Box 4.3. Innovative financing frameworks, such as Indonesia's Blue Halo S, could help Samoa finance the conservation and protection of its marine resources

Financing marine protection and conservation remains a challenge, due to the lack of immediate and visible financial return on related investments, as well as difficulties in factoring in the value of natural capital in market prices. Scarce public resources reinforce the need to develop and deploy innovative mechanisms to meet the financing need for marine conservation and protection.

In 2022, Indonesia launched the Blue Halo S initiative to address this challenge. Blue Halo S operates on the premise that ecological health is a prerequisite for ocean-based economic activity. It seeks to fund environmental protection using the economic benefits generated by the sustainable use of marine resources.

In particular, the initiative aims to integrate marine protection and sustainable fisheries management. Initially drawing on an allocation from the Green Climate Fund, as well as Conservation International, the Blue Halo S initiative aims to be entirely self-funded and mobilise over USD 300 million through a blended finance approach, leveraging a grant facility as well as a blue bond.

Source: Government of Indonesia (2022[6]), "Ocean20: A New Self-Funded Marine Resource Management Framework", https://www.conservation.org/press-releases/2022/11/14/ocean20-a-new-self-funded-marine-resource-management-framework.

Precise, robust measurement of Samoa's sustainable ocean economy would serve as a basis for effective policy making and delivery

To date, a complete and precise picture of the size of Samoa's ocean economy and its relationship to the marine environment is unavailable. This report relies on industry classifications in Samoa's national accounts to assess the size and trends of the country's ocean economy. While these classifications encompass ocean-based industries, the data is not sufficiently disaggregated to be able to disentangle ocean-related economic activities from those not attributable to the ocean. Ocean economy satellite accounts are one methodological solution for measuring the ocean economy. With its tourism satellite account pilot, Samoa has taken initial steps to evaluate the full economic impact of tourism. Linking the tourism satellite account with its waste and energy accounts has also allowed for a preliminary quantification of the relationship between the tourism sector and resource use and marine pollution. These efforts have, nonetheless, been limited in scope, and a thorough understanding of the ocean economy-marine environment relationship remains elusive, especially due to data architecture issues (e.g. gaps in data, insufficient data sharing).

Better measurement would provide a more robust evidence base for ocean-related policy making. Samoa's satellite account pilots have strengthened its national statistical systems (UNESCAP, 2020[7]) and laid the groundwork for efforts to develop more comprehensive ocean satellite accounts. The OECD's definition and list of ocean economy activities for statistical purposes (see Box 4.4) can help concretise the ocean economy and inform Samoa's measurement efforts. While Samoa would benefit from further work on environmental-economic accounting broadly, it is worth noting that the valuation of natural capital, including ecosystem services, in ways consistent with economic accounts, is a global undertaking, and the methodologies are still evolving.

Given Samoa's capacity constraints, a staged approach is appropriate and adequate support essential. In the short to medium term, prioritising the completion of its tourism satellite account is sensible, especially since the sector is the largest of its ocean economy and has clear dependencies and repercussions on the marine environment. Developing comprehensive ocean or marine accounts would be a more ambitious undertaking, which could be informed by the lessons from the development of the tourism satellite account. It would also require a stock taking of the requisite data, capacity and financing, and identifying appropriate partners for support (UNESCAP, 2019[8]). Given the active involvement of the United Nations Economic and Social Commission for Asia and the Pacific in Samoa's tourism satellite account pilot and more generally, in the development of a System of Environmental-Economic Accounting in Asia and the Pacific, it is well-placed to guide Samoa's work in this domain.

Box 4.4. Emerging statistical definitions of the ocean economy can help inform the measurement of Samoa's ocean economy

Definition of ocean economy activities

Drawing on the various relationships between the ocean and the economy, the OECD defines ocean economy activities as the following:

- Activities that take place on or in the ocean
- Activities that produce goods and services primarily for use on or in the ocean
- Activities that extract non-living resources from the marine environment and/or harvest living resources from the marine environment
- Activities that use living resources harvested from the marine environment as intermediate inputs

- Activities that would likely not take place were they not located in proximity to the ocean
- Activities that gain a particular advantage by being in proximity to the ocean

List of ocean economy activities

Based on the definition of ocean economy activities outlined above and using the International Standard Industrial Classification for All Economic Activities, the OECD identified a list of specific ocean economic activities. They are as follows:

