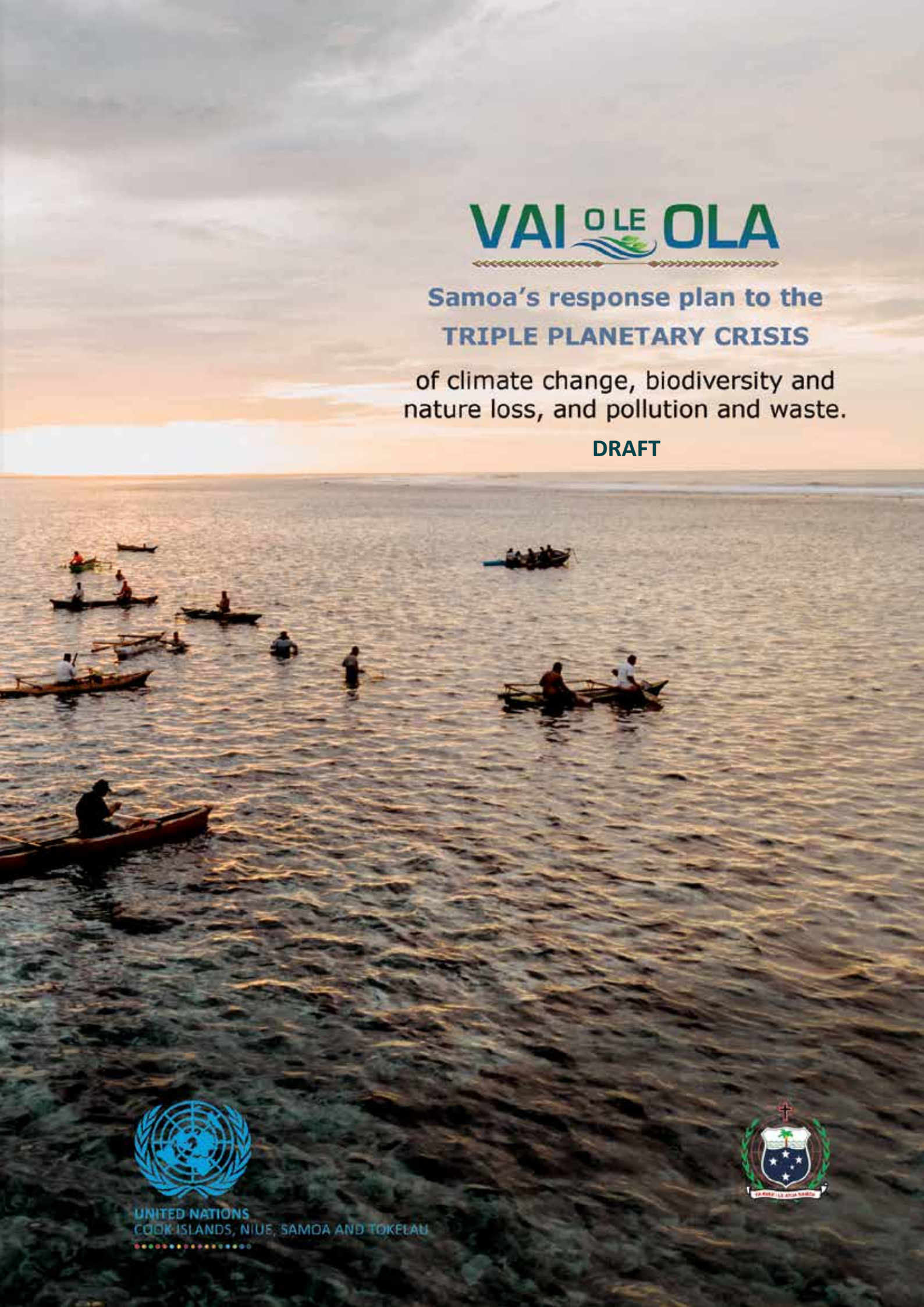
VAI O LE OLA

Samoa's response plan to the TRIPLE PLANETARY CRISIS

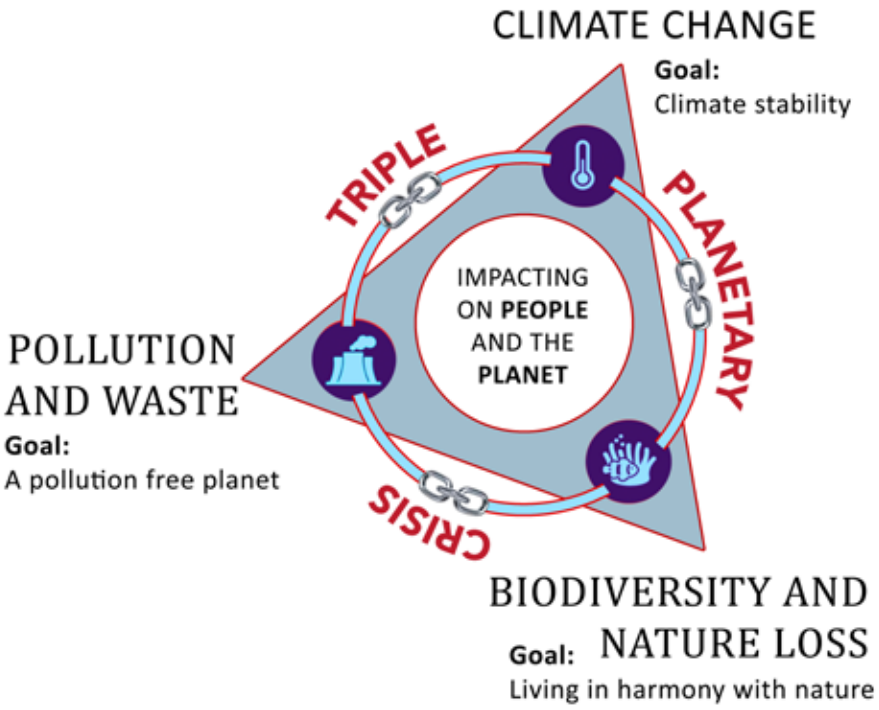
of climate change, biodiversity and nature loss, and pollution and waste.

DRAFT



UNITED NATIONS
COOK ISLANDS, NIUE, SAMOA AND TOKELAU

Figure 1: The Triple Planetary Crisis



"Vai o le Ola" is a Samoan expression that means "water of life." Recognising the vitality of this natural resource for the survival of humanity and all species on earth, Vai o le Ola was selected through a consultative process as a unifying theme for Samoa's response plan to the triple planetary crisis of climate change, biodiversity and nature loss, and pollution and waste.

As a central component of the nature continuum, water sustains life in all forms and connects people everywhere. The integrity and the resilience of the water system against climate and human-induced threats are prerequisites for sustainable development and a thematic area of growing importance in global governance.

Cover photograph by Adam Vilkus: *Fishing off the coast of Saanapu for palolo, a rare delicacy that spawns seven days after the new moon in October and November of each year.*

Passages from the origin story of Samoa and Manu'a and the proverbs featured in this document were researched by Galumalemana Steven Percival who also reviewed translations into English.

Unless otherwise attributed, all photographs were taken by Galumalemana Steve Percival.

VAI O LE OLA

Samoa's response plan to the
TRIPLE PLANETARY CRISIS
of climate change, biodiversity and
nature loss, and pollution and waste.

