Ocean Accounts Partnership

Samoa Pilot Study - Scoping Report[1]

13 June 2019

[1] Report prepared by Silafau Paul Meredith, Consultant, with support from the Ministry of Natural Resources and Environment, Government of Samoa, and United Nations Economic and Social Commission for Asia and the Pacific, and in consultation with relevant national and regional stakeholders.

GLOSSARY OF TERMS

Blue Economy	The 'Blue Economy' encourages better stewardship of the ocean or 'blue' resources. Its approach is based on a sustainable ocean economy that balances economic activity with long-term capacity of ocean ecosystems to support such activity.
Capacity building	Enhancing the skills of people and the ability of institutions to participate in resources management through education and training.
Catch per unit effort (CPUE)	Amount of fish catch that is taken per unit of fishing gear (such as the number of fishing hooks).
Collaboration	An approach to improve relationships and decision making between 2 or more parties.
Floating Plastic Debris Density – Indicator	Modelled macro and micro plastics distribution in the ocean, relative quantities of floating micro (<4.75mm) and macro (>4.75mm) plastics in large marine ecosystems measured based on a model of surface water circulation and the use of proxy inputs (shipping density, coastal population density, area of impermeable catchment i.e. urban areas with rapid run-off).
Ecosystem	The system of interactive relationships among organisms (e.g. energy transfer), and between organisms and their physical environment (e.g. habitat) in a given geographical unit.
Ecosystem assets	Ecosystems are considered assets as with other traditional forms of assets as they support economic production, and general humanity well-being, health and security. The key ecosystem assets identified by UNEP (2014) are: Global Fresh Water, Soil Quality for plant growth, Terrestrial organic carbon, Terrestrial biodiversity, Marine biodiversity and Marine fish stocks.
Indicators	Measurable variable used as a representation of an associated (but non-measured or non-measurable) factor or quantity. For example, consumer price index (CPI) serves as an **indicator** of general cost of living or GDP as a measure of domestic production.
Monitoring	Continuous examination of progress or tracking of achievements based on set targets.
Ocean acidification	A reduction in the pH of the ocean over time, caused primarily by uptake of carbon dioxide (CO^2) from the atmosphere.
System of National Accounts (SNA)	The internationally agreed standard set of recommendations on how to compile measures of economic activity. The SNA describes a coherent, consistent and integrated set of macroeconomic accounts in the context of a set of internationally agreed concepts, definitions, classifications and accounting rules. The SNA provides an overview of economic processes, recording how production is distributed among consumers, businesses, government and foreign nations. It shows how income originating in production, modified by taxes and transfers, flows to these groups and how they allocate these flows to consumption, saving and investment. Consequently, the national accounts are one of the building blocks of macroeconomic statistics

	forming a basis for economic analysis and policy formulation. The SNA is intended for use by all countries, having been designed to accommodate the needs of countries at different stages of economic development. It also provides an overarching framework for standards in other domains of economic statistics, facilitating the integration of these statistical systems to achieve consistency with the national accounts. (United Nations Statistics Division) The 2008 SNA the latest version of the international statistical standard for the national accounts, adopted by the United Nations Statistical Commission (UNSC)
Total Economic Value	The value obtained from the various constituents of utilitarian value, including direct use value, indirect use value, option value, quasi-option value, and existence value.
Tourism Satellite Accounts	Economic Measurement of the Tourism Industry using a Standard Statistical framework such as tourism direct GDP contribution to the economy.
Value	What one is willing to give up in order to obtain a good, service, experience, or state of nature.

Contents

Executive Summary

This Scoping Study Report is part of the Partnership Pilot Studies, commissioned by the Government of Samoa (through the Ministry of Natural Resources and Environment) with support from the United Nations Economic and Social Commission for Asia and the Pacific and is intended to support national ocean related policies and programs culminating with the achievement of SDG14: *"Conserve and sustainably use the oceans, seas and marine resources for sustainable development"* and 2016/17 – 2019/20 Strategy for the Development of Samoa (SDS).

The focus of the pilot studies is to work with Samoa in adopting international standards such as the System of Environmental Economic Accounting (SEEA) as a framework to develop key statistics to assist with the development and monitoring of sustainable ocean policies.

The System of Environmental Economic Accounting (SEEA) is an important Diagnostic Tool that links biophysical and monetary measures of natural resource inputs to the economy, residuals from economic production and expenditures on environmental-related activities. The ecosystems component SEEA (EEA) views ecosystems as integrated assets that provide services to people, including nonmonetary services. Ocean Accounts is a developing statistical framework that adapts the SEEA for application to the ocean.

Samoa is currently developing a National Ocean Strategy planned for completion in 2019. This exercise could potentially provide key benchmarks in terms of Ocean and Marine resources and their respective inter-action with other sectors.

The Ocean is a vital asset for Samoa. Fresh fish is the major export commodity and Tourism Earnings and Remittances being the leading foreign exchange earners. Developing a comprehensive set of Ocean Accounts in the long term provide planners and policy makers with the tools to effectively manage Fishing and Tourism in a sustainable manner by linking transactions to other industries.

The Scoping Mission revealed a multitude of issues that could be addressed either directly or indirectly through the Partnership Pilot Studies. These are:

- [2]Marine Spatial Planning, National Ocean Strategy development & Monitoring.
- Strengthening monitoring of national and sector development indicators.
- Monitoring the Impact of the Plastic Ban in Samoa.
- Tourism Satellite Accounts and measuring sustainable tourism development.
- Monitoring Sediment build up in rivers and linkages to flooding.
- Monitoring the impact of reclamation work on mangroves and how this impact affects oceans.
- Coral bleaching and crown of thorns damaging reefs.
- Monitoring Illegal land dumping that ends up in rivers and ultimately into the oceans and illegal dumping directly into the oceans.
- Monitoring water levels and salinity.
- Monitoring compliance with Fishing Laws and Regulations.

The main gaps identified relates to key Statistical datasets and Legislations. These include:

- Overall Stock of Marine Resources.
- Population Density and Distribution of Specific Species including threatened/vulnerable species and invasive marine species.

[2] *Process that brings together multiple users of the oceans such as energy, industry, conservation, recreation and government. Provides for informed and coordinated decisions on how marine resources are utilized sustainably.*

- ❖ Transactions datasets between Oceans and other Accounts such as Water, Energy and Waste Accounts, Tourism Satellite Accounts.
- ❖ Overarching policy and framework on Oceans including seabed mining.

The selection of three possible pilot projects takes into account the multitude of issues mentioned above, is combined into 3 broad pilot topics common synergies and objectives. The selection also reflects extensive stakeholder[3] consultations (through bilateral meetings and dedicated workshops) in the weeks of 11 February, and 5 May 2019. Follow-up consultations with key national stakeholders were also conducted by the consultation in the period February and May 2019.

The Draft Scoping Study Report presents 3 possible pilot projects for consideration.

1. Sustainable Development of the Tourism Industry (initial stage is the development of a Tourism Satellite Account (TSA).
2. Marine Spatial Planning, National Ocean Strategy development and Monitoring.
3. Strengthening monitoring of national and sector development indicators.

These 3 projects are not mutually exclusive but are interlinked.

During May 2019 consultations with key stakeholders, consensus reached to pursue Option 1 - Sustainable Development of the Tourism Industry with the initial stage being the development of a Tourism Satellite Account (TSA). This option was seen practical and the development of an experimental TSA was feasible for completion within the 5 to 6 months timeframe for the pilot studies.

Sustainable Development of the Tourism Industry (initial stage is the development of a TSA):

The tourism industry has been identified as one of strategic importance for Samoa. An initial step towards understanding the value of the tourism industry to the economy is through the development of a TSA for Samoa. This would provide policy makers and planners with the tool to analyse the sectoral, cross-sectoral impacts and trade-offs to sustainably plan and develop the tourism industry. Sustainable development of the tourism industry is dependent on the environment, including through water and energy usage, waste generation, and land and marine space and ecosystems use.

Tourism when sustainably managed, considers economic, social and environmental concerns. The TSA would identify the direct contribution of tourism sector to GDP. Then TSA could be further utilised to analyse the industry carriage capacity, noting the impact on, and use of, resources such as land, marine spaces, ecosystems, water, energy and waste generated.

The tourism industry activities are also closely related to the comparative strengths of Samoa's product which is based on ocean and coastal resources. With the TSA developed, further analysis and applications to spatial (land and marine spaces) is needed, as well as, implications on intensity of industry use of energy and water, and waste generated. The development of energy, water and solid waste accounts by the Samoa Bureau of Statistics, could be compared to the TSA findings to understand intensity of resource use by tourism sector, for example. The marine spatial planning initiative underway through MNRE and IUCN's effort could be used to consider tourism shore and offshore marine activities, which will support sustainable tourism efforts in terms of understanding spatial and ecosystem carriage capacities.

---

[3] Ministry of Natural Resources and Environment (MNRE), Ministry of Agriculture and Fisheries, Ministry of Finance, Samoa Bureau of Statistics (SBS), Ministry of Foreign Affairs and Trade, Ministry of Communication and Information Technology, Ministry of Tourism, Samoa Water Authority, and Ministry of Works, Transport and Infrastructure. Selected development partner stakeholders were consulted, including Secretariat of the Pacific Environment Programme, Conservation International, International Union for Conservation of Nature, the National University of Samoa and United Nations Environment Programme.

Related projects:

Finally, the Scoping Study Report notes that there are other related projects either in the pipeline or have recently started such as the IUCN "Ocean Planning/Marine Spatial Planning" (MSP) Project. It is recommended that these initiatives be coordinated with the Partnership Pilot Studies at the regional level in terms of planning and structuring as to avoid duplication. At the national level, it is equally important that other related activities are factored into Environment Sector Implementing agency workplans to ensure sufficient absorptive capacity exists, and also that synergies with the options presented in this report are leveraged.

Marine Spatial Planning (MSP), National Ocean Strategy development and monitoring:

Developing Marine Spatial Planning for Samoa provides planners with an additional tool to effectively plan and monitor the impact of projects and programs on Samoa's oceans. In addition, this supports the National Environment Sector Plan (NESP) aspirations and ultimately contribute to Samoa's efforts towards achieving SGD's14 *"Conserve and sustainably use the oceans, seas and marine resources for sustainable development"*.

Developing Marine Spatial Planning, National Ocean Strategy development and Monitoring would provide planner with an in-depth insight into the impact on Samoa's oceans of waste and chemicals materials that ends up in the oceans. These includes plastics and pesticides to name a few.

In terms of feasibility to deliver during pilot period, very initial work could be commenced and noting a medium-term time frame to complete a full MSP. Given IUCN's lead work in this area, stakeholders consider the pilot to best focus in another area of interest. National Ocean Strategy development is also underway with MNRE in the lead and specific support through this pilot is not envisaged best use of limited resources.

Strengthening the Monitoring of National and Sector development Indicators:

Assistance with the NESP M&E indicators yields important primary data that would form the basis for monitoring the implementation of national policy priorities and relevant international commitments like the SDGs and could potentially inform an Oceans Account. Furthermore, this would address immediate needs identified in the NESP to commence with strengthening existing monitoring efforts and to gradually build a full environment sector monitoring program over time.

Identifying key routine surveys complemented with utilizing current administrative records would greatly assist in populating the Samoa National Environment Indicator Reporting System (NEIRS) indicators. The main challenges identified were:

- Data collection from Environment Sector Implementing Agencies (IA's).
- Collection of specialized datasets that require particular skill sets and the necessary equipment for the collection of scientific data.
- Data Cleaning and compilation of administrative records by Implementing Agencies.
- Capacity Building within MNRE and IA's to effectively manage and update their respective environment sector Indicators.

Organizing collected datasets in a structured approach such as the SEEA framework would add further value to the information being collected and enable key policies to be tracked in terms of their overall impact on different environment related accounts such as Oceans, Waste, Water and Energy Accounts.

However, stakeholder feedback lent lower priority to this option, with the possibility of considering a few indicators to measure through this pilot study depending on feasibility. Stakeholders sought to advise on a short list of indicators from the NESP and the fisheries sector.

However, any support through a pilot study would need to focus on ocean related statistics that complement the recent effort to review and update the NEIRS.

In conclusion, focusing on sustainable development of the tourism industry appears the most favored option by the national stakeholders consulted. Developing an experimental TSA and testing estimates regarding tourism sector resource issues (such as water, energy use and waste generation), appears feasible within the pilot study timeframe (till October 2019).

1. Introduction

1.1 Background

This Scoping Study Report is part of the Partnership Pilot Studies, commissioned by the Government of Samoa (through the Ministry of Natural Resources and Environment) with support from the United Nations Economic and Social Commission for Asia and the Pacific and is intended to support the implementation of SDG14 in line with the Strategy for the 2016/17 – 2019/20 Development of Samoa (SDS) and national ocean related policies and programs including the 2017 -2021 National Environment Sector Plan, and other relevant sector plans.

The focus of the pilot is to work with Samoa in adopting international standards such as the System of Environmental Economic Accounting[4](SEEA) as a framework to develop key statistics that will assist with the development and monitoring of sustainable ocean policies.

The SEEA is an international statistical standard that outlines concepts, classifications and methods for linking biophysical and monetary measures of natural resource inputs to the economy, residuals from economic production and expenditures on environmental-related activities. The ecosystems component SEEA (EEA) views ecosystems as integrated assets that provide services to people, including nonmonetary services.

The need for additional sustainable development measurements culminates from the gradual shift over the last 2 decades to incorporate ecosystems as integrated assets in the economy. Thus, by and using the same framework for measuring production, income and expenditure as in the case with gross domestic product, policy makers would obtain a comparable estimate on the value of ecosystems and how they interact with other sectors of the economy. In addition, the SEEA framework enables the measurement of the impact of ocean related development projects in a consistent manner over time.

The main actors in leading the Ocean Accounts Partnership for Samoa is the Samoa Ministry of Natural Resources and Environment (MNRE) and in collaboration with the Samoa Bureau of Statistics (SBS) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

As discussed earlier, the Scoping Study was undertaken from the 11 February to 10 May 2019. The Study involved Desk Research, Scoping Mission and Consultations with key stakeholders. The Scoping Study had the following objectives:

- Provide background on "Ocean Accounts Partnership".
- An assessment of data availability.
- Explore constraints and opportunities for the selected aspects of ocean accounts.
- Based on national priorities, identify areas which could be supported through a pilot study.
- Support capacity building efforts on priority areas.

[4] *Developed jointly by the United Nations, European Commission, Food and Agriculture Organization, International Monetary Fund, OECD and World Bank.*

1.2 Economic Sector – Oceans

Samoa is a Small Island Developing State (SIDS) situated in the middle (-13.69, -171.85) of the Pacific Ocean. Its land area is 2,820 km^2 and an EEZ of 98,500 km^2 the smallest in the Pacific.

Gross Domestic Product in 2018 was SAT $2.156 billion equivalent to SAT $10,906 per capita or [5]$4,115 USD dollars placing Samoa as a developing country. The current economic environment in Samoa is shown in Appendix 1 "Economic Environment"

1.3 Environment Sector – Oceans

1.3.1 Framework

National

The 2017-2020 Strategy for the Development of Samoa (SDS) provides the overall long-term outcome for the sector. The SDS Priority Area 4 *"Environment"* has Key Outcome 13 *"Environment Resilience Improved"*. The corresponding Strategic Outcomes are:

Strategic Outcome 1 *"Protection, Conservation and Sustainability of Environmental and Natural Resources Improved - Number of key habitats and at-risk species protected increased; - Areas of forests and* ***marine sites protected increased****; - Protection plans implemented for at risk" species".*

Furthermore, the SDS states that – *"The state and trend in condition of environmental and natural assets such as lands, forest, freshwater (surface and groundwater) native (including endemics) species diversify (terrestrial and marine), fisheries (inshore and offshore), oceans and air quality* ***will be improved and monitored closely****".*

The SDS outcomes and strategies aligns with Sustainable Development Goals 14 (SDGs): *"Conserve and sustainably use the oceans, seas and marine resources for sustainable development"*.