- Marine fishing
- Marine aquaculture
- Maritime passenger transport
- Maritime freight transport
- Offshore extraction of crude petroleum and natural gas
- Marine and seabed mining
- Offshore industry support activities
- Processing and preserving of marine fish, crustaceans and molluscs
- Maritime ship, boat and floating structure building
- Maritime manufacturing, repair and installation
- Offshore wind and marine renewable energy
- Maritime ports and support activities for maritime transport
- Ocean scientific research and development
- Marine and coastal tourism

Source: Jolliffe, Jolly and Stevens (2021[9]), "Blueprint for improved measurement of the international ocean economy: An exploration of satellite accounting for ocean economic activity", https://doi.org/10.1787/aff5375b-en.

4.2. Sector-specific recommendations

Sustainable tourism

While tourism has significant growth potential in Samoa, a sustainable approach requires considering its social and environmental costs. Mass tourism can result in environmental degradation and loss of biodiversity, due to increased pressures on natural resources. Experience shows that in some cases, the environmental and social costs of mass tourism outweigh its economic benefits (Asian Development Bank, 2020[10]). This realisation calls for new approaches to maximise the positive economic impact of the tourism industry while minimising its negative effects on the environment, to ensure that tourism drives long-term, sustainable growth.

Sustainable tourism can unlock significant benefits for Samoa, from economic growth to social development and environmental conservation. By prioritising sustainable tourism initiatives and practices, Samoa can position itself as a responsible tourism destination offering unique experiences and supporting the preservation of its natural and social capital. This can help it differentiate itself from competing tourism destinations and provide visibility for its efforts to protect its ocean resources. Examples from early adopters of a sustainable tourism approach, such as Costa Rica and Palau, illustrate its potential to reconcile economic, social and environmental considerations (Box 4.5).

Box 4.5. Sustainable tourism initiatives in Costa Rica and Palau have yielded large economic, environmental and social gains

Costa Rica's Certification for Sustainable Tourism

Costa Rica has been a pioneer in developing a sustainable tourism approach through its Certification for Sustainable Tourism. A voluntary accreditation programme, it was launched in 1997 and designed to recognise and promote environmentally responsible and sustainable practices in its tourism industry. The initiative, administered by the Costa Rican Tourism Board, assesses participating businesses based on a set of rigorous criteria, including efficient use of natural resources, waste management, biodiversity conservation and socioeconomic benefits for local communities. Participating businesses, which can range from hotels and lodges to tour operators and car rental agencies, are then given a sustainability rating on a scale of one to five "green leaves", with five being the highest level of commitment to sustainable practices.

The initiative provided Costa Rica with international recognition and a strong image as a sustainable tourism destination. In addition to incentivising businesses to adopt eco-friendly measures and helping tourists make informed choices about their travel experiences, the Certification for Sustainable Tourism has provided visibility to Costa Rica's efforts to the preservation of its natural resources. This has driven the growth of tourism in Costa Rica and contributed to the protection of the country's rich biodiversity, encouraging local economic development and preserving its cultural heritage.

The Palau Pledge and recent plans to make the country a carbon-neutral destination

Palau successfully introduced a first-of-its-kind mandatory eco-pledge recently, to raise awareness among tourists about the country's environmental and cultural sensitivity. Introduced in 2017, the Palau Pledge is a unique initiative that requires international visitors to sign a formal commitment to act responsibly and respect the environment and local customs during their stay. The Pledge is stamped directly into tourists' passports and outlines a set of sustainable practices aimed at minimising negative impacts on the island's fragile ecosystem and culture. For example, by signing the Palau Pledge, visitors commit to respecting local communities and their customs and refrain from feeding fish and sharks or littering. In addition, tourists pledge to support local businesses in the communities they visit. The initiative has helped raise awareness about sustainable tourism practices and empowered local communities to hold tourists accountable for their actions.

The Pledge is only one component of a set of measures taken by Palau to transform the country into a sustainable tourism destination. In 2020, for example, the Palau Bureau of Tourism initiated a project aimed at bolstering local food production in the tourism sector and establishing a carbon management platform for visitors, which will enable them to offset the emissions of their travel and activities. The contributions gathered from offsetting are to be allocated to blue carbon projects, including mangrove restoration and sustainable production activities that help curtail CO_2 emissions. This innovative programme is projected to generate more than USD 1 million annually for carbon reduction endeavours.