DRAFT

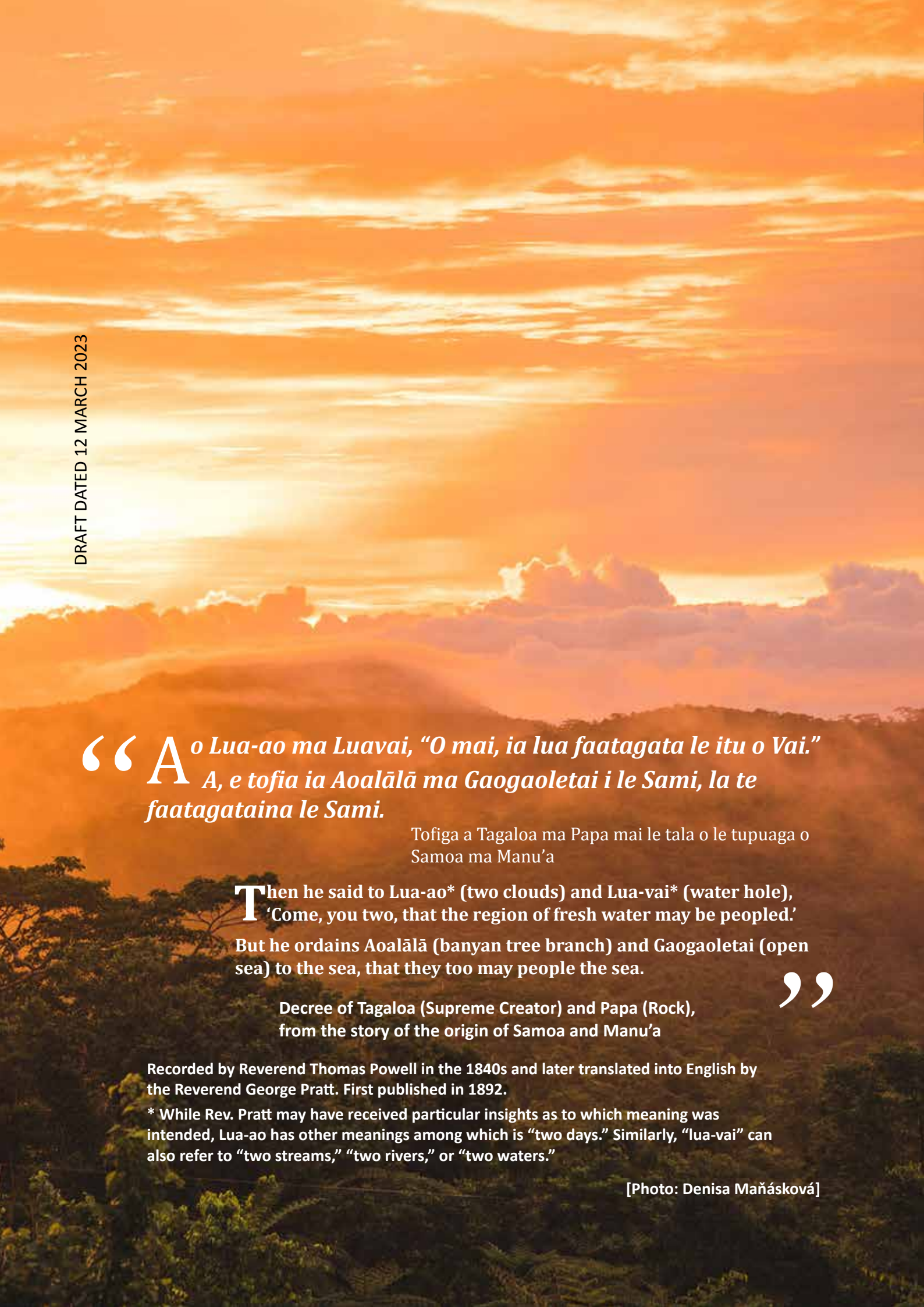
Making peace with nature, securing its health and building on the critical and undervalued benefits that it provides are key to a prosperous and sustainable future for all.

António Guterres
Secretary-General of the United Nations,
February 2021

Nothing short of a transformation is required to address the triple planetary crisis and make peace with nature.

Inger Andersen
United Nations Under-Secretary-General
and UNEP Executive Director

UNITED NATIONS
COOK ISLANDS, NIUE, SAMOA AND TOKELAU



“Ao Lua-ao ma Luavai, “O mai, ia lua faatagata le itu o Vai.” A, e tofia ia Aoalālā ma Gaogaoletai i le Sami, la te faatagataina le Sami.

Tofiga a Tagaloa ma Papa mai le tala o le tupuaga o Samoa ma Manu’a

Then he said to Lua-ao* (two clouds) and Lua-vai* (water hole), ‘Come, you two, that the region of fresh water may be peopled.’

But he ordains Aoalālā (banyan tree branch) and Gaogaoletai (open sea) to the sea, that they too may people the sea.”