The SDS Priority Area 4 and SDG14 are further amplified and detailed in the 2017-2021 National Environment Sector Plan (NESP) Long Term Outcome 1 (LTO1): *"Sustainable management and development of natural resources and environment improved"* supported indirectly by the other 3 NESP Long Term Outcomes.

Under NESP LTO1 and End of Sector Plan Outcome 1.5 (ESPO1.5): *"Sustainable management and development of oceans improved".* The NESP details some of the key initiatives such as:

- Integrated approach to coastal management including inshore and offshore fisheries. This includes government, private sector, NGOs and communities as key stakeholders.
- Improvements to catchment management to lessen the pressure on the ocean and its marine resources by reducing sedimentation loads, waste such as plastics and aluminium cans, nutrients from effluent discharge and so forth from contaminating the marine environment.
- Continue with implementation of Community Integrated Management Plans (CIM) plans. This would improve the sustainable management and development of oceans at the community level.
- Revising marine wildlife regulatory framework.
- Response plans developed to manage cetacean stranding incidents, coral bleaching and crown of thorns.
- Management plans developed for marine species including sharks and turtles and
- Develop national marine sanctuary framework and revise and update existing management plans.

[5] *Exchange Rate of 1USD to SAT2.65*

There are strong linkages between other sector activities and the environment sector such as the 2016-2020 Agriculture Sector Plan (ASP). Under the ASP Strategic Objectives 4, the relevant Strategies are:

- "Promote and support ecosystem and community-based approaches for sustainable management of coastal and inshore marine resources".
- "Ensure a well-functioning biosecurity service to ensure adequate levels of management and control of endemically occurring pests, diseases and spread of introduced exotic pests and diseases".

The ASP focuses and supports community-based approaches to the management of fishing habitat and promoting sustainable management practices in terms of marine resources.

The NESP outlines the financing for the various environment projects and program over the next 3 years. In addition, the NESP provides tentative means for measuring outputs and outcomes. These are detailed in the National Environment Indicator Reporting System (NEIRS).

There are strong linkages between the environment sector outcomes and programs undertaken by other sectors. The NESP provides the implementation layout as well as identifying the key actors involved. This is shown in detail in Appendix 2a "Key Actors in the Environment Sector"

The Ministry of Environment is responsible for 17 Policies/Standards supported by 24 Acts/Legislations shown in Appendix 3 "Environment Sector Legislations and Sector Policies"

In 2017, Samoa was one of the countries to agree to the Voluntary Commitments at the 2017 UN Ocean Conference. The specific targets Samoa has agreed to are:

- Target 14.1 Marine Pollution including plastic or litter in the marine environment; Waste Water; Agriculture inputs and pollution from shipping vessels.
- Target 14.2 Sustainable management of marine and coastal ecosystems includes, Integrated coastal management and marine spatial planning and community-based marine managed areas.
- Target 14.3 Ocean acidification such as reduction of CO2 emissions.
- Target 14.4 Sustainable fisheries includes Implementing the ecosystem approach to fisheries, eliminate or reduce harmful practices and fishing gear.
- Target 14.5 Conserving at least 10% of coastal and marine areas by promoting Marine Protected Areas (MPA); Marine Spatial Planning (MSP) and Integrated Coastal Management.
- Target 14.6 Prohibiting certain forms of fisheries subsidies and
- Target 14.7 Increasing economic benefits to Small Island Developing States (SIDS) and Least Developed Countries (LDC).

The full 2017 UN Voluntary Commitments for Samoa is shown in Appendix 4 "2017 UN Voluntary Commitments for Samoa"

Main Gaps - 2017 UN Voluntary Commitments for Samoa:

Target 14.1: The main data gaps is the actual measurement of plastics and other chemicals that is filtered into Samoa's oceans over time. The other gap is identifying the location of farms that uses pesticides in Samoa.

The MNRE has enacted the Ban on Plastic Bag which targets single-use plastics enacted in January 2019. This is part of Samoa's commitment towards enhancing the Blue Pacific and joining the global fight to restore oceans especially in the pacific region.

The Samoa Ports Authority (SPA) is responsible for disposing vessel waste both from the Marina and the International Wharf at Matautu. The legal framework is covered under the Marine Pollution Prevention Act 2008 and the Waste Management Act 2010.

In terms of chemicals, the Ministry of Agriculture (MAF) is responsible for supervising the handling and entry of Chemicals/Pesticides used for Agricultural purposes. The Pesticides Act and Regulations primary focus is the safe handling of chemicals. The issue arises in terms of the use of chemicals in farms besides rivers and streams subject to runoffs towards the oceans.

The Waste Treatment Plant operated by the Ministry of Work Transport and Infrastructure (MWTI) covers commercial businesses in the Apia Central Business District (CBD) and does not include other areas such as the Vaitele Industrial Zone and general road runoffs that flow into the ocean.

Target 14.2: Spatial Planning in Samoa. The main issue is data availability and technical skills to conduct such analysis. The MNRE plans to conduct the Apia City Spatial Plan and skills obtained from this exercise would complement the marine spatial planning exercise. Marine Spatial Planning is expected to improve Integrated coastal management in Samoa. Marine Protected Areas (MPA) have been established and MNRE works closely with communities in maintaining and developing new Marine Protected Areas. The Fisheries Division of MAF works with over 110 villages in coastal areas under the Community Based Fisheries Management Programme. Over 80 of these villages have declared no take zones (fish reserves) within their coastal marine areas for the protection of habitats, invertebrates and fishes.

Target 14.3: Ocean acidification is currently being measured by the Samoa Meteorology Division of MNRE. However, Samoa is yet to develop a comprehensive Blue Carbon Conservation plan that incorporates resilience efforts to compact ocean acidification.

Target 14.4: The MAF Fisheries Division works closely with coastal villages in managing their coastal fisheries resources. Enforcement and monitoring are the responsibility of village fisheries committees. However, MAF is also engaged in other strategies to ensure noncompliance to fisheries regulations are minimized. In terms of oceanic fisheries, there are tools that are currently used to control and monitor oceanic fishing activities. However, MAF Fisheries Division do not have sufficient resources to monitor and enforce compliance across the islands as to reduce by-catch, discards and under size fish.

Target 14.5: As mentioned above, Marine spatial planning and integrated coastal management remains a challenge.

Target 14.6: The main issue is an integrated approach to manage sustainable fisheries, tourism and environmental activities.

Target 14.7: As with 14.6 above, the main gap is the institutional integration of the various [6]Agency's activities within a transparent framework. This include Sustainable Fishing Industry, Tourism, Transport, Aquaculture and linking to investments in Renewable energy and climate resilience initiatives.

Regional/International Agencies: Samoa is a member of several key Regional and International Agencies as shown in Appendix 2b "International/Regional Organizations"

Samoa is a signatory to the Noumea convention for the Protection of Natural Resources and Environment of the South Pacific Region 1986 that has been supported by the Secretariat of the Pacific Regional Environment Programme (SPREP). The Convention is a major multilateral

[6] *MAF, MNRE, Samoa Tourism Authority (STA) and MWTI*

umbrella agreement in the Pacific Region for the Protection of Natural Resources and the Environment.

The convention represents the legal framework for the *"Action Plan for managing the Natural Resources and Environment of the South Pacific"* Environment.

In terms of oceans, the Noumea Convention is the Pacific region component of UNEP's Regional Seas Programme aimed to address the accelerating degradation of the world's oceans and coastal areas through the sustainable management and use of marine and coastal environments.

Samoa Membership Environment Related with Financial Obligation	Lead Agency
Asian Pacific Association of Forestry Institute	MNRE
Basel Convention	MNRE
Commonwealth Forestry Association (London)	MNRE
Convention for the International Trade of Endangered	MNRE
Convention on Biological Diversity	MNRE
Convention on Migratory Species	MNRE
Forum Fisheries Agency	MAF
Heritage	MNRE
International Seabed Authority	MFAT
International Tribunal for Law of the Sea	MFAT
International Union Conservation of Nature	MNRE
PPCR- Enhancement of the Climate Resilience for Coastal	MNRE
RAMSAR Convention	MNRE
Rotterdam Convention	MNRE/MAF
SPREP Work Programme	MNRE
Stockholm Convention	MNRE
UNFCCC	MNRE
United Nation Environment Programme (UNEP)	MNRE
United Nations Convention to Combat Desertification	MNRE
United Nations Laws of the Sea Convention	MNRE
Waigani Convention	MNRE
Western & Central Pacific Fisheries Conventions (Tuna	MAF
World Meteorological Organisation	MNRE
Source: Ministry of Finance	

As stated, Action Plans have been developed underpinned with a legal framework in the form of a Regional Convention and associated Protocols to tackle specific issues and challenges. These includes Dumping Protocol and Emergencies Protocol. Other key protocols yet to be enforced includes Oil Pollution Protocol.

Samoa is a member of the Commonwealth and is part of the Commonwealth Blue Charter. The Charter highlights the close linkages between ocean, climate change, and the wellbeing of the people of the Commonwealth. The 'Blue Economy' concept reflects the Green Economy on land. The Blue Economy encourages better stewardship of our ocean or 'blue' resources. The Commonwealth Blue Charter reaffirms the values of the Commonwealth, including equity and public participation in marine and coastal decision-making thereby supporting the achievement of SDG14.

Secretary-General Patricia Scotland: "The Blue Charter will help countries develop an integrated approach to the building of the blue economy, one which considers the value of often overlooked sectors such as artisanal fishing as well as the role of women and young people." These considerations are at the very heart of the SEEA framework.

The Rotterdam Convention formally, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade – 1998 is currently handled by both MAF and the Ministry of Natural Resources and Environment. Appendix 5 "Environment Membership with Financial Obligations; Government funded policies"

1.3.2 Oceans

Ocean Policy

Currently there is no definitive holistic mandate covering Samoa's Oceans. Different aspect of the Oceans is mandated under separate Acts either within MNRE or other Ministries/Agencies

Mandates. In terms of Oceans, MNRE is currently developing a National Ocean Strategy planned for completion in 2019.

The Ministry of Natural Resources & Environment is developing the Environment Management and Conservation (EMC) Bill to be completed by 2020. The EMC Bill includes: Monitoring of Coral Reefs; Mangroves and Marine Protected Areas (MPA). The Marine Wildlife Act and Regulations covers whales, sharks, dolphins and turtles administered by MNRE with support from Fisheries Division of the Ministry of Agriculture & Fisheries in terms of monitoring.

In terms of fishery resources, MAF deals mainly with International Conventions covering inshore catches, Marine Protected Areas and Community based fishery reserves. MAF also controls the fishing activity of fishing vessels in Samoas EEZ through licensing.

The Ministry of Works Transport & Infrastructure regulates fishing vessel standards. The respective agencies are well aware of their respective roles and functions. The NESP has identified each actor responsible for each Activity/Input and Output which also includes Oceans and Marine Resources.

Deep Sea Mining

The topic of seabed mining is becoming a pressing topic in the Pacific and Samoa was no exception.

<table>
<tr><th>According to LOSC</th><th>Continental Shelf</th><th>The Area</th></tr>
<tr><td>Where is it?</td><td>This extends a minimum of 200 nautical miles (nm) from the coastal States territory. That is from baseline used to measure the territirial sea. It some cases it may estend up to 350nm, depending on the coastal State's Geography and a process of lodging an extended continental shelf with the United Nations.</td><td>The area of seabed that remains outside any national jurisdiction. That is beyond all continental shelves of all coastal States.</td></tr>
<tr><td rowspan="2">Who Owns the Resources?</td><td>The coastal State has Exclusive Rights to expore and exploit the resources of its continental shelf. This means that it can: (1) Conduct Mining; (2) Authorise and Regulate a Third Party to mine and (3) Refuce Mining.</td><td rowspan="2">All Resources are designated the "common heritage of mankind" and any seabed mining activities are controlled by ISA and must be carried our</td></tr>
<tr><td>Note: Article 82 of LOSC requires some revenue sharing from the coastal State to the ISA (-International Seabed Authority created by the LOSC to control seabed mining activities) where exploitation of the continental shelf takes place beyond 200nm (this only applies where a coastal Satae has a continental shelf beyond 200nm and developing State may be exempt.</td></tr>
<tr><td>What Laws Applies?</td><td>Coastal Staters Law applies that is the National jurisdiction of each PIC as stated under the LOSC. International law applies to the extent that is applicable to the coastal State. This includes legal rights and duties of: LOSC; ISA Mining Codem Rio Declaration of the Environment and Development, Convention on Biodiversity and related IMO Conventions.</td><td>Governing International Law: UN Laws of the Sea Convention Part IX with any Rules, Regulations, Procedures that are developed and enforced by the International Seabed Authority.</td></tr>
<tr><td colspan="3">Source: Extract from current Legislations</td></tr>
</table>

"[7]This is because the exploration of the seabed beneath the Pacific Ocean is revealing or has revealed potential mine sites for valuable minerals that are in global demand particularly for new technologies".

In terms of legal framework, the 1982 United Nations Law of the Sea Convention (LOSC) granted Pacific Island Countries sovereignty or exclusive sovereign rights to extract (explore and exploit) resources from the seabed within their oceans.

Seabed mining could take place in areas that are within coastal State's jurisdiction (on or within the coastal State's continental shelf) or beyond areas of national jurisdiction – defined by LOSC as "the Area".

There are 3 different types of seabed mineral resources of potential commercial interest in the Pacific Ocean region namely: polymetallic nodules; seafloor sulphides and cobalt rich crusts.

Samoa does not have a Deep-Sea Mining Act. [8]Some Pacific Islands have already developed and enacted Deep-Sea Mining legislations.

The Environment Sector has various obligations under a number of Multi-lateral Environment Agreements (MEAs) and frameworks. Careful consideration has been made, through relevant implementing focal points, to ensure these commitments are reflected in the NESP's five-year strategic framework.

The new Environment Management and Conservation (EMC) Bill is expected to provide clarity on the roles and mandates of each IA/s within the sector. However, there is limited focus on oceans in the EMC Bill with greater emphasis on migratory species. The Marine Wildlife Act concentrates on protective species such as whales, sharks, dolphins, and turtles.

1.3.3 Current Ocean Related Indicators

The Environment Sector Coordination Division is responsible for coordinating environment related activities delivered by various environment Implementing Agencies. These activities include regional and international commitments, national broad policies and the Samoa National Environment Sector Plan strategies and activities. The monitoring of these desired Targets/Outcomes, Outputs and Activities are outlined in the National Environment Indicator Reporting System (NEIRS) developed in 2018. The NEIRS contains 465 Indicators and outlines the following:

- Type of Indicator. (Outcome; Output and Input)
- Related Documents. (SDG's, SDS, NESP etc.)
- Type of Environment Resource. (Water, Waste, Ocean, Land Resources etc.)
- Data Source in terms of Agency/Division monitoring these indicators.

In addition, Indicators includes the following details: Definition of each indicator; How indicators are calculated; Methodology, Coverage, Frequency for data collection, Unit of Measurement, Baseline Data and Targets.