Source: Instituto Costaricense de Turism (2023[11]), Sustainability, https://www.ict.go.cr/en/sustainability/cst.html; Palau Bureau of Tourism, 2023[163]) (2023[12]), Palau Pledge, https://palaupledge.com/; Palau Government (2020[13]), "Project to Make Palau a Carbon Neutral Destination Launched by Palau Bureau of Tourism, Sustainable Travel International, and Slow Food", https://www.palaugov.pw/project-to-make-palau-a-carbon-neutral-destination-launched-by-palau-bureau-of-tourism-sustainable-travel-international-and-slow-food/.

As part of efforts to increase the economic contribution of its tourism industry, Samoa could benefit from enhancing its linkages to the labour market. A comparison with its peers in the Pacific suggests that there may be scope to increase tourism's contribution to labour market outcomes. Strengthening labour market linkages can lead to increased job creation, better income opportunities for local communities and greater overall resilience of the tourism industry. Investing in education, training and skills development programmes tailored for the tourism sector can ensure that the local workforce is equipped with the knowledge and expertise necessary to deliver high-quality services to tourists. Over time, this approach can allow for a shift from a volume-driven growth of the tourism industry to one based on quality and value, which can also make the industry and its workers more adaptable and better prepared to handle challenges, such as changing market demands and external shocks.

Drawing lessons from recent crises, Samoa could implement mechanisms to augment the resilience of its tourism industry. Addressing structural weaknesses, such as inadequate infrastructure, limited human resources and low levels of digitalisation, is vital to ensure the sector's long-term viability and adaptability in the face of global challenges. Given the high cost of investments needed to tackle these issues, one option could be for such initiatives to be financed by the proceeds of the tourism levy currently being considered by the government of Samoa. To ensure broad buy-in from tourism sector stakeholders, tourism levies require careful planning and transparency on the use of their proceeds, as well as effective communication on how the latter will benefit the sector through increased resilience.

The COVID-19 pandemic has demonstrated that despite investments in resilience, certain events can still have a profound impact on Samoa's tourism industry. In anticipation of scenarios where disruptions to the industry are unavoidable, it is essential to prioritise resilience through stop-gap measures designed to minimise socioeconomic fallout and facilitate the sector's rapid recovery. By making plans for and employing strategies such as stimulus packages for businesses and social protection mechanisms, Samoa can mitigate the adverse effects of unforeseen events on the tourism industry. In a country like Samoa, it is also crucial to consider the unique needs of the informal sector, which may not be adequately addressed by conventional protective measures. Developing tailored approaches for this sector will strengthen the industry's resilience and ensure a more comprehensive recovery in the face of future challenges.

Sustainable fisheries

To enhance the fisheries sector's contribution to economic growth and reduce its exposure to external shocks, Samoa could identify and address supply chain constraints limiting value and hindering exports. For example, Samoa could increase the benefits derived from its tuna industry by investing in value-added fish products and by upgrading local capacity to meet quality standards required by the major export markets, such as Australia, New Zealand, the United States and the European Union. Research on how Indonesian fisheries can better cater to the European Union tuna market found the need to strengthen practices (e.g., better documentation) that increase the traceability of sustainably fished products (Firbiani, 2018[14]). Measures to raise awareness among fishers and suppliers, and to equip them with the ability to apply and verify strict environmental and sustainability standards, as in the example of Pacific Island Tuna (Box 4.6), a joint initiative between the Republic of the Marshall Islands and the Nature Conservancy, can help to ensure greater access to global export markets.

Box 4.6. Pacific Island Tuna, a partnership between the Nature Conservancy and the Republic of the Marshall Islands, supplies Walmart with sustainably sourced canned tuna

Pacific Island Tuna is a joint venture company between the Nature Conservancy and the Republic of Marshall Islands. Walmart, the world's largest retailer, has chosen Pacific Island Tuna to supply it with Marine Stewardship Council-certified canned skipjack tuna for its in-house brand, Great Value.

The business model positions Pacific Islanders to participate equitably in global tuna supply chains and intends to direct 100% of long-term net profits back to Pacific Island governments and communities. At least 40% of the company's net income distributions directly support community-based conservation and climate resilience projects, including the development and management of Marine Protected Areas and coral reef restoration. The other 60% of profits will be returned to Pacific Island governments.