Decree of Tagaloa (Supreme Creator) and Papa (Rock), from the story of the origin of Samoa and Manu’a

Recorded by Reverend Thomas Powell in the 1840s and later translated into English by the Reverend George Pratt. First published in 1892.

*** While Rev. Pratt may have received particular insights as to which meaning was intended, Lua-ao has other meanings among which is “two days.” Similarly, “lua-vai” can also refer to “two streams,” “two rivers,” or “two waters.”**

[Photo: Denisa Maňásková]

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS 6
ACKNOWLEDGEMENT 9
PREAMBLE 10
FOREWORD 11
THE TRIPLE PLANETARY CRISIS 13
ABSTRACT 16
SECTION 1: BACKGROUND AND OBJECTIVES 20
SECTION 2: STAKEHOLDER CONSULTATIONS 28
SECTION 3: LOSS AND DAMAGE IMPACTS OF THE TRIPLE PLANETARY CRISIS 30
SECTION 4: OVERVIEW OF INTERNATIONAL COMMITMENTS AND COUNTRY-LEVEL POLICY FRAMEWORKS 38
SECTION 5: ILLUSTRATIVE INTERVENTIONS 53
SECTION 6: THE WAY FORWARD 73
ANNEXES
- Annex I: List of Stakeholders Consulted 77
- Annex II: Bibliography 78
- Annex III: Poster 79

DISCLAIMER

This document has been prepared in consultation with key partners in Samoa and abroad and is a draft roadmap for how the country, in collaboration with the United Nations and other actors, may respond to the Triple Planetary Crisis of climate change, biodiversity and nature loss, and pollution and waste, within the loss and damage framework adopted at the Conference of the Parties #27. This plan is still under discussion with key actors in the community of interest, including the Government of Samoa, and is published in this format for review and discussion purposes only.

ABBREVIATIONS AND ACRONYMS

2NDC	Second Nationally Determined Contribution
6NR	Sixth National Report
ADB	Asian Development Bank
AFOLU	Agriculture, Forestry and Other Land Use
AOSIS	Alliance of Small Island States
CBD	Convention on Biological Diversity
CBO	Community-Based Organisations
CC	Climate Change
CCGAP	Climate Change Gender Action Plan
CCP	Samoa Climate Change Policy 2020-2030
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CERO Waste	Circular Economy for the Recovery of Waste Project
CIM	Community Integrated Management
CIP	Country Implementation Plan 2023-2024
COP	Conference of the Parties
CROP	Council of Regional Organisations of the Pacific
CSO	Civil Society Organisation
CSSP	Community Social Services Programme
CTF	Conservation Trust Fund
DALYs	Disability-adjusted life years
EEZ	Exclusive Economic Zones
EM-DAT	The Emergency Events Database
EPC	Electric Power Corporation
EU	European Union
EWACC	Economy-Wide Adaptation to Climate Change
FAO	Food and Agriculture Organisation
GBF	Global Biodiversity Framework
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GNI	Gross National Income
GoS	Government of Samoa
HDPE	High Density Polyethylene (type of plastic)
IAMP	Infrastructure Asset Management Project
IBPES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
ICCRIFS	Integration of Climate Change Risks and Resilience into Forestry Management in Samoa Project
IDA	International Development Association
IMPRESS	Improving the Performance & Reliability of Renewable Energy Power Systems in Samoa
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for the Conservation of Nature
IUU	Illegal, unreported and unregulated