The NEIRS is a centralized database for the Environment Sector and requires data collection from different Implementing Agency. Some areas need further modifications such as categorization

[7] *Seabed Mining in the Pacific Ocean: To mine or not to mine? Exploring the legal rights and implications for Pacific Island Countries by James Sloan October 2018.*

[8] *Cook Islands Seabed Minerals Act 2009; Tonga Seabed Minerals Act 2014; Tuvalu Seabed Minerals Act 2014; Cook Islands Seabed Minerals Exploration and Prospecting Regulations 2015; Kiribati Seabed Minerals Act 2017 and Federated States of Micronesia Seabed Resources Act 2018.*

between Outcome, Output and Input indicators. However, identifying indicators, data sources, responsible agency for data collection, setting of targets have been clearly identified.

The NEIRS enables planners, policy makers and IA's to readily access environment indicators and monitor and track their respective policies and activities.

NEIRS contains 43 Indicators that relate to Marine Resources and these are shown in Appendix 6 "Environment –Marine Indicators"

Of the Ocean related environments indicators, the most common issues raised by the staffs responsible for collecting and compiling these indicators were:

1. Data Collection issues in terms of resources both financial and technical capacity to collect and analyse data.
2. Need to modernize data collections such as using aerial maps and surveying equipment and
3. Specific data collection is done on an ad-hoc basis a combination of the issues raised above (1) and (2).

Most of the data collection for Ocean related indicators identified above are collected within the Ministry of Natural Resources and Environment. Other data such as fish catches are collected by Fisheries Division of the Ministry of Agriculture and Fishing. The Fisheries Forum Agency (FFA) and SPC estimates the stock levels of different species of fish in the region.

Specific data on inshore catches including other marine resources are collected on an ad-hoc basis mainly as part of scientific research.

There is no database specifically assigned to compile Ocean Statistics in Samoa. Scientific Studies and corresponding data are not required to be submitted to MNRE after the completion of Research Studies.

Main Gaps - Marine Indicators:

The main gaps relate to data availability and resource constraints to conduct required surveys. Specifically, these include the following:

- Species richness - Number of incidences in occurrences of species in sample population.
- Population Density and Distribution of Specific Species including threatened and vulnerable species and pervasive species such as Crown-of-thorn etc.
- Incidents, severity and recovery of Coral Bleaching.
- Mapping of key ocean ecosystem types and
- Data to conduct Research on migratory species of concern.

1.3.4 Related Work

The following activities in relation to oceans accounts that have been undertaken include:

- Two workshops have been conducted in 2018 on measuring: Ocean Health Index supported by the International Union for Conservation of Nature.
- Using the SEEA framework developed:
    - Samoa's Experimental Solid Waste Accounts,
    - Samoa's Water Accounts and
    - Energy Accounts albeit at the testing phase.

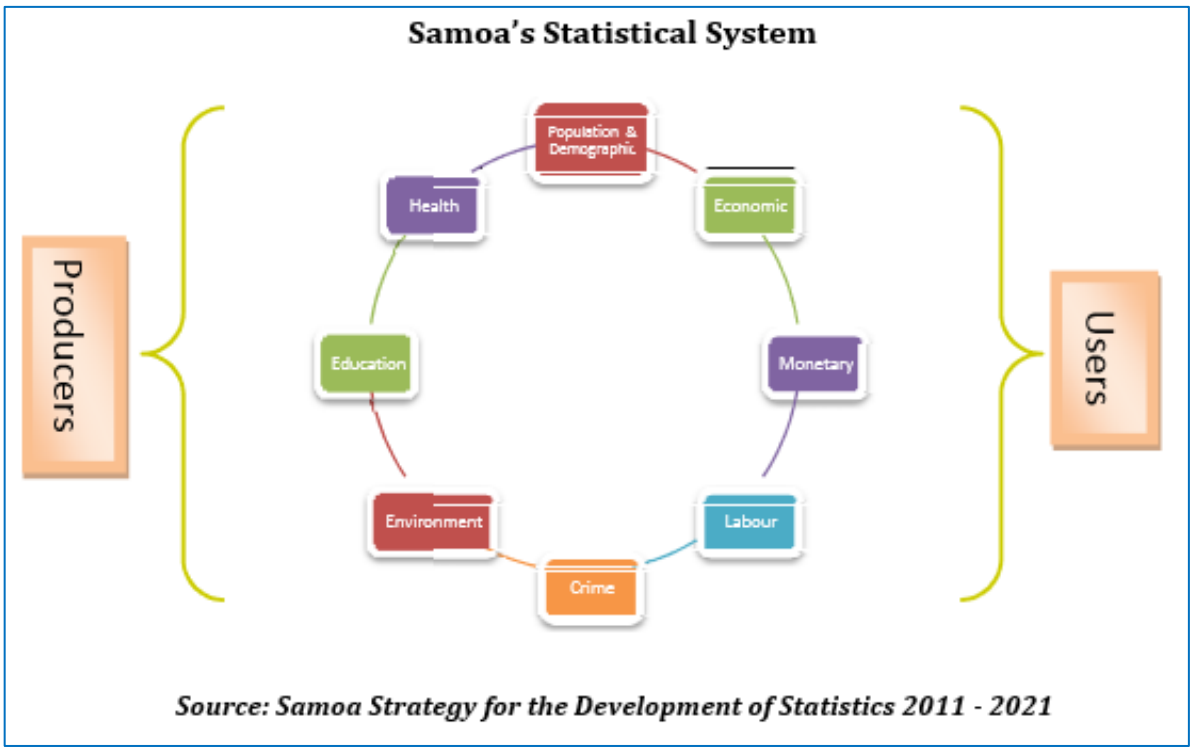
- Ocean Planning/Marine Spatial Planning (MSP) to build climate resilience by strengthening community engagement through MSP and Ecosystem-based Adaptation (EbA). This is a four (4) years Project developed by the International Union for Conservation of Nature's Oceania Regional Office (IUCN ORO) with funding support from the European Union.

1.4 Statistical Environment

1.4.1 Framework

The Samoa statistical framework is a decentralized statistical system. Over 60% of Key Indicators are collected through administrative records of respective agencies. The collection of these datasets (at the record level) is mandated under the respective Agency's Legislations. The 2015 Statistics Act provides the overarching mandate on the use and dissemination of Official Statistics for Samoa.

The 2011-2021 Samoa Strategy for the Development of Statistics outlines Samoa's Statistical System which shows the interaction between SBS and other sectors including the environment sector.



Source: Samoa Strategy for the Development of Statistics 2011 - 2021

The Samoa Bureau of Statistics have allocated staffs within their respective divisions and units to work on each sector's statistical needs and development.

1.4.2 System of Environment & Economic Accounting (SEEA)

The SEEA is an international statistical standard providing concepts, classifications and methods for linking biophysical and monetary measures of natural resource inputs to the economy, residuals from economic production and expenditures on environmental-related activities. The ecosystems component (SEEA-EEA) (United Nations, European Commission, Food and Agriculture Organization, OECD, & World Bank. (2014a) views ecosystems as integrated assets that provide services to people, including nonmonetary services. Full details on the SEEA is in Appendix 7 "SEEA Framework"

Selected SBS staff have been trained on the SEEA Framework. Furthermore, SBS staff have worked on the [9]Samoa's Experimental Solid Waste Accounts and [10]Samoa's Water Accounts with their respective counterparts from these sectors based on the SEEA framework.

The Partnership Pilot Studies provides another great opportunity for SBS staff and selected environment sector personnel to further their understanding on the System of Environment & Economic Accounting.

The SEEA framework is a powerful tool to assist Policy Makers in ensuring development plans, policies and projects integrate environmental assets, ongoing costs and benefits in their forecasting models. In addition, the SEEA framework enable these measurements to be carried out consistently over time to determine changes to the stock value for a specific environment asset.

1.4.3 Data Collection/Compilation

Key Macro Indicators such as Population, GDP, Government Finance Statistics (GFS), Consumer Price Index (CPI), Monetary Surveys and Balance of Payment Statistics are collected mainly by the Samoa Bureau of Statistics and the Central Bank of Samoa

Sector Indicators such as the Environment, Education, Health are collected by the lead government agency and compiled either by the Agency themselves or with assistance from the Samoa Bureau of Statistics. Other sectoral indicators are collected by SBS based on either Administrative records for the Sector Lead Agency OR through census and surveys conducted by the Bureau.

Specific Data Sets such as Scientific Data are collected by the respective agency such as MNRE Samoa Meteorology Division (SMD) and Scientific Studies done independently but with license issued by the Ministry of Foreign Affairs and Trade (MFAT). The National University of Samoa (NUS) also collects relevant data as part of research assignments and consultancy work undertaken by the Faculty of Science at the National University of Samoa. Other research datasets are collected by private consultancy firms as part of their respective assignments.

The MNRE Samoa Meteorology Division collects data on: Rainfall, Wind speed; Storm Surges from selected sites. Other data such as Ocean acidification, Ocean Currents and Ocean Tides are also collected by the Samoa Meteorology Division.

The MNRE monitors fresh water levels and salinity including data from water catchment areas.

The Fisheries Division of the Ministry of Agriculture and Fisheries collects data on Fish Catches by species, size and weight sampled from the main fisheries market in Apia.

Data Gaps - Fisheries

The main data gaps as shown above is Population Density and Distribution of Specific Species including threatened and vulnerable species. There are really good data available for the purpose of managing specific fisheries resources that are covered by MAF and obtained from research and assessment of fish reserves to catch, effort and catch rates data from markets surveys, port sampling and fishing vessel log sheets. These provides good indicator or proxy on the status of certain species. However, species not covered by MAF data are either collected on an ad-hoc basis OR not at all.

The MAF faces a challenge in terms of resources to effectively cover other fisheries outlets – data coverage.

[9] *External assistance provided by UNESCAP*

[10] *External assistance provided by UNESCAP and Australia Bureau of Statistics*

2. Current Situation

The Scoping Study revealed a multitude of issues that could be examined through a pilot study. This draft present 3 key areas:

1. Sustainable Development of the Tourism Industry with the initial pilot phase being the development of a Tourism Satellite Accounts.
2. Marine Spatial Planning, National Ocean Strategy development and monitoring.
3. Strengthening monitoring of national and sector development indicators.

Other key areas stated was the monitoring of the impact of the plastic ban in Samoa.

2.1 Link Marine Spatial Planning and National Ocean Strategy

The Ocean is a major source of income for Pacific Island Countries including Samoa. The livelihoods of communities in terms of food security, cultural and economic wellbeing are all inter-connected with the ocean. There is a worldwide concern that marine ecosystems are in decline, mostly due to human activities, but there is also recognition that it is possible to manage human activities to minimize these impacts.

2.1.1 Marine Spatial Planning

Over the last decade, the evolution of marine spatial planning (MSP) and ocean zoning has become a crucial step in making ecosystem-based, sea use management a reality. The idea was initially stimulated by international and national interest in developing marine protected areas, such as the Great Barrier Reef in Australia and other key marine ecosystems. Recent attention has been placed on managing the multiple use of marine space, especially in areas where potential competing interest among users are increasing as in the case of Samoa. For instance, over exploitation of marine resources in an unsustainable manner such as over-fishing, unsustainable fishing practices and using unsustainable fishing gear and equipment would have long term repercussions in terms of the fish stocks for Samoa.

Recent focus was on the need to conserve nature, especially ecologically and biologically sensitive areas, in the context of multi-use planning of ocean space.

The scope of MSP has not been clearly defined. Terms such as integrated management, marine spatial management, and ocean zoning are all used inconsistently. Thus, it is important that Samoa follows a clearly defined set of definitions with a common understanding amongst all planners both at the national and sectoral levels.

<u>IUCN Project on Marine Spatial Planning:</u>

The SPREP organization with assistance from the World Bank and International Union for Conservation of Nature (IUCN) is providing support to member States on marine spatial planning. An initial Workshop was conducted in Apia on the 13th March 2019 by the International Union for Conservation of Nature's Oceania Regional Office (IUCN ORO). The focus was on Marine Spatial Planning (MSP) and to identify practical ways for planning and organizing human use of marine areas and to strike a sustainable balance between resource demand and the need to maintain the health of the ecosystems on which those activities depend. The IUCN and the Government of Samoa have developed an implementation plan and supporting governance structure. that will see the partnership between government and CSO for MSP implementation. The work programme is scheduled for four years.

MSP involves an inter-sectoral and participatory public process of identifying and achieving economic, social and ecological objectives in a transparent and organized manner. The intended

result of MSP is to spatially organize human activities to ensure that they are ecologically, economically and socially sustainable. The Tourism Industry is one of the biggest foreign exchange earners in Samoa. Adopting MSP would greatly assist with eco-tourism initiatives such as the establishment of new diving and tourist activity sites. This is one of the initiatives currently being promoted by the Samoa Tourism Authority.

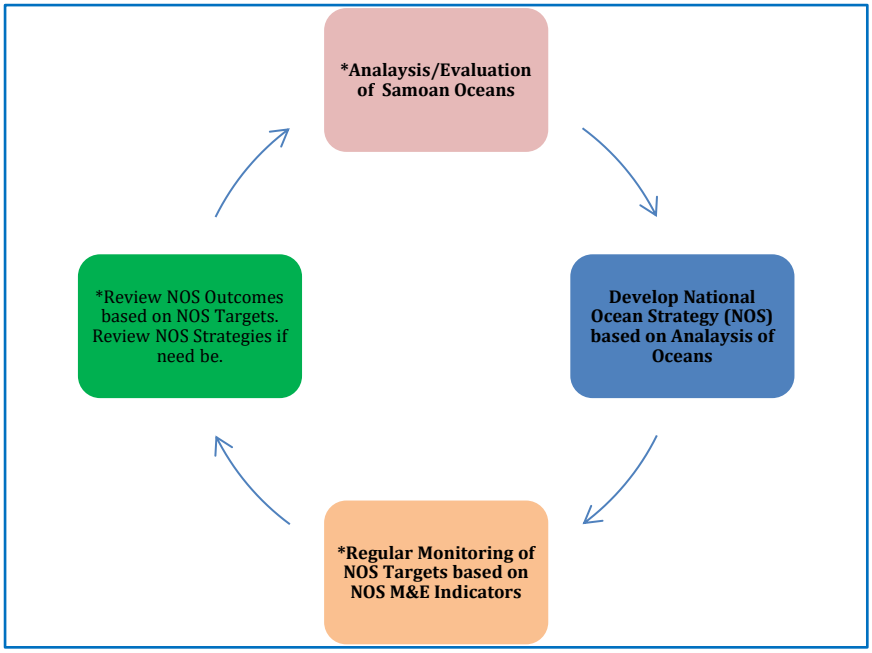
The IUCN project presents an ideal opportunity for closer coordination with this Oceans Account Pilot study. However, this requires closer coordination between ESCAP, IUCN and SPREP at the regional level as well as implementing agencies at the national level.

Marine Spatial Planning relies heavily on Spatial datasets. Conducting a national inventory of current dataset held within MNRE, MAF and SBS is a logical start to identify key data gaps in terms of developing a comprehensive MSP for Samoa. Furthermore, identifying regional datasets held by different agencies such as SPREP, SPC, FFA and other private sector consultancy firms and agencies would minimize data collection costs in re-establishing key benchmark data.

According to MNRE, they are currently using GIS maps and plans to develop MSP for all activities that are currently not mapped. Other key agencies also mentioned the need for spatial mapping of coral reefs and damages as a result of natural disasters such as Tsunami and how this impacts other industries such as tourism and fishing.

In terms of feasibility to deliver during pilot period, very initial work could be commenced and noting a medium-term time frame to complete a full MSP. Given IUCN's lead work in this area, stakeholders consider the pilot to best focus in another area of interest.