The model, developed in collaboration with Bain & Company, includes strict sourcing standards that match robust social and environmental sustainability commitments with best-in-class verification. A prohibition of the use of fish aggregating devices reduces the bycatch of juvenile tunas and at-risk species like sharks and turtles. Meanwhile, dockside offloading – Pacific Island Tuna's requirement that all fish pass through a port in the Pacific to verify catch volumes – eliminates the possibility of illegal, unreported, and unregulated fishing and provides workers on fishing vessels the added safety measure of being able to leave the vessel if necessary. These standards are validated through Pacific Island Tuna's commitment to 100% on-the-water transparency through human observers and Electronic Monitoring coverage on all fishing vessels. By following best-in-class transparency practices, Pacific Island Tuna further demonstrates its commitment to upholding the highest environmental and labour standards.

Source: Businesswire (2021[15]), "Global Tuna Supply Chain Disrupted: New, Sustainably-Sourced Product to Line Shelves of World's Biggest Retail Chain", https://www.businesswire.com/news/home/20211006005271/en/Global-Tuna-Supply-Chain-Disrupted-New-Sustainably-Sourced-Product-to-Line-Shelves-of-World%E2%80%99s-Biggest-Retail-Chain.

In addition, efforts to develop the domestic market through an import substitution strategy could provide a local source of fish demand, allowing the fisheries sector to circumvent constraints capping its export potential, while promoting goals of food security. This can be done through public procurement programmes, using the government's purchasing power to provide regular demand by supplying canteens in local schools, hospitals and other public institutions. Demand for local fish products can also benefit from measures to incentivise and enable the use of rejected fish or bycatch to produce fish meal and oil for aquaculture, livestock husbandry and as fertiliser for vegetable farming. Education on the nutritional benefits of fish products in the context of public health awareness programmes can also help to boost local demand (MRAG Asia Pacific, 2022[16]).

Efforts to develop the fisheries sector must be accompanied by a proportionate investment in fisheries management and assessment of fish stocks. The long-term economic health of the fisheries sector is tied to the long-term sustainability of fish stocks, which makes fisheries management indispensable. OECD evidence shows that the impact of support to fisheries on fish stock health is predicated on the type of fisheries support and fisheries management. Without adequate fisheries management, policies that minimise fixed costs (e.g. the cost of vessels) have been shown to yield a high risk of encouraging unsustainable fishing (OECD, 2022[17]). Lacking a robust management framework, any growth in the fisheries sector could also potentially be short-lived and generate more issues than it resolves. It is thus vital to combine measures to grow the fisheries sector with efforts to ensure robust fish stock assessment and effective fisheries management.

Given their high exposure to natural disasters and climate change, fishing communities would benefit from measures to enhance climate resilience and protection against natural disasters. This can include community projects to protect coastlines from erosion through revetments and groynes, as well as maintenance and construction of seawalls. Measures to include climate resilience can also include insurance protection for fishing communities hit by natural disasters (Box 4.7).

Box 4.7. The Caribbean Ocean and Aquaculture Sustainability Facility provides climate insurance to fishermen

The Caribbean Ocean and Aquaculture Sustainability Facility, led by the World Bank and the Caribbean Catastrophe Risk Insurance Facility Segregated Portfolio Company, aims to improve fishermen's access to disaster risk financing. Concretely, the facility provides parametric insurance coverage to vulnerable fishing communities for losses caused by "bad weather", defined as high waves and occurrence of heavy rainfall.

While the facility's policies are directly purchased by governments, the product incorporates a livelihood protection component (akin to microinsurance) and a tropical cyclone component (sovereign insurance). In particular, the Caribbean Ocean and Aquaculture Sustainability Facility product provides coverage for losses on fisherfolk and direct damages caused by tropical cyclones (wind and storm surge) to fishing vessels, fishing equipment and fishing infrastructure.

Source: CCRIF (2023[18]), Caribbean Ocean and Aquaculture Sustainability Facility, https://www.ccrif.org/projects/coast/caribbean-ocean-and-aquaculture-sustainability-facility.

Maritime transport

Decarbonisation of maritime transport would generate economic benefits for Samoa. Given its reliance on foreign fuel imports and the considerable fossil fuel use by the maritime transport sector, efforts to decarbonise the sector would yield tangible gains throughout the economy.