JICA	Japan International Cooperation Agency
KPA	Key Priority Area of the Pathway for the Development of Samoa
L&D	Loss and Damage
LMIC	Low- and middle-income countries.
MNRE	Ministry of Natural Resources and Environment
MPA	Marine Protected Area
MVI	Multidimensional Vulnerability Index
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organisation
NIP	National Implementation Plan
NBWM	Nature-based Watershed Management
NWRMP	National Water Resources Management Plan for Samoa 2021-2030
NUS	National University of Samoa
OECD	Organisation for Economic Co-operation and Development
PDS	Pathway for the Development of Samoa 2021/22-2025/26
PES	Payment for Ecosystem Services
PET	Polyethylene terephthalate (type of plastic)
PIFS	Pacific Island Forum Secretariat
PPP	Public-Private Partnership
PSIDS	Pacific Small Island Developing States
PWWA	Pacific Water and Wastewater Association
R2R	Ridge-to-Reef
SDG	Sustainable Development Goals
SIAM	Samoa Infrastructure Asset Management
SGP	Small Grants Programme
SIDS	Small Island Developing States
SLM	Sustainable Land Management
SMSMCL	Strengthening Multi-sectoral Management of Critical Landscapes Project
SOS	Samoa Ocean Strategy 2020-2030
SPC	The Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
SPTO	South Pacific Tourism Organisation
SUNGO	Samoa Umbrella for Non-Governmental Organisations
SWRM Act	Samoa Water Resources Management Act 2008
TPC	Triple Planetary Crisis
UNCT	United Nations Country Team
UNDCO	United Nations Development Coordination Office
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UN	United Nations
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNRCO	United Nations Resident Coordinator Office
UNSDCF/PCF	United Nations Sustainable Development Cooperation Framework 2023-27
USD	United States Dollars
USP	University of the South Pacific
WB	World Bank
WMO	World Meteorological Organisation

O le lāʻau e tū ae ōia.

The tree stands but, with rotting roots, is doomed and cries out in pain.

A tree with rotting roots that can be caused by inundation is an analogy for an ill-fated person whose demise is predicated by something deeply wrong at the core. Arrogance and greed, leading to unsustainable production and consumption are drivers of climate change, biodiversity and nature loss, and pollution and waste, resulting in impacts described by the peoples of the Pacific as existential threats. But these harmful drivers do not originate in the Pacific region and the people here are not going to just accept this fate. Vai o le Ola builds on all calls to action; that we may do more than just stand and be doomed, that we may recover and live in harmony with nature.

ACKNOWLEDGEMENT

People living in the islands of Samoa, like those in all small islands everywhere in the world, once enjoyed pristine environments.

There were no plastics, no processed foods, and the seasons were regular and predictable. Our world has changed and we must now find ways to restore the balance needed to sustain life into the future; within the places we live in to the vast ocean that surrounds us.

The Vai o le Ola initiative is Samoa's response to the United Nations Secretary General's call to address the challenges posed by the Triple Planetary Crisis of climate change, biodiversity and nature loss, and pollution and waste and to ultimately achieve climate stability, live in harmony with nature, and move towards a pollution-free planet. It is a strategy prepared with the invaluable contribution of key ministries of the Government of Samoa, civil society, regional organisations, and academia, captured through a series of stakeholder consultations that refined the scope and focus of the initiative. We are grateful to all who provided comments, suggestions and ideas during the consultation process and hope they see themselves and their priorities reflected in the initiative.

The response draws on two key assessments 1) the National Water Resources Management Plan (2021-2030) including updated assessments of water and watersheds in Samoa, and 2) the comprehensive water study that New York University and New York University of Abu Dhabi conducted jointly with the Ministry of Natural Resources and Environment and the National University of Samoa in 2019-2020 at the request of the Government of Samoa and titled the Biosecurity of Upolu Fresh and Salt Environmental Water Resources. Both the National Plan and the results of the study led to wide national consultations on the optimal modalities to mitigate the compounded impact on all water streams of human action and climate change. As rivers, swamps and the ocean are connected, addressing water quality issues is of critical importance to the health of the ocean that Samoa shares with other Pacific nations and the rest of the world through closely neighboring Exclusive Economic Zones and the hydrological cycles of nature.

The research and writing team operated under the leadership of Dr. Simona Marinescu, UN Resident Coordinator for Cook Islands, Niue, Samoa and Tokelau, and the guidance of Aban Marker Kabraji (UNDCO Senior Advisor Climate Change and Biodiversity). The team included Francois Martel (UNDP Senior Technical Advisor Environment and Climate Change), Galumalemana Steven Percival (UNRCO Communications Lead), Tiffany Chan (UNRCO International Consultant), Youle Beatty (UNRCO Joint Programme Support Officer) and Travis Klaus Mitchell (UNRCO Senior Economist) with support from the UN Resident Coordinator's Office.