2.1.2 Benefits to the National Ocean Strategy



A simple process for developing the National Ocean Strategy (NOS) for Samoa is presented alongside. Marks in asterisk (*) are phases in which the Ocean Accounts for Samoa would assist with the National Ocean Strategy in terms of Evaluating and Analysis of Samoan Oceans; Monitoring of the NOS targets and Review of NOS Targets.

The Ocean accounts would present a total picture of the Oceans and its linkages to other areas such as fishing, tourism, water and waste management.

The development of Ocean Accounts for Samoa over the long term would highlight transactions between ocean and other sectors including efforts to increase the value of oceans (asset) in Samoa. This includes restoration of marine habitats against efforts to decrease the value of oceans in terms of extraction of marine resources.

Other key transaction that could be captured includes the possible location of tourism infrastructure such as hotels, beach fales and diving sites thus increasing the value of oceans in

terms of its contribution to the tourism industry and visa-versa in terms of impact the Tourism industry would have on the oceans.

The oceans accounts provide a valuable tool for a holistic and comprehensive view on the impact on oceans as a result of other activities such as:

- The impact of reclamation work on mangroves and how this impact on the oceans.
- Coral bleaching and crown of thorns damaging reefs.
- Plastics a concern, and sedimentation (erosion) that brings chemicals into the ocean.
- Monitoring of Illegal land dumping that ends up in rivers and ultimately into the oceans and illegal dumping directly into the oceans.
- Monitoring water levels and salinity.

National Ocean Strategy development is underway with MNRE in the lead and specific support through this pilot is not envisaged best use of limited resources.

2.1.3 Data Gaps

Relatively sound data on fishing and tourism in Samoa exists. Data gaps are mentioned elsewhere in the report. However, these could be addressed with selected surveys, studies and fully utilizing administrative records within the Implementing Agencies.

2.2 Strengthening monitoring of National and Sector development indicators

2.2.1 Background

Samoa has undertaken significant reforms which commenced in the late 90's culminating with renewed efforts to strengthening informed planning and decision-making processes.

In 2015, the GOS released a revised Sector Planning Manual and the Samoa Monitoring, Evaluation and Reporting Framework (SMERF) aimed at further improving the linkages between National, Sectoral and Agency level planning, monitoring and evaluation exercises. The aim was to strengthen the linkages between projects by developing Long Term Indicators and mapping these to individual Outcomes or Output for each programme consisting of more than 1 project.

This shift from projects focusing on Key Performance Indicators based on linear log frame to Outcome and Output based indicators that links multiple project enhances coordination between projects. Furthermore, these Outcomes, Outputs and Inputs are mapped to National Outcomes in the Strategy for the Development of Samoa.

The promotion of community-based programs such as Community Integrated Management (CIM) Plans when dealing with the environment and Private Public Sector Partnerships (PPP) has also been initiated to strengthen community ownership of environment centred initiatives.

2.2.2 Environment Sector Indicators

In the National Environment Indicator Reporting System (NEIRS), the NESP broad categories had the following number of indicators:

- LTO1 Natural Resources and Environment has 228 Indicators.
- LTO2 Built Environment has 115 Indicators.
- LTO3 Climate Change & Disaster Risk Management has 90 Indicators.
- Enabling Environment with 32 Indicators.

2.2.3 Applying the SEEA Framework on NESP Indicators

There is great potential in using datasets collected as part of the NESP monitoring to compile specific environment accounts such as oceans. The NESP states developing a consolidated Oceans

Management and Development framework that includes coastal management, marine conservation, fisheries and ocean health monitoring.

Using the SEEA framework to develop Oceans Accounts would provide planners with an additional insight to how the Oceans, Fisheries for instance is performing in terms of linkages and overall changes to the specific environment assets stock over time.

Example: NESP 3.1.5 – "*Sustainable management and development of oceans improved*"

States: *"A designated activity on oceans monitoring has been included to address the paucity of information and data. This is fundamental to establishing trends on the health and status of the oceans, which will over time reveal the impact of land-based interventions and marine conservation programs, impacts of climate change, ocean acidification and so forth. It is anticipated that as capacity improves the scope of the monitoring network will also increase. But for the moment, the priority is to strengthen existing monitoring efforts and gradually build up to a fully-fledged-well-resourced monitoring program over time".*

The development of the Samoa's experimental solid waste accounts should be built upon and the experience and momentum gained in this exercise lays the foundation to finalize the waste accounts, particularly concerning the waste that ends up in the ocean.

Developing an oceans accounts pilot for Samoa would provide hands-on experience for MNRE, MAF Fisheries and SBS staff with technical support under the Partnership Pilot Study.

2.3 Monitoring the Impact of the Plastic Ban in Samoa

2.3.1 Background

Plastic waste accumulating in the middle of the Pacific Ocean loosely referred to as the Great Pacific Garbage Patch (GPGP) has been a growing concern especially over the last decade. There has been growing awareness with the high levels of plastic in the Oceans with special focus in the Pacific Oceans nicknamed "The Great Pacific Garbage Patch".

It is estimated that around 16 billion pounds of plastic enters the ocean each year depending on your source. However, this is a growing environmental hazard affecting the world oceans and marine biodiversity. Some Government led clean-up efforts and private led initiatives such as "The Ocean plastic clean-up of Boyan Slat" an ocean plastic clean-up campaign and Take 3 Programs[11] to name a few are focusing in reviving the oceans by removing plastic bags. Other countries have implemented legislations to restrict or ban certain plastic products.

Samoa enacted the ban on single use plastic bags in early 2019 as part of its commitment to reducing plastics from entering the oceans.

2.3.2 Measuring the amount of plastic waste in Samoan waters

One of the issues identified during the Scoping Study was the need to measure the amount of plastic waste discharged into Samoan oceans. This requires measuring the amount of plastic materials that entered Samoan waters before 2019 as a baseline measurement and to monitor changes over time to note the ocean quality. Floating Plastic Debris Density as well as chemical composition are to be monitored to trace of any changes as a result in the ban on plastic bags.

2.3.3 Monitoring the Impact of Plastic Ban

The SEEA framework provides the most effective approach in measuring in a standardized approach the impact on Samoan oceans of solid waste accounts which factors in the recent 2019

[11] *Take 3 pieces of rubbish with you when you leave the beach, waterway or anywhere and you have made a difference.*

Samoa Plastic Bag Ban. In February 2019, MNRE and Samoa Stationery and Books (SSAB) and HP New Zealand company launched an E-waste collection campaign starting with HP tonners and ink cartridges and shipping these overseas for proper disposal and recycling. A study conducted in 2013 under the Pacwaste Project showed that the bulk of e-waste was generated by both government and commercial companies. The Waste Management Act 2010 covers E-waste.

The Solid waste accounts estimates waste generation, waste collection and waste that reaches landfill, and estimates waste which is generated but does not reach the landfill. In addition, waste is further split between solid waste and chemical waste.

2.4 Tourism Industry

2.4.1 Framework

Samoa Tourism Authority (STA) established in 1986 assists and regulates the tourism industry in Samoa in terms of policies and standards. The STA local partners within the industry are: Samoa Hotels Association; Savaii Samoa Tourism Association and Aleipata Tourism Alliance.

The STA also works closely with the South Pacific Tourism Organization (SPTO) and the United Nation World Tourism Organization (UNWTO) at the region and international levels.

The tourism industry has featured as one of the key sectors of the economy and is covered extensively in all 5 previous National Plans. This highlights the industry as one of the important strategic Industry for Samoa in terms of current income (foreign exchange) as well as future prospects for the country.

Tourism Development and Performance Improved was stated Under Priority Area 1 Key Outcome 4 of the (SDS) 2016 – 2020. The relevant Strategic Outcome to achieve this was "Quality tourist product development ……".

2.4.2 Economic and Social Value

The tourism industry provides new market opportunities for goods and services for other sectors in Samoa. It plays a vital role in terms of foreign exchange earnings.

Tourism Earnings is over 4 times that of merchandise export. It is estimated that tourism earning was around SAT $425.8 million in 2017 and SAT $493.8 million in 2018. As a percent of GDP, Tourism Earnings is within the range of 17% to 20% of total Gross Domestic Product.

Table 1: Selected Indicators

In thousands of Tala	**2013**	**2014**	**2015**	**2016**	**2017**
Tourism Earnings	319,213	342,715	363,847	384,099	425,836
Total Exports (Merchandise)	55,393	64,100	87,119	92,794	95,274
Fish Exports	8,176	5,402	26,095	37,873	30,357
GDP Estimate	1,859,306	1,921,730	1,982,303	2,108,588	2,165,336
Tourism Earnings %'age of GDP	17.1%	17.6%	17.7%	18.0%	19.3%
Fish Export as a %'age of Total Export	14.8%	8.4%	30.0%	40.8%	31.9%
Source: Central Bank of Samoa and Samoa Bureau of Statistics					

2.4.3 Datasets & Gaps

Arrivals: The number and different [12]type of arrivals based on purpose of travel are collected by SBS based on Immigration Arrival Cards as the traditional case. The arrival cards provide

[12] *Types such as Holiday*

datasets on: "Country of Citizenship", "Number of Arrivals" and "Purpose of Visit" tabulated on a monthly basis.

International Visitors Survey: This (IVS) is conducted by STA every 5 years and produces *"Length of stay", "Amount Spent"* and breakdown of *"[13]Main Expenditure Type"* whilst visiting Samoa.

Tourism Earnings: Tourism Earnings are compiled by the Central Bank of Samoa. This is based on estimates of arrivals captured from arrival cards collected by the Samoa Bureau of Statistics by Country and compiled by CBS using a [14]Tourism Price Index.

An estimate of average tourist spending (ATS) is based on the average number of days spent in Samoa multiplied by the average daily spending per tourist. The ATS is used to calculate the estimate for tourism earning by multiplying directly with the number of Arrivals.

Tourism Earnings = Number of Arrivals Average tourist spending per day (ATS)*

The ATS benchmark is obtained from the Visitor Expenditure Survey (VES). Between VES, the ATS amount is adjusted for inflation with the explicit assumption that tourist spending patterns are not altered with minor inflationary changes.

Employment: There are NO data available on the number of people directly employed in the tourism industry.

The Tourism industry is cross cutting and not featured as a specific industry in the [15]SNA and National Accounts estimates. The linkages between the Tourism industry and other Industries are thus not captured in the routine data collection and compilation undertaken by the Samoa Bureau of Statistics and Central Bank of Samoa.

2.5 Tourism Satellite Account

2.5.1 Background

There has been no formal Tourism Satellite Accounts (TSA) for Samoa in the last decade. However, TSA results when compiled and monitored over time provides a powerful planning and monitoring tool that would assist the Tourism and related industries.

Consultations with key stakeholders and senior government officials reaffirmed the importance of a Tourism Satellite Accounts. Furthermore, there was great interest in developing a Tourism Satellite Account (TSA) that would enable planners to track the linkages between the Tourism industry and other sectors of the economy.

2.5.2 Samoa Tourism Satellite Accounts

Consultations with key industry stakeholder revealed a multitude of issues that would be addressed via a Tourism Satellite Account. These are outlined below:

- Economic value of the Tourism Industry.
- Linkages between the Tourism Industry and Other Industries (transaction flows).
- Factoring in of Resource Requirements to ensure the sustainability of the tourism product.
- Incorporating sustainability into New Resource Attractions for the industry such as diving and snorkelling sites.
- Balance between resource allocation such as conservation against resource use.
- Valuation of Conservation initiatives towards marine resources with respect to the tourism industry.
- The Best practice within tourism industry to ensure the sustainability of the industry.

[13] *Includes Accommodation, Transport and so forth*
[14] *Differentiates between different countries expenditure patterns*
[15] *System of National Accounts*

- Monitoring of the Quality of Tourism sites.
- Monitoring of Protected areas including dive sites.

The TSA conducted over time would also track the value and the impact of marine conservation efforts in Samoa with respective to the tourism industry.

2.6 Fishing Industry

2.6.1 Framework

The Fisheries Division of the Ministry of Agriculture & Fisheries (MAF) is responsible for regulating and assisting the Fishing Industry. The Registration of Fishing vessels is mandated with the Ministry of Work Transport and Infrastructure (MWTI). Managing of fishing activities through monitoring control and surveillance is done by the MAF Fisheries Division.

At the regional level, the Pacific Islands Forum Fisheries Agency (FFA) provides advice to their local counterparts MAF in this instance in terms of Fisheries Management, Fisheries Development and Fisheries Operations. The decision in terms of implementation and how to manage these resources are left6 to the individual countries. Other technical support is provided by the Secretariat of the Pacific Community.

Advisory to the development and managing the domestic commercial fishing is also provided by the Commercial Fisheries Management Advisory Committee (CFMAC) comprising of government and key private personnel from the Industry.

2.6.2 Economic and Social Value

Fresh Fish (Offshore catches) is the largest export commodity accounting for over 50% of domestic exports. From 2008, Fish Volumes has fluctuated between 1,106 Metric Tonnes (MT) and 6.47 MT. The lowest volumes of fish exported during this period were in 2014 with 1.01 MT and 2011 with 1.5 MT. In terms of value, Fish exports from Samoa increased substantially starting from 2015 and has maintained at over SAT $30 million. The main species exported are Albacore, Yellow Fin and Big Eye tuna.

Exports (Toudsand of Tala)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
FRESH FISH Export	12,246	16,539	13,436	9,444	10,394	8,176	5,402	26,095	37,873	30,357	32,409
NONU JUICES	2,799	2,379	1,990	3,564	2,316	3,033	3,486	6,049	7,803	4,725	9,080
BEER	2,811	1,706	1,659	1,962	3,179	2,826	3,942	5,442	3,645	4,662	6,584
TARO	858	875	1,109	669	793	1,395	1,904	4,676	5,401	8,380	5,934
COCONUT	454	455	440	583	453	118	567	408	685	1,871	1,694
VIRGIN COCONUT OIL	133	193	148	130	295	469	265	156	337	909	1,062
NONU FRUIT (**)	113	215	227	216	283	6	3	87	106	37	966
CRUDE COCONUT OIL	104	1,989	3,549	6,979	8,022	1,701	3,137	1,995	1,055	844	850
COCONUT CREAM	2,069	1,401	991	5	179	26	498	354	497	452	425
KAVA	0	0	3	35	6	0	0	0	0	47	190
COPRA MEAL	52	329	468	441	717	201	690	2,318	748	135	49
COPRA	0	0	0	0	0	0	0	0	0	0	0
COCONUT	0	0	0	0	0	0	0	0	0	0	0
Other Domestic Exports	1,313	689	2,616	2,522	2,058	2,268	2,664	2,356	2,466	4,240	4,954
Total Domestic Exports	**22,951**	**26,770**	**26,637**	**26,551**	**28,696**	**20,221**	**22,558**	**49,936**	**60,616**	**56,658**	**64,199**
Percentage Fishing	***53.4%***	***61.8%***	***50.4%***	***35.6%***	***36.2%***	***40.4%***	***23.9%***	***52.3%***	***62.5%***	***53.6%***	***50.5%***
Source: Central Back of Samoa, Samoa Bureau of Statistics											

Source: Central Bank of Samoa and Samoa Bureau of Statistics

The inshore coastal fishery plays a vital role in the livelihood of villages with an estimated subsistence catch of 7,169 tons valued at SAT 45 million in 2000 (Passfield, 2001).

In June and July 2012, 100 villages were surveyed by MAF and SPC covering 881 households in both Upolu and Savaii. The socioeconomic questionnaires used for the survey was adopted from the Secretariat of the Pacific Community's "Socioeconomic fisheries surveys in Pacific Islands.