In concrete terms, this implies decarbonising Samoa's current fleet of vessels while heeding emissions concerns in procuring new vessels. Efforts to reduce emissions would be germane to the Samoa Shipping Corporation, whose fleet of seven ferries services domestic islands, as well as American Samoa and Tokelau. Existing literature points to a range of technological (e.g., lighter materials, slender design, less friction, waste heat recovery), operational (e.g., lower speeds, ship size, ship-port interface), and alternative fuel-related (e.g., sustainable biofuels, hydrogen, ammonia, electric ships, wind assistance) measures that can mitigate or eliminate maritime transport-related emissions (ITF, 2018[19]). Steps to increase the energy and operational efficiency of maritime transport can drive emission reductions in the short term. A more ambitious transition to alternative fuels is critical for longer-term decarbonisation (see Teeter and Cleary (2014[20]) for the case for sail-solar shipping in SIDS). Samoa does not yet own a cargo ship, but momentum is building to purchase one to offset heightened freight costs (Samoa Global News, 2023[21]), which offers an opportunity to include decarbonisation considerations from the outset. Optimising ship design and ship size would help increase the net energy efficiency of a potential cargo ship. The continuation and expansion of existing forms of technical and financial assistance (e.g. the joint Japan-United Nations Development Programme project to explore low-carbon propulsion systems for Samoa's transport sector) is indispensable for a low-carbon transformation of its maritime transport sector. South-south co-operation could also help supply replicable solutions for Samoa, especially since maritime transport is a central feature of many coastal economies, and many island nations have historically relied on low or no-carbon modalities for maritime travel.

Samoa can sustainably and strategically develop onshore activities to reap additional benefits from international maritime traffic. Interviews conducted with Samoan officials for this report indicated that the consolidation of shipping lines during the pandemic introduced an opportunity for Samoa to function more prominently as a shipping hub. Capacity constraints at the Apia Port may cap the growth potential of maritime traffic, but strategically expanding onshore services (e.g. refuelling, restocking, crew accommodation, etc.) could bring in additional revenue. A holistic approach to managing port services is necessary, however, to eschew pursuing economic gains at the expense of environmental or social damage. This entails aligning port operations with broader decarbonisation (e.g., by optimising port logistics, reducing the emissions of port-based industries) and ocean restoration and conservation efforts. The economic gains of port-based activities could be channelled into social development, by creating decent local jobs, developing skills and capacity, and promoting inclusion of marginalised groups. As elaborated in Box 4.8, the Blue Ports initiative provides a framework and capacity support for such an integrated approach.

Box 4.8. The Blue Ports Initiative advances the environmental, as well as socioeconomic, sustainability of ports.

Led by the Food and Agriculture Organization and supported by Spain, the Blue Ports initiative aims to harness "blue ports" to drive sustainable development. With an initial focus on fishing ports, and possible expansion to other types of ports, the initiative aims to promote both environmental and socio-economic sustainability. It espouses the following benefits of a "blue port":

- Reinforced strategic planning that is inclusive, competitive, green and efficient
- Stronger partnerships with academia, governments, the private sector and civil society
- Collaboration between the public and private sector
- Investments guided by stakeholder needs and sustainability concerns
- Fostering innovation by attracting investors and entrepreneurs
- Improved commercial operations of the port in terms of volume and earnings

The Blue Ports initiative aims to help countries realise these benefits through capacity building and by providing a platform for knowledge exchange. Its outputs include a guidance on becoming a "blue port", workshops and seminars, knowledge management tools such as data platforms, and bespoke technical assistance activities to support port design and implementation strategies.

Source: Sanchez (2022[22]), The Blue Ports initiative to encourage positive city–port relationships, https://www.aivp.org/en/newsroom/the-blue-ports-initiative-to-encourage-positive-city-port-relationships/; Government of Spain (2022[23]), "Spain offers FAO its support for the creation of the Blue Ports Global Network office and its location in the Port of Vigo", https://www.puertos.es/es-es/Paginas/Noticias/puertosazules2022.aspx.

To weather future shocks, buttressing the resilience of Samoa's maritime transport sector is essential. A combination of higher exposure and lower adaptive capacity makes Samoa extremely vulnerable to climate change. Simultaneously, maritime transport functions as the economic lifeline of the country, and as the source of essential goods and services. Climate-proofing maritime transport, notably seaports, is an urgent undertaking. The forthcoming transport sector plan is a chance to elaborate a long-term climate change adaptation plan, rooted in a systematic use of risk assessments and cost-benefit analysis of adaptation projects. The high cost of adapting transport to climate change also means that continued support from partners (e.g. the Asian Development Bank's investments in upgrading the Apia Port) is pivotal. Structural solutions that limit disruptions of connectivity can also be pursued. This would include fortifying intraregional trading partnerships and co-ordinating with other Pacific countries to safeguard connectivity in times of crisis, as well as pursuing process improvements in trade and shipping to allow for continuity in the face of disruptions (UNCTAD, 2021[24]).