PREAMBLE

In her maiden speech to the United Nations General Assembly in September 2021, Samoa's Prime Minister Hon. Fiame Naomi Mata'afa, made reference to the many challenges facing humanity, among which are the looming existential threat of the climate crisis and the accelerated loss of biodiversity. Quoting the UN Secretary-General, she stated that we are at an inflection point in history: we either break down or break through.

> *"For the Pacific community, the real challenge is not about securing more scientific evidence, setting new global targets, and more talk-shops. It is about action for survival and we all need to shoulder our responsibilities and play our part... I believe we should not surrender to a future of perpetual crisis but choose hope through urgent, decisive and united action. There is no greater challenge confronting the global community now than that of climate change."*
>
> Hon. Fiame Naomi Mata'afa, Prime Minister of Samoa

As globalisation and wasteful growth models led humans to living beyond sustainable planetary limitations, Samoa has not been spared. A piece of the puzzle in a complex regional and world trade architecture, Samoa and our way of life have dramatically changed over the last one hundred years. Our harmony with nature has been shaken to the core and, as a result, our future is more and more uncertain.

The compounding effects of climate change, biodiversity and nature loss, and pollution and waste, which the United Nations Secretary-General calls the Triple Planetary Crisis, have exacerbated the socio-economic and ecological stress on our islands and across the region. Hardship for our people is expected to grow as temperature rises, ocean acidification continues and life on land and under the water is in decline. Samoa's natural capital is at threat with our waters suffering the most.

Action is planned "*to increase community commitment to implementing watershed management plans and increasing conservation areas,*" as well as to improving waste and wastewater management to protect life on land and in the rivers, mangroves, and the ocean.

The Triple Planetary Crisis response plan provides a good framework for the integration of the country's efforts to reduce human harm done to the environment by ensuring our lifestyle and the model of economic growth will radically change to reduce global warming and pollution. As the water system in every country is the foundation of life, we chose to build the Triple Planetary Crisis response on interventions that will protect our most valuable resource. This approach also enables close monitoring of the losses and damages of our national wealth caused by both local and external pollution.

FOREWORD

Samoa is a country rich in oral traditions and wisdom that is deeply enshrined in our culture.

Our waters are a source of beauty and life, giving rise to the title of this initiative: ***Vai o le Ola***. A continuum of land and ocean deeply connected by culture and history defines our identity as islanders, voyagers, and people of the Pacific. For more than two millennia, our islands have been our home; our rivers and ocean our pathways. We strive to live in harmony with the environment as the main provider of resources for our existence and wellbeing and the only shelter we have against disasters.

More than three times higher than the global average of 990mm annually, Samoa's 3,000+mm rainfall per year nurtures a spectacularly green, stunning landscape. Owing to its 12 nautical miles of territorial waters and the over 120,000 km^2 Exclusive Economic Zone, Samoa has more water than landmass, the latter standing at only 2,831 km^2 making Samoa truly an ocean state. The recent study done jointly by the Ministry of Natural Resources and the National University of Samoa in partnership with New York University and New York University of Abu Dhabi, has found that poor waste management and high concentrations of minerals and microplastics have dramatically affected the biosecurity of the body of fresh and saltwater across the island of Upolu. Left unaddressed, these factors impacting on the safety of all water streams will intensify the effects of the Triple Planetary Crisis in Samoa.

As underwater resources are diminishing, the economic value of the Pacific Ocean under Samoa's national jurisdiction is rapidly shrinking with potentially dramatic consequences for the country's public revenues and fiscal stability. Equally important, the ocean capacity to operate as a carbon sink has decreased considerably. To address the issue, the Government of Samoa committed through the Ocean 2030 Strategy to investing in a healthy ocean with a Marine Protected Area expanding to 30% of its EEZ. As stated also in the Pathway for the Development of Samoa 2022-2026, "our collective priority is to restore and maintain the health of our vast and bio-diverse waters, while acting to secure the future health of our terrestrial ecosystems."

As this draft goes to print, news has come through that the Biodiversity Beyond National Jurisdiction Agreement has been adopted at the United Nations, a milestone achievement with far-reaching implications for the people of the Pacific Ocean. The new global agreement, known also as the High Seas Treaty, reached by nations on 4 March 2023 in New York, creates a framework to conserve marine life and restrain harmful activities in two-thirds of the ocean.