The survey revealed the following results, on average, people consume finfish at 2.7 days per week. Total finfish consumption for all surveyed communities was 226 t year-1. Furthermore, patterns of seafood quantities consumed vary substantially between communities, with inland communities generally consuming less than coastal communities. The frequency of consumption was higher in coastal villages with 53 kg person-1 year-1 compared to 30 kg person-1 year-1 for inland communities.

The total number of people formally employed in Fishing is low with formal wages at SAT $1.5 million in 2017. However, the average wages in Fishing was SAT$11,173 compared to SAT$9,296 for Agriculture in 2017.

2.6.3 Datasets & Gaps

Fisheries export data volume are captured by the Fisheries Division of the Ministry of Agriculture & Fisheries (MAF) and value extracted by the Central Bank of Samoa (CBS) based on export certificate data. The total volume and value of fish catches are collected by MAF and only covers catches sold at the Apia Fish Market. It excludes catches sold in Savaii as well as catches directly sold to restaurants, hotels and in rural areas. According to MAF, they estimate this amount to be around 20% of the total catch.

MAF Fisheries Division conducts the following:

- Regular market surveys on inshore fisheries and offshore fisheries landings data.
- Monitor fish reserves and habitats.
- Conduct Research on Artisanal pelagic fisheries, longline fisheries to assist in determining key offshore fisheries resources status. This includes estimates of the total stock based on fish catch per unit effort (CPUE).

Formal Employment data for Fishing are extracted by SBS through administrative records of the Samoa National Provident Fund. Thus, employment and wages in the Fishing industry is expected to be much higher when taking into account self-employed fishermen that do not register with SNPF and persons involved in semi and subsistence fishing activities.

Data Gaps

Fish catches outside the routine survey coverage is the main issue. It was estimated at 20% but a full coverage of other avenues such as: Direct delivery from fishermen to [16]specialized outlets and for own consumptions need to be ascertained.

2.7 Other Key Areas

2.7.1 Sediment build up in rivers – monitoring.

Sediment build up in rivers such as the Vaisigano River basin is an issue in Samoa. The sediments have had devastating flooding impacts especially during high tides where river levels are lower than sea-level; thus, the river retreats back inland causing floods in surrounding areas. This is notable in recent floods in the Apia Central Business District (CBD) and around previously swamp areas such as Fugalei and Taufusi.

A related Legislation to address this is the Soil Bill which covers from ridge-to-reef. The sediment build-up is linked to Land Use Accounts, Water and Waste accounts.

In October 2018, training was conducted in Samoa on Land Degradation Neutrality Target Setting Programme focusing on Target Setting Programmes (TSP) in Pacific Small Island Developing States (SIDS).

The training focused specifically on educating key IA's on Land Degradation Neutrality (LDN)-GIS related tools, namely the Collect Earth and Trends Earth Geographic Information Systems (GIS)

[16] *Such as hotels and restaurants*

tools to assist Pacific SIDs with analysis of land degradation trends in their countries. Samoa and Fiji have been implementing the Land Degradation Neutrality process.

3. Project Possibilities

There are 3 Possible Broad Project Possibilities that could be covered under the Partnership Pilot Studies.

1. Sustainable Development of the Tourism Industry (initial stage is the development of a Tourism Satellite Account).
2. Marine Spatial Planning, Ocean Accounts, National Ocean Strategy development and Monitoring.
3. Strengthening monitoring of national and sector development indicators.

The 3 projects are not mutually exclusive, they are interlinked.

The selection of 3 Possible Pilot Projects takes into account the multitude of issues and areas mentioned above and aggregates these into 3 broad pilot projects with common synergies and overall expectations.

3.1 Sustainable Development of the Tourism Industry (initial stage TSA).

3.1.1 Importance

The tourism industry has been identified as a strategic development industry for Samoa. Developing a tourism satellite account would provide planners with the means to effectively plan and develop the industry in a sustainable manner.

Tourism when properly managed, is one of the few industries that could balance economic and environmental conservation efforts with ease provided the impacts are correctly identified and measured.

Sustainable Tourism is inter-related to water resource management, energy usage, waste generation and impact and value of Samoa ecosystems.

3.1.2 Linking to Sustainable Resource Management

The tourism industry demands resources from other sectors such as Water, Land Use, Energy and Oceans.

Developing Input/output Tables for Tourism provides an important tool for managing the Tourism industry in Samoa and tracks resource requirements and impact between the tourism industry and other industries currently being measured in the System for National Accounts.

3.1.3 What is feasible as part of the Pilot Study

The follow up workshop in May 2019 showed:

- An experimental TSA is feasible for completion within the remaining 5 to 6 months of the project. Expected deliverables would include developing a TSA framework, testing with data albeit some would be estimates only and producing an analysis of the TSA results. TSA would extract data based on current SNA datasets and current industry classification to develop a framework, populate and test TSA. The TSA would be based expert consultation and case study which should obtain information on proportion of business due to tourism, energy, water (and possibly land) used and solid waste generated; recommendations and work plan to expand to full TSA.
- Test using TSA to estimate proportion of water, waste, and energy attributable to tourism industry; recommendations and work plan to improve estimates

Tourism Satellite Accounts have been compiled for other PIC such as Fiji and some key tables are showed in Appendix 8 "Fiji TSA" as an illustration.

3.1.4 Approach

Administrative records could provide a detailed list of Enterprises directly under the Tourism Industry. Revenue and Expenditure streams could be obtained from this group that could be used as a starting point in developing the Tourism Satellite Accounts for Samoa. Purchases from the agriculture sector, energy and water usage could all be obtained from administrative records. However, other datasets would require surveys to obtain approximate benchmarks such as Waste generated, value of the ocean in terms of direct and indirect income as well as establishing key coefficients for the Tourism Satellite Accounts.

Need to collaborate with UN World Tourism Organisation (which provides guidance on TSA methods and support and is working on a framework for measuring sustainable tourism), South Pacific Tourism (which has a project on industry sustainable practices), and potentially the Fiji Bureau of Statistics for South-South support.

3.2 Marine Spatial Planning, National Ocean Strategy development & Monitoring.

3.2.1 Importance of Marie Spatial Planning /National Ocean Strategy

Developing Marine Spatial Plans for Samoa would provide planners with an additional tool to effectively monitor and plan projects and programs that impact on the oceans either in a positive or negative way. In essence, this would greatly contribute to Samoa's efforts towards achieving SGD's14.

Furthermore, this aligns with the NESP aspirations stated under "Sustainable Management and Development of Oceans improved" namely:

"Improvements to the sustainable management and development of oceans will take on a much more integrated approach to coastal management, inshore and offshore fisheries management involving a diverse range of stakeholders both in government, private sector, NGOs and communities. Improvements to catchment management will lessen the pressure on the ocean and its marine resources by reducing sedimentation loads, waste (plastics and aluminium cans), nutrients (from effluent discharge) etc. from contaminating the marine environment. The implementation of CIM plans currently under review will significantly increase efforts to improve sustainable management and development of oceans at the community level".

Oceans is a very important resource for Samoa, the Pacific Region and Globally. According to the Commonwealth Secretariat

- The worldwide ocean economy was valued at around US$1.5 trillion per year.
- Eighty per-cent of global trade by volume is carried by sea.
- 350 million jobs world-wide are linked to fisheries.
- By 2025 it is estimated that 34% of crude oil production will come from offshore Oil fields.
- Aquaculture is the fastest growing food sector and provides about 50% of fish for human consumption.

Ocean accounts would enable planners to effectively monitor multitudes of interventions in an integrated approach as it tracks transactions between Ocean Accounts and other Industries.

3.2.2 Fishing Industry

As a result of the MSP coupled with greater data collection, improved estimates of marine stocks such as particular fish species could be obtained. Determining the exact contribution from the Ocean and focusing on the Fishing Industry is an ideal start since:

- Fishing is the largest export commodity in Samoa.
- Of a national interest to further improve the management of this resource (Fishing).

- ❖ The Fishing Industry raw data as collected by MAF are relative sound and these are relayed to both the Central Bank of Samoa and SBS for GDP calculation (National Accounts).
- ❖ The MAF Fisheries Division has an ongoing mechanism for data collection for coastal fisheries. Benchmark fisheries data are also available from social economic surveys. For pelagic fisheries data, these are also available.

  BUT benchmarks estimates would still require a comprehensive data collection to include all outlets.
- ❖ There are employment estimates available for the industry albeit formal employment only.

3.2.3 Impact on the Oceans

Monitoring the impact on plastic bags ban in Samoan Oceans would provide valuable data for national planners as well as within the region in terms of the effectiveness of the ban and its impact on the oceans. Recently, clothing materials have also been raised as another major source of plastic debris in the oceans. The MSP would also tap/link to the Waste Accounts.

3.2.4 What is feasible as part of the Pilot Study

This undertaking by nature requires large scale input. The IUCN has engaged in developing Marine Spatial planning and it is feasible for this project work closely with the IUCN and other development partners interested in this area.

3.2.5 Recommended Approach

At the outset it is important that this exercise is well coordinated with other regional/international initiatives as to maximize resources, minimize burden on IA's and to share experiences learnt.

The MNRE is committed to developing a National Ocean Policy for Samoa and the MSP exercise should complement this initiative and form the backdrop for the development of marine related strategies and policies.

Key datasets include: Fish Stock estimates by species, Removed and addition to fish stocks, Other key marine species and transaction between Oceans and other industries/sectors. The Report notes these are enormous undertaking requiring addition resources in terms of research and data collection. Similarly, other key datasets in terms of waste, environment protection and enhancement initiatives should also be identified and costed if anything else, drawn directly from the respective agencies budget estimates for related Outputs.

The TA could assist in terms of standardizing classification and compilation of key indicators that relate to national concerns for Samoa.

3.3 Strengthening the Monitoring of National and Sector development Indicators.

3.3.1 Importance

Assistance with the NESP M&E indicators would yield important primary data that would form the basis for monitoring transactions in and out of the Oceans Account. In addition, such efforts would also address the immediate needs identified in the NESP to start with strengthening existing monitoring efforts and to gradually build a full monitoring program over time.

NESP: *"A designated activity on oceans monitoring has been included to address the paucity of information and data. This is fundamental to establishing trends on the health and status of the oceans, which will over time reveal the impact of land-based interventions and marine conservation programs and not to mention, the impacts of climate change, ocean acidification and so forth. It is anticipated that as capacity improves the scope of the monitoring network will also increase. <u>But</u>*

for the moment, the priority is to strengthen existing monitoring efforts and gradually build up to a fully-fledged well-resourced monitoring program over time".

3.3.2 Linking to NEIRS

Identifying key routine surveys complemented in fully utilizing current administrative records would greatly assist in populating the NEIRS indicators. When consulted, the main challenges identified were:

- Data collection from respective environment sector Implementing Agencies (IA's).
- Collection of specialized datasets that requires particular skills-set as well as equipment such as scientific data.
- Data Cleaning and compilation of administrative records by the Implementing Agencies.
- Capacity Building within MNRE to effectively manage their datasets.

Finally, organizing collected datasets in a structured approach such as the SEEA framework would add further value to the information being collected and enable key policies to be tracked in terms of the overall impact on different environment related accounts such as Oceans, Waste, Water and Energy.

3.3.3 What is feasible as part of the Pilot Study

The pilot exercise could address a few key indicators based on what key environment stakeholders consider as important and in relation to issues such as monitoring plastic bags. In addition, the project could provide TA assistance in terms of standardizing the classification for compiling NEIR indicators.

3.3.4 Recommended Approach

Using the datasets in the NEIRS, revisit all IA's to identify key data gaps and use this as a basis for developing a road map to collect and construct these missing indicators. Also explore the avenue to use proxy estimates for other missing indicators that are expensive to collect and compile. Need to liaise with Conservation International, SPREP, and IUCN on related work to inform indicator development. MAF is currently using proxies such as fish length, frequencies and catch rates for selected species as proxy indicators for fish stock.

4. Way forward and conclusion

Three options for pilot study have been identified in this scoping report. Focusing on sustainable development of the tourism industry appears the most favored option by the national stakeholders consulted. In particular, developing an experimental tourism satellite account and testing estimates regarding tourism sector resource issues (such as water, energy use and waste generation), appears feasible within the 5-month timeframe (till October 2019) for the pilot study.

Technical support to develop the TSA will be provided through an agreement between the relevant implementation agencies and ESCAP. A local consultant will be appointed in consultation with key counterpart agencies, to lend support to collect relevant data, and collate, compile, and analyze the findings of the TSA. Capacity building in the process of developing the pilot study could be identified and delivered, as feasible.

In terms of overall coordination and national counterparts for the pilot, stakeholders suggested using existing coordination mechanism facilitated by Samoa Tourism Authority (STA) and the Samoa Bureau of Statistics (SBS) as the main counterparts. It appears both the STA and the SBS have joint interest, in principle, and coordinated effort is needed to ensure that SBS housed

official statistics (on national accounts) and information (survey based and administrative) are utilized to develop the TSA and its SEEA applications. In practice, SBS could take a lead role noting the existing work on SEEA and GDP compilation which will be the primary source of information to develop the TSA.

Need to collaborate with UN World Tourism Organisation (which provides guidance on TSA methods and support and is working on a framework for measuring sustainable tourism), South Pacific Tourism (which has a project on industry sustainable practices), and potentially the Fiji Bureau of Statistics for South-South support.

Results of the pilot study on the TSA and its applications to water and energy resource (possibly land) use and waste generation could be validated through a stakeholder discussion in October 2019. A part of ESCAP's work to develop ocean statistics, an expert group meeting with other Asia-Pacific countries will be convened in November 2019, to discuss next steps and specific resourcing needs.

Appendixes

Appendix 1 Economic Environment

Economic

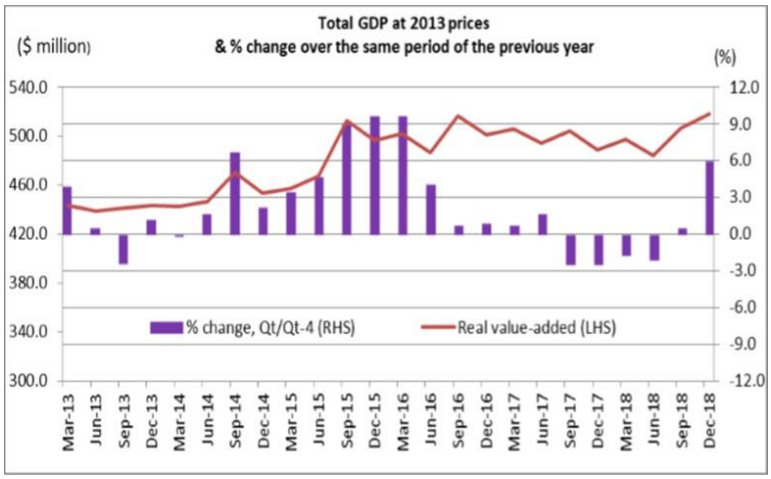
Samoa is a Small Island Developing State (SIDS) situated in the middle (-13.69, -171.85) of the Pacific Ocean. Its land area is 2,820 km^2 and an EEZ of 98,500 km^2 the smallest in the Pacific.

Gross Domestic Product in 2018 was SAT $2.156 billion equivalent to SAT $10,906 per capita or [17]$4,115 USD dollars.

Real Income has been increasing over the last decade as a result of higher real growth rate averaging 1.4% compared to a population increase of less than 1 percent. In the last 5 years, nominal GDP has increased at an average rate of 4.1% compared to a population growth rate of 0.8 percent.