Emerging sectors

The ocean economy provides opportunities for Samoa to harness innovation and diversify its economy. By focusing on emerging sectors, such as ocean-based renewable energy, marine biotechnology and aquaculture, Samoa can create new job opportunities, promote value-added activities and offer alternatives to seasonal migration. These sectors also provide avenues for enhancing the skill sets of the local workforce through capacity building.

Attracting investment in these emerging sectors, however, will mean addressing existing barriers that could impede their growth. This includes the need to adequately adapt the regulatory environment, creating a more conducive atmosphere for investment to increase the attractiveness of these sectors, facilitating access to finance and promoting public-private partnerships.

One promising avenue for Samoa's ocean economy is the development of ocean-based renewable energy. This includes offshore wind, which currently dominates global renewable electricity generation, but also other emerging renewable sources, such as waves, tides, floating solar and algae (for biofuel). Recent research suggests that ocean-based renewable energy can be especially important for small island countries with large ocean resources and limited space for other forms of renewable energy (Jolliffe, Jolly and Stevens, 2021[9]). By harnessing some of these ocean-based renewable sources, Samoa can move towards energy independence. This transition, in line with the country's decarbonisation strategy and its target to achieve 70% renewable energy by 2031, would also reduce its reliance on imported fossil fuels and mitigate its exposure to external inflation. In addition, ocean-based renewable energy holds promise to generate localised clean energy in support of ocean-economy activities such as tourism, port services, fish processing and aquaculture (Jolliffe, Jolly and Stevens, 2021[9]). Samoa's experience with more mature renewable energy, like solar photovoltaic, can contribute to its readiness to adopt ocean energy technologies. Recent research suggests that an existing regulatory framework supporting the integration of clean energy technologies may streamline the deployment of emerging technologies such as wave, tidal or floating solar photovoltaic (OES, 2020[25]). In addition, Samoa's ongoing marine spatial planning process could help prevent conflicts and delays if it considers the country's potential for ocean energy deployment.

Marine biotechnology presents another opportunity for economic diversification and upskilling. Continued research and development in marine biotechnology could unlock opportunities for economic diversification and growth, for example through the development of innovative products like pharmaceuticals and cosmetics derived from marine organisms. Avoiding irreversible ecosystem damage is, nonetheless, paramount. Collaborative efforts between the Scientific Research Organisation of Samoa and the Ministry of Agriculture and Fisheries, but also with regional peers and existing knowledge networks, will be essential to pool resources, share scientific knowledge and develop the expertise needed to unlock the full potential of marine biotechnology research.

Lastly, the potential of aquaculture for both domestic consumption and export warrants further exploration. Aquaculture is still a young industry in Samoa and represents only a minor share of the country's fisheries sector. To assess the feasibility of scaling up this activity, a comprehensive analysis of suitable species, required capital inputs, market demands and environmental considerations would be a necessary first step. Aquaculture production that requires the conversion of high-value coastal ecosystems like mangroves may not be appropriate for Samoa, especially given the emphasis in the SOS on coastal ecosystem protection. Likewise, the viability of intensive production systems would be limited in Samoa due to the large requisite capital and energy inputs and social costs for local communities (OECD, 2020[26]).

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Towards a Blue Recovery in Samoa

APPRAISAL REPORT

The re-opening of Samoa's borders in late-2022 kickstarted the country's recovery from the COVID-19 pandemic. This offers an opportunity to rebuild sustainably its tourism, maritime transport, and fisheries sectors. Samoa's ocean resources can also augment its resilience to future shocks such as climate change. Through an analysis of Samoa's economic trends and environmental pressures, institutional set-up and policy tools, as well as financing landscape, this report identifies opportunities and challenges for Samoa's ocean economy to drive sustainable and resilient development. The Samoa Ocean Strategy offers a blueprint for such a pursuit, but there remain gaps and impediments. To address them, the report provides several cross-cutting and sector-specific policy recommendations to accelerate Samoa's transition to a sustainable ocean economy.

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