The Government of Samoa, in close collaboration with the United Nations and all other partners, is committed to achieving the country's Sustainable Development Goals and to ensuring the realisaton of the fundamental right of all people to a clean, safe, and sustainable environment.

The Triple Planetary Crisis of climate change, biodiversity and nature loss and pollution and waste offers an ideal framework for the conceptualisation of Loss and Damage.

In their entirety, losses and damages include deterioration of the environment, depleting natural resources and ecosystem services as well as unrealised growth potential and economic costs that governments and societies bear together. Out of the three components of the national wealth: natural, human, and productive capitals, the natural capital as a critical component to enable growth is the most sensitive to the interlinked impacts of climate change, biodiversity loss, and pollution. Through regular economic valuation, governments can assess changes in national wealth and the resulting loss of growth potential generated by the Triple Planetary Crisis.

Resolution A/RES/76/300, adopted by the United Nations General Assembly on 28 July 2022, recognises the *human right to a clean, healthy and sustainable environment*, and identifies climate change, biodiversity loss, and pollution as drivers of unsustainable development and key factors impeding the realisation of the full benefit of ecosystem services to humans.

The Triple Planetary Crisis framework allows governments to map the factors limiting the exercise of the right to a clean, healthy and sustainable environment and develop a response plan. This is one such plan.

While focusing on any of the components of natural capitals would allow a solid analysis of the impact the Triple Planetary Crisis has on the country's development trajectory, using water as an entry point was the choice we have made in order to put into perspective the threat that the Triple Planetary Crisis poses to a vital element already scarce and fragile.

Water is a limited resource and, as reflected in ancient cultures and religions, a symbol of life, purification, and hope. We must protect it and share it in peace with nature and one another.

[SIGNED]

Dr Simona Marinescu
United Nations Resident Coordinator

“O le vasa laolao, o lo’o si’omia, puipuia ma tausia i tatou, o atumotu o le vasa. O le totonugalēmū lea o le olaga masani o tagata o le Moana.”

Afioga Fiame Naomi Mata’afa, Palemia o Samoa

The ocean surrounds, protects and provides for us ocean states. It is core to our Pacific way of life.

Hon. Fiame Naomi Mata’afa, Prime Minister of Samoa

“Ua faapōpō ni aso ua, ae lē tuua aso folau.”

A well known Samoan proverb that means our journey will be made, even if it means negotiating adverse climatic conditions. How we make this journey is captured in the theme for Samoa’s 60th anniversary of independence: *Folau ma le Faatuatua*, Sail with Faith. Faith that we will build the capacity and the individual and collective will to overcome the challenges facing humanity and the planet.

SAMOA
FOLAU MA LE FAATUATUA

DRAFT DATED 12 MARCH 2023

ABSTRACT

The Human Development Report of 2020 titled "The Next Frontier – Human development and the Anthropocene" released a compelling and equally frightening analysis showing that the era of human impact on Earth – the so-called Anthropocene – has begun. "Human choices, shaped by values and institutions, have given rise to the interconnected planetary and social imbalances we face."

The human-planetary system has reached a stage of self-destruction with humans in the lead. We have brought the planet to a breaking point. The triple crisis of climate change, biodiversity and nature loss and pollution and waste has its roots in an environmentally harmful, resource-dependent economic growth model and our unsustainable lifestyles that continue to exacerbate planetary pressures.

Our impact on the environment has led to dramatic changes in life on land and under the water as reflected in all recent reports released by the United Nations.[1] The common resource most affected is what sustains life itself: ***water***. Impacting it negatively, by poor waste management or the unabated release of greenhouse gases linked to unsustainable production and consumption, is what threatens the stability of our life systems.

We are trapped in a dangerous loop and while we may not be able to recover completely from the damage we have caused, we do have a responsibility to try.

This study in the framework of the Triple Planetary Crisis is such an attempt to correct course and keep water – a vital element of our ecosystem – within safe parameters for all life forms to live within, consume, and use renewably so that the planet can thrive.