	2011	2012	2013	2014	2015	2016	2017	2018
Total Value Added at Market Prices (SAT $ Million)	1,763.8	1,731.6	1,765.4	1,820.6	2,015.1	2,107.5	2,106.2	2,156.4
Total Value Added at Constant 2013 Prices (SAT $ Million)	1,826.4	1,752.1	1,765.5	1,811.9	1,934.0	2,005.2	1,992.3	2,005.4
Population Estimates	187,820	189,236	190,652	192,067	193,483	195,979	196,315	197,731
GDP Per Capita (SAT)	9,391	9,151	9,260	9,479	10,415	10,753	10,729	10,906
Annual Growth Rate								
Nominal GDP Annual Growth Rate	*2.6%*	*-1.8%*	*2.0%*	*3.1%*	*10.7%*	*4.6%*	*-0.1%*	*2.4%*
Real GDP Growth Rate	*0.3%*	*-4.1%*	*0.8%*	*2.6%*	*6.7%*	*3.7%*	*-0.6%*	*0.7%*
Population Growth Estimate	*0.8%*	*0.8%*	*0.7%*	*0.7%*	*0.7%*	*1.3%*	*0.2%*	*0.7%*
GDP Per Capita (SAT)	*1.8%*	*-2.6%*	*1.2%*	*2.4%*	*9.9%*	*3.3%*	*-0.2%*	*1.7%*
Notes								
1. Samoa Bureau of STatistics Rebased National Estimates from 2009 Prices to 2013 in Aporil 2019								
2. Population Estimates provided by SBS is based on annual growth rate of 0.8 percent from census 2011 except for the population figure for the year 2016								

In constant 2013 prices, GDP in 2018 was SAT $2.005 billion an increase of 0.7% from SAT $1.992 billion in 2017.



The latest [18]national accounts estimates for December 2018 quarter shows [19]real GDP growing at 6.0% compared to the corresponding quarter of the previous year. This follows an increase of 0.5% in the September 2018 quarter.

GDP By Industry:

Contribution to Real GDP Growth:

[17] *Exchange Rate of 1USD to SAT2.65*
[18] *Produced by Samoa Bureau of Statistics (SBS)*
[19] *Constant 2013 Prices*

At the Industry level, the main drivers for the economy has been "Commerce" particularly Wholesaling and Retailing. The highest contributors to real growth in 2018 were "Commerce" with 2.4 percentage points followed by "Construction" and "Financial Services" with 0.7 percentage points each.

Contribution to 2018 Real GDP Annual Growth Rate	%'age Points
Commerce	2.4
Construction	0.7
Financial Services	0.7
Business Services	0.3
Public Administration	0.1
Ownership of Dwellings	0.1
Accommodation & Restaurants	0.0
Food & Beverages Manufacturing	0.0
Electricity and Water	-0.1
Personal & Other Services	-0.2
Communication	-0.2
Transport	-0.3
Fishing	-0.5
Agriculture	-0.8
Other Manufacturing	-1.4
Real Annual Growth Rate	0.7

In 2018, the most significant drag on the economy was "Other Manufacturing" with -1.4 percentage points contribution to real GDP growth followed by "Agriculture" with -0.8 percentage point. The decline in Other Manufacturing for 2018 follows the -0.9 percentage points registered in 2017 following the closure of [20]Yazaki Samoa.

Share of GDP:

In terms of Industry shares for 2018, "Commerce" remains by far the largest Industry with a share of 35.2% of total GDP; followed by "Financial Services" with 8.9%; "Public Administration" with 8.2%; 7.2% from "Agriculture"; 7.1% from "Communication" and 6.2% of total GDP from the "Construction" Industry.

In terms of Industries related to Oceans, "Fishing", "Accommodation & Restaurants" had 2.2% and 2.1% share of Gross Domestic Product respectively. The contribution from Aquaculture is almost negligible. There are other industries that draws on the Oceans indirectly such as "Transport", "Construction" and "Food & Beverage Manufacturing" to name a few.

Trade: Samoa's merchandise trade balance deficit remains over 30% of Gross Domestic Product. Since 2013, Exports increased from SAT $55.4 million in 2013 to SAT $109.9 million in 2018 and Imports increased from SAT $752.7 million to SAT $861.5 million over the same period.

Indicators	2013	2014	2015	2016	2017	2018
Exports (fob)	55,393	64,100	87,119	92,794	95,274	109,912
Imports (fob)	752,717	795,659	763,213	801,469	819,461	861,521
Trade Balance	(697,325)	(731,559)	(676,094)	(708,675)	(724,186)	(751,609)
GDP	**1,765.4**	**1,820.6**	**2,015.1**	**2,107.5**	**2,106.2**	**2,156.4**
Trade Balance %'age of GDP	-39.5%	-40.2%	-33.6%	-33.6%	-34.4%	-34.9%
Source: Samoa Bureau of Statistics, Central Bank of Samoa						

The Trade deficit since 2013 has increased from SAT $697.3 million (39.5% of GDP) in 2013 to SAT $751.6 million (34.9% of GDP) in 2018.

In relation to Oceans, the highest export commodity in 2018 was Fish which account for 29.5% of total exports. In 2013, Fish Exports was SAT $8.2 million and has increased sharply to SAT $26.1 million in 2015, SAT $37.9 million in 2016, SAT $30.4 million in 2017 and SAT $32.4 million in 2018.

The rapid increase in fish produce mirrors what happened in the mid 1990's when the fishing industry first took off in Samoa before declining sharply a decade later as a result of over fishing. The recent increase in fishing activities is attributed to offshore fishing licenses. Incorporating the SEEA framework in relation to Oceans and the Fisheries Industry would greatly improve the management of the fishery resources.

Foreign Reserves has been maintained at over 6 months of goods import cover.

[20] *Automotive Wire harnessing Company*

Private Remittances: Private Remittance has traditionally and still is one of the main sources of income for Samoa. In 2018, Remittance registered SAT $525.7 million (24.4% of GDP) an increase of 23.5% from 2017. In the last 6 years, Private Remittance declined in 2014 and again in 2016 BUT, the average annual growth rate for Private Remittance was 4.9% during this same period. Private remittance is one of the main financiers for Samoa's Trade Balance deficit.

In thousands of Tala	2013	2014	2015	2016	2017	2018
Remittances	423,095.9	393,681.9	408,335.4	397,055.6	425,670.3	525,679.5
Remittances %'age of GDP	*24.0%*	*21.6%*	*20.3%*	*18.8%*	*20.2%*	*24.4%*
Source: Central Bank of Samoa and Samoa Bureau of Statistics						

In 2018, the bulk of the remittance 68.9% was towards Individuals/Families and Households. The main country of Origin for remittance in 2018 was New Zealand accounting for 40.7% of total remittance followed by Australia with 32.1% and USA with 18.4% of total remittances.

Employment: Employment statistics has been relatively weak compared to other key indicators in Samoa. Employment Statistics as produced by SBS is restricted to formal employment defined as those employed and [21]contribute to the Samoa National Provident Fund. The trend analysis produced in the [22]Samoa Employment Situational Analysis (SESA) using the same raw data as collected by the Samoa Bureau of Statistics shows "Agriculture and Fishing" declining between 1995 and 2014 from a Five-Year average of 9.7% of Total Employment in 1995-1999 to 1.1% in 2010-2014. "Accommodation and Restaurants" have increased slightly from 5.6% of total employment to 7.4% during this same period. These industries are interlinked with the Ocean economy.

Percentage of Total Persons Employed by Industry - 5 Yearly Average	***1995 to 1999***	***2000 to 2004***	***2005 to 2009***	***2010 to 2014***
Agriculture and Fishing	*9.7*	*2.3*	*1.6*	*1.1*
Food Manufacturing	*3.2*	*3.5*	*2.4*	*2.1*
Other Manufacturing	*14.5*	*12.8*	*10.4*	*6.1*
Electricity and Water	*3.3*	*3.0*	*3.2*	*3.8*
Construction	*2.4*	*4.4*	*4.1*	*3.6*
Commerce	*8.4*	*11.0*	*11.6*	*12.2*
Accommodation/Restaurants	*5.6*	*6.3*	*5.9*	*7.4*
Transport/Communication	*7.4*	*9.6*	*8.4*	*7.9*
Finance and Business Services	*5.3*	*6.1*	*6.5*	*6.9*
Public Administration	*23.4*	*25.7*	*23.7*	*25.5*
Education	*2.6*	*2.7*	*2.3*	*2.4*
Personal Services	*0.8*	*1.0*	*1.3*	*2.1*
Other Services	*13.2*	*11.6*	*18.7*	*18.9*
Total	*100.0*	*100.0*	*100.0*	*100.0*
Source: National Provident Fund Administrative Records				

Recent Employment Statistics produced by SBS has split Agriculture, Fishing, Accommodation and Restaurants. This shows the Five-Year average percentage of total employment between 2014-2018 for "Agriculture" to be 0.8%, 0.3% for Fishing, Accommodation at 5.9% and Restaurants at 1.8 percent. In other words, "Agriculture and Fishing" combined was averaged 1.1% no change from 2010 to 2014 whilst "Accommodation and Restaurants" increased further from 7.4% to 7.7% of total employment.

Total employment in 2018 has increased from 23,705 persons employed in 2013 to 24,345 in 2018.

[21] *Excludes voluntary SNPF contributors*

[22] *September 2015 SESA - ILO & WizConsult*

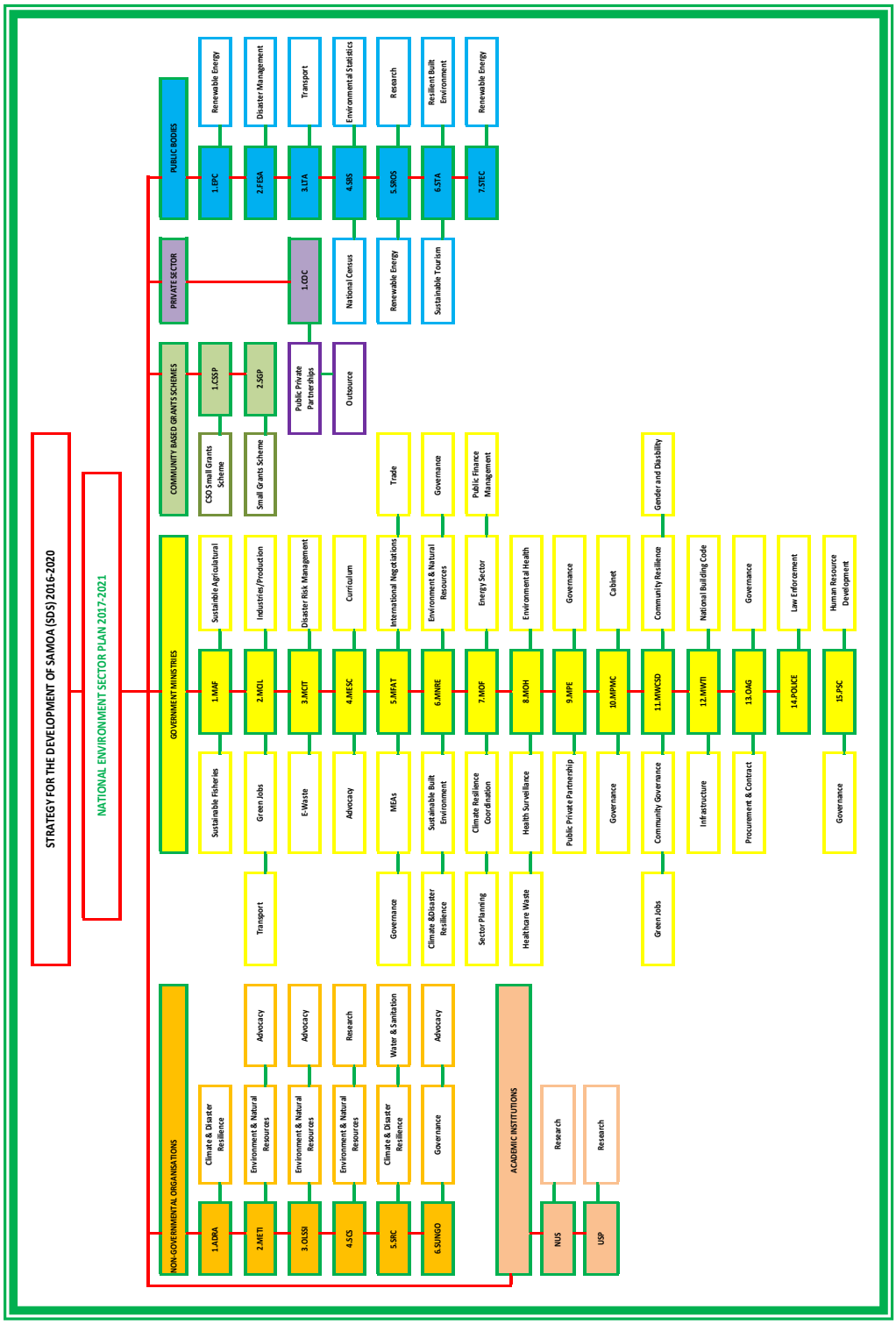
Year 2017 (Calander Year)	Total Males & Females	Agriculture	Fishing	Food manufacturing	Other manufacturing	Electricity	Water	Construction	Commerce	Accommodation	Restaurants	Transport	Communication	Finance services	Other business Services	Public administration	Education	Health	Personal services	Other services
Employment By Gender																				
Total Employment	**24,188**	164	69	490	1,130	322	289	972	3,543	1,541	397	1,831	388	1,102	704	5,554	487	1,052	1,325	2,830
Male	**13,795**	123	51	344	605	269	220	882	2,249	831	217	1,293	228	451	440	2,677	155	442	783	1,533
Female	**10,393**	40	18	146	525	53	69	91	1,293	710	180	538	160	651	264	2,876	332	610	542	1,297
Share of Total Employment	**100.0%**	**0.7%**	**0.3%**	**2.0%**	**4.7%**	**1.3%**	**1.2%**	**4.0%**	**14.6%**	**6.4%**	**1.6%**	**7.6%**	**1.6%**	**4.6%**	**2.9%**	**23.0%**	**2.0%**	**4.3%**	**5.5%**	**11.7%**
Total Wages classified by industry, Dec 2012 - Dec 2017 (SAT millions)																				
Total Wages (SAT millions)	**536.2**	1.5	0.8	9.0	17.3	9.4	7.5	16.5	53.7	18.0	4.1	34.9	16.7	39.7	12.0	157.8	6.2	39.2	29.1	62.7
Male	**294.2**	1.2	0.5	5.8	10.3	7.5	5.5	14.9	34.4	10.1	2.5	24.6	11.5	16.5	7.2	73.2	2.5	16.1	16.7	33.3
Female	**242.0**	0.3	0.3	3.2	7.0	1.9	2.0	1.6	19.3	7.9	1.7	10.2	5.2	23.2	4.8	84.6	3.7	23.2	12.3	29.5
Share of Total Wages	**100.0%**	**0.3%**	**0.1%**	**1.7%**	**3.2%**	**1.8%**	**1.4%**	**3.1%**	**10.0%**	**3.4%**	**0.8%**	**6.5%**	**3.1%**	**7.4%**	**2.2%**	**29.4%**	**1.2%**	**7.3%**	**5.4%**	**11.7%**
Source: Samoa Bureau of Statistics																				

Public Administration and Commerce are the main industries in terms of employment and share of total wages paid.

In terms of Ocean related Industries, Fishing, Agriculture, Accommodation and Restaurants accounts for 9.0% of total employment and 4.6% of total formal wages paid in 2017.

Inflation: There has been no substantial fluctuations in inflation in the last 2 years. Inflation has been maintained below the SDS target of 4 percent. In February 2019, inflation increased by 0.7% compared to January 2019 but no change compared to February 2018. This is also reflective of the ease in monetary policy as adopted by the Central Bank of Samoa.

Appendix 2a Key Actors in the Environment Sector



Source: 2017-2021 National Environment Sector Policy

Appendix 2b International/Regional Organizations

- European Union,
- United Nations Development Programme,
- United Nations Environment Programme,
- Food and Agriculture Organisation,
- Global Environment Facility,
- The Peoples Republic of China,
- Government of Japan,
- Japan International Cooperation Agency,
- Asian Development Bank,
- World Bank,
- German Development Agency,
- United States Aid,
- Adaptation Fund,
- Green Climate Fund,
- Conservation International,
- The Australian Department of Foreign Affairs and Trade,
- New Zealand Government,
- Secretariat to the Pacific Community,
- International Union for the Conservation of Nature, and the,
- Secretariat of the Pacific Regional Environment Programme to name a few.

Source: 2017-2021 National Environment Sector Policy

Appendix 3 Environment Sector Legislations and Sector Policies

Sector Legislative Frameworks	Sector Policies
The Stevenson Memorial Reserve and Mount Vaea Scenic Reserve Ordinance 1958.	National Bio-Safety Policy 2004
Constitution of the Independent State of Samoa1960	National Heritage Policy 2004
The Survey Ordinance 1961	National Policy on the Conservation of Biological Diversity 2007
Noxious Weeds Ordinance 1961	National Policy on Forestry for Sustainable Development 2007
The Taking of Land Act 1964	Parking Policy and Standards 2006
The Alienation of Customary Land Act 1965	National Signage Policy 2006
The Land Titles Investigation Act 1966	National Noise Policy 2006
Forest Act 1967	National Policy on Combating Climate Change 2007
Exclusive Economic Zone Act 1977	National Policy for Licensing Surveyors 1999
Plants Act 1984	Reclamation Policy 2000
The Lands, Surveys and Environment Act 1989	Land Valuation Licensing Policy 2000
The Land for Foreign Purposes Act 1992/1993	Land Surveying Licensing 2000
Maritime Act 1999	National Water Resource Policy 2010
Public Finance Management Act 2002	National Bio-prospecting Policy 2001
Planning & Urban Management Act 2004	National Land use Policy 2001
Public Service Act 1977 & Amended Act 2004	National Population and Sustainable Development Policy 2001
Disaster & Emergency Management Act 2007	National Waste Management Policy 2001
Land Titles Registration Act 2008	***Source: 2017-2021 National Environment Sector Plan***
Water Resources Management Act 2008	
Unit Titles Act 2010	
Waste Management Act 2010	
Spatial Information Agency Act 2010	
Forest Management Act 2011	
Customary Land Advisory Commission Act 2013	

Appendix 4 Environment –UN Voluntary Commitments 5-9 June 2017

Target 14.1 Marine Pollution

- Address Plastics or litter in the marine environment
- nutrient management through treatment of wastewater and addressing agricultural inputs such as fertilizers and manure through improved management actions; as well as addressing pollution from shipping.

Target 14.2 Sustainable management of marine and coastal ecosystems

- Integrated coastal management and marine spatial planning.
- Large Marine Ecosystem (LME) approach, community-based marine managed areas
- Climate adaptation measures such as ecosystem-based adaptation and blue carbon

Target 14.3 Ocean acidification

- Reductions in CO2 emissions through energy efficiency or use of renewables, building resilience against impacts of ocean acidification
- Adaptation to more acidic ocean conditions, activities related to coastal carbon sinks, including in particular blue carbon conservation, and activities related to mitigation and carbon sequestration.

Target 14.4 Sustainable fisheries

- Implementing the ecosystem approach to fisheries,
- Eliminate or reduce harmful practices and gear
- Improve compliance, monitoring and enforcement,
- Create science-based fisheries management plans,
- Reduce by-catch and discards, and
- Provide eco-labelling, traceability and market-based instruments.
- Combat IUU fishing, improve cooperation and available scientific information and expand marine protection to habitats.

Target 14.5 Conserving at least 10% of coastal and marine areas

- Different types of marine protected areas (MPAs) and marine managed areas, including community-managed marine areas
- Marine spatial planning and integrated coastal management. In the context of this target, Increase MPA coverage and improve management, capacity and funding for MPAs.

Target 14.6 Prohibiting certain forms of fisheries subsidies

- Removal and reduction of harmful subsidies, either directly or through related activities as well as research and information sharing relating to subsidies. (Not related to Samoa)

Target 14.7 Increasing economic benefits SIDS and LDCs

- Sustainable fisheries, tourism, aquaculture and mariculture
- Renewable energy, transport and marine biotechnology.

Target 14.a Increasing scientific knowledge, capacity and technology transfer.

- Developing capacity for research, training and professional development
- Data access and sharing and the transfer of marine technologies.

Target 14.b Access for small-scale artisanal fishers to marine resources and markets

- Community empowerment in management of marine resources,
- Improving access to coastal fishing grounds,
- Improving human and institutional capacity and transfer of fishing technologies.
- Access to markets generally included actions such as improving traceability, certification and ecolabelling as well as access to market-based instruments, and
- Capacity building for fishing communities relating to these actions.

Target 14.c Implementing international law - UNCLOS

- Raising awareness about UNCLOS and related agreements for comprehensive ocean governance,
- Strengthening ocean governance - Development of national and regional ocean policies, Effective implementation of UNCLOS and related agreements,
- Development of required infrastructure and/or enforcement provisions to comply with UNCLOS and other instruments.

Timeframes: Target dates include 2020, 2025 and 2030, the timeframes for voluntary commitments vary from prior to 2017 to 2030 and beyond.

Appendix 5 Environment Memberships with Financial Obligations; Government Funded Policies

Samoa Environment Membership with Financial Obligation	Current Government Environment Policies funded by Government
World Meteorological Organisation	Waste Management Service Contracts
International Union Conservation of Nature	Land Compensation
SPREP Work Programme	Land Registration / Leasing Commission
UNFCCC	Sludge Maintenance Contract (Upolu & Savaii)
Commonwealth Forestry Association (London)	Water Sector Research Initiative and Impact Assessments
Asian Pacific Association of Forestry Institute	Global Climate Change Alliances
Convention on Biological Diversity	Environment Household Survey conducted by end of 2020
Convention on Migratory Species	***Source: Ministry of Finance***
RAMSAR Convention	
United Nations Convention to Combat Desertification (UNCCD)	
United Nation Environment Programme (UNEP)	
Stockholm Convention	
Basel Convention	
Heritage Rotterdam Convention	
Waigani Convention	
Convention for the International Trade of Endangered Species (CITES) Trust Fund	
IRENA - International Renewable Energy Agency	
Chemical Weapons Convention 1992 ORPCW	
International Tribunal for Law of the Sea	
Organisation for Prohibition of Chemical Weapons	
International Seabed Authority	
PPCR- Enhancement of the Climate Resilience for Coastal Resources	

Appendix 6 Environment – Marine Indicators

MNRE Division	ResourceType	IndicatorType	Indicator
DEC Marine	Marine Resources	Outcome	Abundance/ biomass - % change in biomass relative to baseline
DEC Marine	Marine Resources	Outcome	Species richness - % of native species with viable populations within the mangrove areas
DEC Marine	Marine Resources	Outcome	Total area coverage of mangroves
DEC Marine	Marine Resources	Outcome	# of established mangrove conservation areas
DEC Marine	Marine Resources	Outcome	Coral community structure - subjective assessment based on expert observation
DEC Marine	Marine Resources	Outcome	Fish abundance/ biomass - % change in biomass relative to baseline
DEC Marine	Marine Resources	Outcome	Area/coverage of Marine Protected Areas (MPA)
DEC Marine	Marine Resources	Outcome	Incidents, severity and recovery of Coral Bleaching
DEC Marine	Marine Resources	Outcome	Population Density and Distribution of Crown-of-thorn
DEC Marine	Marine Resources	Outcome	Population Density and Distribution of Marine Turtles
DEC Marine	Marine Resources	Outcome	Population Density and Distribution of Sharks
DEC Marine	Marine Resources	Outcome	Fish species richness - no. of incidences of occurrences of species in sample population
DEC Marine	Marine Resources	Outcome	Species richness - no. of incidences of occurrences of species in sample population
DEC Marine	Marine Resources	Outcome	Status of established MPAs assessed
DEC Marine	Marine Resources	Outcome	Status of threatened and vulnerable species
SMD	Marine Resources	Outcome	Change in Sea Level annually
SMD	Marine Resources	Outcome	Change in Sea Surface temperature annually
SMD	Marine Resources	Outcome	Aspirational - Ocean acidification - Coral Bleaching
DEC Marine	Marine Resources	Output	Crown-of-thorn response
DEC Marine	Marine Resources	Output	Disaster risk proof fishing practices and management included in fisheries plans and implemented
DEC Marine	Marine Resources	Output	Eco-tourism activities promoted
DEC Marine	Marine Resources	Output	Effective management of ballast water from ships
DEC Marine	Marine Resources	Output	Increased aquaculture/ Mariculture fish/ invertebrate production through environmentally
DEC Marine	Marine Resources	Output	Marine Species Action Plan implemented
DEC Marine	Marine Resources	Output	New MPAs established
DEC Marine	Marine Resources	Output	Number of community based projects promoted and supported
DEC Marine	Marine Resources	Output	Number of community based replanting schemes implemented
DEC Marine	Marine Resources	Output	Ocean monitoring capacity and network increased
DEC Marine	Marine Resources	Output	Research on migratory species of concern undertaken
DEC Marine	Marine Resources	Output	Research/ survey on lesser known species conducted
SMD	Marine Resources	Output	Coastal Geomorphology Mapping Reports
SMD	Marine Resources	Output	Deep Sea Minerals Legislation
SMD	Marine Resources	Output	Number of Daily marine weather bulletins
SMD	Marine Resources	Output	National Deep Sea Policy developed
DEC Marine	Marine Resources	Input	Awareness and educational programs conducted
DEC Marine	Marine Resources	Input	Coral Bleaching (CBR) Response Plan developed
DEC Marine	Marine Resources	Input	Emergency Response Plan to manage Cetacean stranding developed
DEC Marine	Marine Resources	Input	Legal framework for Mangroves developed
DEC Marine	Marine Resources	Input	Management Plans for targeted turtle nesting areas developed
DEC Marine	Marine Resources	Input	Marine Wildlife Protection Regulation 2009 amended
DEC Marine	Marine Resources	Input	National Plan of Action for Sharks developed
DEC Marine	Marine Resources	Input	Staff trained in research programs

Source: National Environment Indicator Reporting System

Appendix 7 SEEA Framework

System of Environmental-Economic Accounting (SEEA)

The System of Environmental-Economic Accounting (SEEA) is a framework that integrates economic and environmental data to provide a more comprehensive and multipurpose view of the interrelationships between the economy and the environment. The SEEA notes environmental assets stock levels and changes as they bring benefits to humanity.[23] The SEEA framework follows a similar accounting structure such as concepts, definitions and classifications as used in the System of National Accounts (SNA). The SEEA is a flexible system that can be adapted to countries' priorities and policy needs whilst maintaining a commonality in terms of framework, concepts, terms and definitions.

The SEEA is a multipurpose system that generates a wide range of statistics, accounts and indicators with many different potential analytical applications.

The internationally agreed standards governing environmental-economic accounting which include environmental accounts are described in the System of Environmental-Economic Accounting 2012—Central Framework (SEEA Central Framework).

The SEEA-CF is a statistical framework for measuring the relationship between the environment and the economy. The output tables and accounts are comparable thus providing Planners and Policy makers with comparable statistics.

The SEEA-CF covers 3 Main Areas:

- Measurement of Environmental flows: Includes both physical and monetary terms;
- Economic activity related to the environment: Economic activities related to the environment in terms of monetary terms both, including spending on environmental protection and resource management, and the production of environmental goods and services and
- The SEEA Central Framework takes into account individual environmental assets, such as water resources, energy resources, fisheries resources, and how those assets move between the environment and the economy.

Considering the increasing demand for statistics on ecosystems within analytical and policy frameworks on environmental sustainability, human well-being and economic growth and development, the System of Environmental-Economic Accounting 2012 - Experimental Ecosystem Accounting (SEEA-EEA)[24] has been developed by the European Commission, Organization for Economic Co-operation and Development, United Nations Statistical Commission and World Bank to compliment the SEEA-CF. The SEEA-EEA approach provides a set of terms, concepts, accounting principles and classifications; and an integrated accounting structure of ecosystem services and ecosystem condition in both physical and monetary terms (United Nations, 2014b). Taking the perspective of ecosystem assets (delineated as spatial areas containing a combination of biotic and abiotic components) and considering how individual environmental assets interact as part of natural processes within a given spatial area, the SEEA-EEA assesses changes in ecosystem assets and the services they provide to benefit economic and other human activity.

[23] *https://seea.un.org/*

[24] *https://seea.un.org/ecosystem-accounting.*

The SEEA Experimental Ecosystem Accounting has a system of accounts that present a coherent and comprehensive view of ecosystems:

- Ecosystem Extent Account: Serves as a common starting point for ecosystem accounting. It organizes information on the extent of different ecosystem types within a country in terms of area;
- Ecosystem Condition Account: Measures the overall quality of an ecosystem asset and captures, in a set of key indicators, the state or functioning of the ecosystem in relation to both its naturalness and its potential to supply ecosystem services;
- Ecosystem Services Accounts: Measures the supply of ecosystem services as well as their corresponding beneficiaries, classified by broad national accounting categories or other groupings of economic units.;
- Monetary Asset Account: Records the monetary value of opening and closing stocks of all ecosystem assets within an ecosystem accounting area and additions and reduction to those stock; and,
- Thematic Accounts (covering accounts for land, water, carbon and biodiversity): are standalone accounts on topics of their own right and are also of direct relevance in the measurement of ecosystems and in assessing policy response.

The SEEA-EEA is not an international standard for ecosystem accounts. It is consistent with the System of Environmental-Economic Accounting (SEEA) and the 2008 System of National Accounts (2008 SNA). The original intent of ecosystem accounting described in the SEEA EEA was for application of the framework at a national level; linking information on multiple ecosystem types and multiple ecosystem services with macro level economic information such as measures of national income, production, consumption and wealth. The current international efforts in testing and experimenting on the ecosystem accounts and statistics have contributed greatly to advancement of understanding and knowledge in this area, involving people from many disciplines including ecology, economics, statistics and geography. Data sources range from specific local data to global satellite imagery.

However, at an experimental level, there is a need to articulate the broad logic or framing of a national accounting-based approach to compiling ecosystem accounts (UNSD and UNEP, 2017). The central measurement challenge and it underpins the breadth envisaged for ecosystem accounting, the approach to the organization of information and the potential applications comprise: Spatial scale and ecosystem assets; ecosystem condition and change in condition over time; supply of ecosystem services; basket of different ecosystem services; demand or use of ecosystem services; linking to benefits and flows of benefits; valuation concept that is aligned to the SNA; pricing and valuation of ecosystem services; and, valuation of ecosystem assets. Meeting this central measurement challenge will require a substantive collaboration of skills and data that can be applied and implemented at national and subnational levels.

Ocean Accounts is a developing statistical framework that adapts the SEEA for application to the ocean.[25]

[25] https://oceanaccounts.unescap.org.

Appendix 8 Fiji Tourism Satellite Accounts

TSA Tables

Step 1: Tourism expenditure by type of product and type of tourist is calculated in Table 1 and then carried on to Table 4.

Tourism Expenditure
By type of product and type of tourist
Year ended December 2011
FJD [000's]

Products	Domestic Demand			International Demand	Total Demand
	Household Demand	Government Demand	Business Demand		
Tourism-characteristic products					
Accommodation services	10,710	3,633	8,223	408,576	431,142
Food serving services	3,137	2,683	5,024	131,910	142,754
Beverage serving services	1,031	473	802	74,978	77,284
Land transport services of passengers	37,322	1,104	2,846	14,101	55,373
Water transport services of passengers	14,491	2,293	2,229	7,776	26,789
Air transport services of passengers	47,238	19,268	78,392	490,281	635,179
Travel arrangement, tour operator and related services	6,506	445	10,544	111,252	128,747
Leasing or rental services concerning cars and light vans without operator	1,976	231	9,710	39,482	51,399
Recreational, cultural and sporting services	5,111	0	1,046	21,358	27,515
Total tourism-characteristics products	**127,522**	**30,130**	**118,816**	**1,299,714**	**1,576,182**
Tourism-related products					
Retail sales	113,205	4,171	103,922	192,976	414,274
Food	*77,906*	*653*	*26,493*	*18,005*	*123,058*
Beverages and Tobacco	*19,471*	*0*	*3,888*	*1,000*	*24,359*
Wearing apparel	*8,582*	*1,227*	*8,622*	*3,003*	*21,434*
Fuel	*5,998*	*2,277*	*62,774*	*4,770*	*75,820*
Handicraft	*0*	*0*	*0*	*161,652*	*161,652*
Others	*1,247*	*14*	*2,145*	*4,546*	*7,952*
Financial services	18	1	1	9,797	9,817
Gambling services	5	0	0	0	5
Education services	17,055	0	0	12,800	29,855
Total tourism-related products	**130,283**	**4,172**	**103,923**	**215,573**	**453,951**
Total tourism demand by type of tourist	**257,805**	**34,302**	**222,739**	**1,515,287**	**2,030,133**

Table 2: Output/VA

Step 2: *This table shows the components of GDP of the economy*

System of National Accounts Production Accounts

By Industry

Year ended December 2011

FJD [000's]

	Tourism-Characteristics Industries								Tourism-Related Industries			All non-tourism related industries	Total
	Accommodation	Food and beverage service activities	Road passenger transport	Water passenger transport	Air passenger transport	Rental and leasing activities	Travel agency and tour operator activities	Recreational and cultural activities	Retail trade	Financial activities	Education		
GDP at current basic price													5,738,835
GDP by production	327,428	42,111	67,205	16,322	105,421	15,113	43,717	21,616	467,764	240,662	409,620	3,981,857	5,738,835
Equivalent to: Total Output	*715,681*	*156,893*	*158,055*	*63,700*	*649,346*	*59,182*	*143,670*	*58,224*	*734,035*	*340,232*	*543,205*	*7,878,950*	*11,501,172*
Less: Intermediate Consumption	*388,253*	*114,782*	*90,850*	*47,378*	*543,926*	*44,069*	*99,953*	*36,607*	*266,272*	*99,570*	*133,585*	*3,897,094*	*5,762,337*
GDP by income													
Compensation of employees	*151,522*	*20,584*	*26,817*	*11,922*	*65,143*	*5,705*	*17,929*	*15,381*	*121,643*	*63,997*	*324,591*	*1,255,811*	*2,081,046*
Consumption of fixed capital	*55,999*	*3,322*	*14,696*	*4,552*	*25,463*	*4,717*	*1,506*	*3,522*	*24,292*	*15,223*	*81,157*	*505,527*	*739,976*
Gross operating surplus	*119,907*	*18,205*	*25,692*	*-152*	*14,815*	*4,690*	*24,282*	*2,714*	*321,829*	*161,442*	*3,872*	*2,220,518*	*2,917,814*

Table 3: Sales

Step 3: *Total output of each tourism-characteristic and tourism-related industry presented in Table 2 is disaggregated into tourism products in Table 3. This gives the total supply of each industry classified by products.*

Table 3

Sales

By type of product and industry

Year ended December 2011

FJD [000]

Products	Tourism-Characteristics Industries								Tourism-Related Industries			All non-tourism related industries	Imports	Total
	Accommodation	Food and beverage service activities	Road passenger transport	Water passenger transport	Air passenger transport	Rental and leasing activities	Travel agency and tour operator activities	Recreational and cultural activities	Retail trade	Financial activities	Education			
Tourism-characteristic products														
Accommodation services	438,601	4,570	0	0	0	0	0	0	0	0	0	0	0	443,170
Food serving services	130,994	84,668	0	0	0	0	0	0	0	0	0	0	0	215,662
Beverage serving services	79,445	66,295	0	0	0	0	0	0	0	0	0	0	0	145,740
Land transport services of passengers	6,528	0	157,686	0	0	0	0	0	0	0	0	0	0	164,215
Water transport services of passengers	7,105	0	0	63,700	0	0	0	0	0	0	0	0	0	70,805
Air transport services of passengers	1,920	0	0	0	646,446	0	0	0	0	0	0	0	0	648,366
Travel arrangement, tour operator and related services	12,451	250	0	0	0	0	143,533	0	0	0	0	0	0	156,235
Leasing or rental services concerning cars and light vans without operator	2,112	0	0	0	0	59,128	0	0	0	0	0	0	0	61,240
Recreational, cultural and sporting services	960	0	0	0	0	0	0	48,695	0	0	0	15,837	0	65,292
Total tourism-characteristics products	**680,117**	**155,782**	**157,686**	**63,700**	**646,446**	**59,128**	**143,533**	**48,695**	**0**	**0**	**0**	**15,837**	**0**	**1,970,726**
Tourism-related products														
Retail sales														
Food	0	0	0	0	0	0	0	0	382,272	0	0	92,445	609,463	444,716
Beverages & Tobacco	10,636	102	0	0	0	0	0	0	6,169	0	0	4,364	46,944	21,271
Clothing	0	0	0	0	0	0	0	0	65,381	0	0	8,475	25,174	73,856
Fuel	0	0	0	0	0	0	0	0	71,506	0	0	147,705	1,288,076	219,212
Handicrafts	0	0	0	0	0	0	0	0	182,378	0	0	0	0	182,378
Others	0	0	0	0	0	0	0	0	52,966	0	5,106	377,809	87,810	435,881
Financial Services	0	0	0	0	0	0	0	0	0	340,232	0	445,373	0	785,605
Gambling services	0	0	0	0	0	0	0	5,849	0	0	0	0	0	5,849
Education services	0	0	0	0	0	0	0	0	0	0	201,928	341,277	0	543,205
Total tourism-related products	**10,636**	**102**	**0**	**0**	**0**	**0**	**0**	**5,849**	**730,672**	**340,232**	**207,035**	**1,417,447**	**2,057,466**	**2,711,972**
Sales of domestically produced non-tourism related products	**24,928**	**1,008**	**369**	**0**	**2,900**	**54**	**137**	**3,879**	**3,363**	**0**	**336,170**	**6,445,666**	**0**	**6,818,474**
Total Sales	715,681	156,893	158,055	63,700	649,346	59,182	143,670	58,224	734,035	340,232	543,205	7,878,950	2,057,466	11,501,172
Less imports of tourism-related products	0	0	0	0	0	0	0	0	0	0	0	0	2,057,466	
Total Output	**715,681**	**156,893**	**158,055**	**63,700**	**649,346**	**59,182**	**143,670**	**58,224**	**734,035**	**340,232**	**543,205**	**7,878,950**	**0**	**11,501,172**

Table 6: Tourism Value Added

Step 7: *The tourism industry ratios were multiplied through each industry's production account given in Table 2 to obtain total tourism value-added.*

Derivation of Direct Tourism Value Added

Year ended December 2011

	Tourism- Characteristics Industries								Tourism-Related Industries			All non-tourism related industries	Total
	Accommodation	Food and beverage service activities	Road passenger transport	Water passenger transport	Air passenger transport	Rental and leasing activities	Travel agency and tour operator activities	Recreational and cultural activities	Retail trade	Financial activities	Education		
Tourism industry ratios [TIR]	**0.81**	**0.61**	**0.34**	**0.38**	**0.98**	**0.84**	**0.82**	**0.35**	**0.30**	**0.01**	**0.02**	**0.01**	
Direct tourism value added FJD[000's]	**264,686**	**25,737**	**22,608**	**6,175**	**102,815**	**12,673**	**35,991**	**7,589**	**142,443**	**3,007**	**8,427**	**29,487**	**661,639**
Equivalent to: Tourism output	*578,540*	*95,888*	*53,171*	*24,101*	*633,297*	*49,627*	*118,279*	*20,441*	*223,528*	*4,251*	*11,176*	*58,346*	*1,870,646*
Less: Tourism intermediate consumption	*313,855*	*70,151*	*30,563*	*17,925*	*530,482*	*36,954*	*82,288*	*12,852*	*81,085*	*1,244*	*2,748*	*28,859*	*1,209,007*
GDP at current basic price													**5,738,835**
Direct tourism value added as a percent of GDP [%]													**11.5**
Components of direct tourism value added FJD[000's]													
Tourism compensation of employees	*122,487*	*12,581*	*9,022*	*4,511*	*63,533*	*4,784*	*14,760*	*5,400*	*37,043*	*800*	*6,678*	*9,300*	*290,897*
Tourism consumption of fixed capital	*45,268*	*2,030*	*4,944*	*1,722*	*24,833*	*3,956*	*1,240*	*1,237*	*7,397*	*190*	*1,670*	*3,744*	*98,231*
Tourism gross operating surplus	*96,930*	*11,126*	*8,643*	*-58*	*14,449*	*3,933*	*19,991*	*953*	*98,003*	*2,017*	*80*	*16,444*	*272,511*

Table 7: Tourism Employment

Direct Tourism Employment and Compensation of Employees

By Industry

Year ended December 2011

	Tourism- Characteristics Industries								Tourism Related Industries			All non-tourism related industries	Total
	Accommodation	Food and beverage service activities	Road passenger transport	Water passenger transport	Air passenger transport	Rental and leasing activities	Travel agency and tour operator activities	Recreational and cultural activities	Retail trade	Financial activities	Education		
Total employment in Fiji													
Male	4,143	1,031	3,688	537	551	453	534	677	7,299	933	7,604	63,108	85,136
Female	4,488	1,485	165	146	361	258	332	252	4,955	948	7,804	31,527	46,447
Total	**8,631**	**2,516**	**3,853**	**682**	**912**	**711**	**866**	**929**	**12,254**	**1,881**	**15,408**	**94,635**	**131,583**
Tourism Industry Ratio	**0.81**	**0.61**	**0.34**	**0.38**	**0.98**	**0.84**	**0.82**	**0.35**	**0.30**	**0.01**	**0.02**	**0.01**	
Total tourism employment in Fiji													
Male	3,349	630	1,241	203	537	380	440	238	2,223	12	156	467	9,764
Female	3,628	908	56	55	352	216	273	88	1,509	12	161	233	7,362
Total	**6,977**	**1,538**	**1,296**	**258**	**889**	**596**	**713**	**326**	**3,732**	**24**	**317**	**701**	**17,126**
Tourism employment as a percentage of total employment (%)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	**13.0**
Tourism compensation of employees FJD[000's]	122,487	12,581	9,022	4,511	63,533	4,784	14,760	5,400	37,043	800	6,678	9,300	290,897
Average compensation per tourism employee FJD	**17,556**	**8,181**	**6,960**	**17,470**	**71,445**	**8,024**	**20,703**	**16,556**	**9,927**	**34,023**	**21,066**	**13,270**	**16,986**

Appendix 9 People Consulted Scoping Mission

	Name	Organisation/Ministry	Contact
1	Samuel Ieremia	MOF	34324.
2	Samoafana L Tomane	SPA	64400
3	Tagaga Collins	MWTI	21611.
4	Manuia. Sotoa	SWA	7723040
5	Sebastian Puta	SWA	7742224
6	Patila Amosa	NUS	7254172
7	Malaeletalu Ulia	MFAT	7728564
8	Matilda Bartley	MFAT	7268391
9	Asiata Gerard Anapu	MFAT	21171
10	Tausili Reupena	SBS	62000
11	PAPALII [illegible]	SBS	27376
12	MOSE TOFETO	SBS	27376
13	Kathleen Taitague	MNRE	67200
14	Marie Satoa	MNRE	67200
15	Peter M Fruean	MCIT	7622955
16	Hans Iese	MNRE	7261490
17	Joy Pagiali'i	MOF	34325
18	DULCIE WONG SIN-SIMANU	STA	63500 / 63537
19	Aliimuamua Malaefono	SBS	62000
20	Frances Reupena	MNRE	7514505
21	Pam Meredith	Wijnsmith	7728379
22	Sanjesh Naidu	ESCAP	[redacted]
23	Michael Bordt	ESCAP	+66 2288 1521
24	Alex Lee Cheung	MNRE	
25	Sailele Aimaasu	MNRE	

	Name	Organisation/Ministry	Contact email
1	Frances Reupena	MNRE	fran.reupena@mnre.gov.w
2	Paul Meredith	Wizconsult	sikfau.paul-meath@gmail.com
3	Elizabeth Kerslin	MNRE	elizabeth.kerslin@mnre.gov.ws
4	Iose Leatuao	MNRE	iose.leatuao@mnre.gov.ws
5	AFIFO HAMADA ANO	SPREP	AFIFOH.EXT@SPREP.ORG
6	Gregory Barbara	SPREP	gregoryb@sprep.org
7	MICHAEL BORDT	ESCAP	bordt@un.org
8	Sanjesh Naidu	ESCAP	naidu@un.org
9	Rosianna-Maimai-Aiomata	MCIT	r.aiomata@mcit.gov.ws
10	Kalone Tikeri	UNEP	kalone.tikeri@un.org
11	Vanda Faasoa Chan Ting	MNRE	vanda@mnre.gov.ws
12	Ape Tuvau	MNRE	tuvau.lefaulau@mnre.gov.ws
13	Perise Kerslake	MNRE	perise.kerslake@mnre.gov.ws
14	Katie Pereji	MNRE	katie.pereji@mnre.gov.ws
15	Sebastian Fata	SWA	sebastian.mesfau@as
16	Mania Satoa	MNRE	mania.satoa@mnre.gov.ws
17	Papali'i Ben	SBS	27376
18	Rose Topeto	SBS	27376

	Name	Organisation/Ministry	Contact
1	Audi Faletoese	WRD-MNRE	67200
2	Manuia Sotoa	SWA	7203040
3	Sebastian Fata	SWA	7742224
4	Merepa Siaosi	MNRE	7667931
5	Cathleen Taituave	MNRE	67200
6	Manuia Satoa	MNRE	67200.
7	Grace Lauvale	MNRE	67200
8	Kirisimasi Samasoni Afa	MNRE-PUMA	"
9	Hans Iere	MNRE - PUMA	"
10	PAPALII BEN	SBS	27376
11	Julie David.	MNRE-PUMA.	67200-
12	Edith	CSD - MNRE	67200
13	Frances Reupena	MNRE	
14	Mulipola Tauvau	MNRE	
15	TUALA PETANIA	SIA - MNRE	#67200
16	Sailele A Matafa	MNRE	
17	Sanjesh Naidu	ESCAP	
18	Michael Bordt	ESCAP	
19	Paul Meredith	Wizconsult	
20			
21			