Eliminating pollution and treating water as a valuable resource will not only restore its quality, but will also see biological diversity thrive and make adaptation to climate change possible. This can in turn accelerate the goals of climate stability, living in harmony with nature, and to move towards a pollution-free planet.[2]

1 See for e.g., IPCC, 2018 Special Report on the impacts of global warming of 1.5C; UNEP, 2022, Frontiers: Noise, Blazes and Mismatches – Emerging Issues of Environmental Concern; IPCC, Climate Change 2022: Mitigation of Climate Change.

2 United Nations Environment Programme, "For People and Planet", Medium-Term Strategy 2022-2025

This strategy sets forth the Triple Planetary Crisis approach as the framework for a coherent and holistic response to the impacts of climate change, pollution and waste and biodiversity and nature loss on livelihoods and the environment of Samoa.

It focuses on leveraging the interdependence of social, economic, and natural systems to generate opportunities and achieve a balance in the people-nature-economy nexus in Samoa in an attempt to make peace with nature. In the context of Samoa, an Ocean State, the approach adopted in the present strategy views the land and sea as one contiguous ecosystem, with water as a vital element chosen to be the natural resource entry point, owing to the overarching importance of the health, resilience, and integrity of water systems in addressing multidimensional vulnerabilities, as well as for livelihood regeneration and sustainable development. The Vai Ole Ola strategic plan is meant to be a living document which provides guidance to the sustainable future of Samoa.

The illustrative interventions introduced in this strategy are designed to holistically respond to the Triple Planetary Crisis in Samoa. It is not an exhaustive list and is meant to evolve and develop with further contributions as the discourse on this work continues. Moreover, each of the interventions presented here is considered critical for tackling the immediate threats posed by the Triple Planetary Crisis in Samoa and they range from legislative and policy measures to infrastructure projects, as well as financing mechanisms.

Notably, the formulation and development of the approach and illustrative interventions were informed by extensive national stakeholder consultations with government ministries, civil society organisations, academia, and development partners.

Samoa Skink Emoia samoensis has most recently been assessed for The IUCN Red List of Threatened Species in 2011. Emoia samoensis is listed as Endangered under criteria B1ab(iii,v). [Photo: Percival]

This response plan also strategically aligns with Samoa's international commitments including the Paris Agreement and Convention on Biological Diversity, and key national framework policies such as the **Pathway for the Development of Samoa 2021/22-2025/26 (PDS)** and the **Samoa Ocean Strategy 2020-2030 (SOS)**.

The Triple Planetary Crisis approach for Samoa also offers an amplifying framework for the Loss and Damage analysis and costing, the operationalisation of which the Government of Samoa has expressed full commitment to following the remarkable COP#27 decision on Loss and Damage funding arrangements. Loss and damage impact of the Triple Planetary Crisis in Samoa is measured through conducting a comparative calculation of the dollar cost impact of climate change, loss in biodiversity and pollution – an approach that recognises loss in natural capital as the main driver for Loss and Damage. As Samoa assumed the chairmanship of the Alliance of Small Island States (AOSIS) on 1 January 2023, the development of the Loss and Damage approach embedded within the Triple Planetary Crisis framework could be replicated or scaled up in the region, opening doors to wider funding opportunities, and further advancing the climate justice agenda amongst Pacific SIDS.

Finally, this strategy provides recommendations and future directions for the implementation of the Triple Planetary Crisis response set out across the areas of institutional governance, implementation arrangements (outreach and project execution) and development financing.

Known as caviar of the Pacific, *palolo* (*Palola viridis*) are worm-like sacs of eggs and sperm from the female and male forms of a sea annelid. The male sperm sacs are brown whereas the female egg sacs are blue-green as shown right. The delicacy rises only twice in a year, seven days after the full moons in October and November. The *palolo* is listed as a threatened species in the IUCN Red-List with a data deficiency meaning not enough information has been published about the ecology of this marine organism. Its annual mass spawning makes *palolo* an interesting case study to understand marine life and the real and potential impacts of a changing climate.

As with climate change, failure to address waste management and pollution will have profound and lasting impacts on the health and wellbeing of our people.

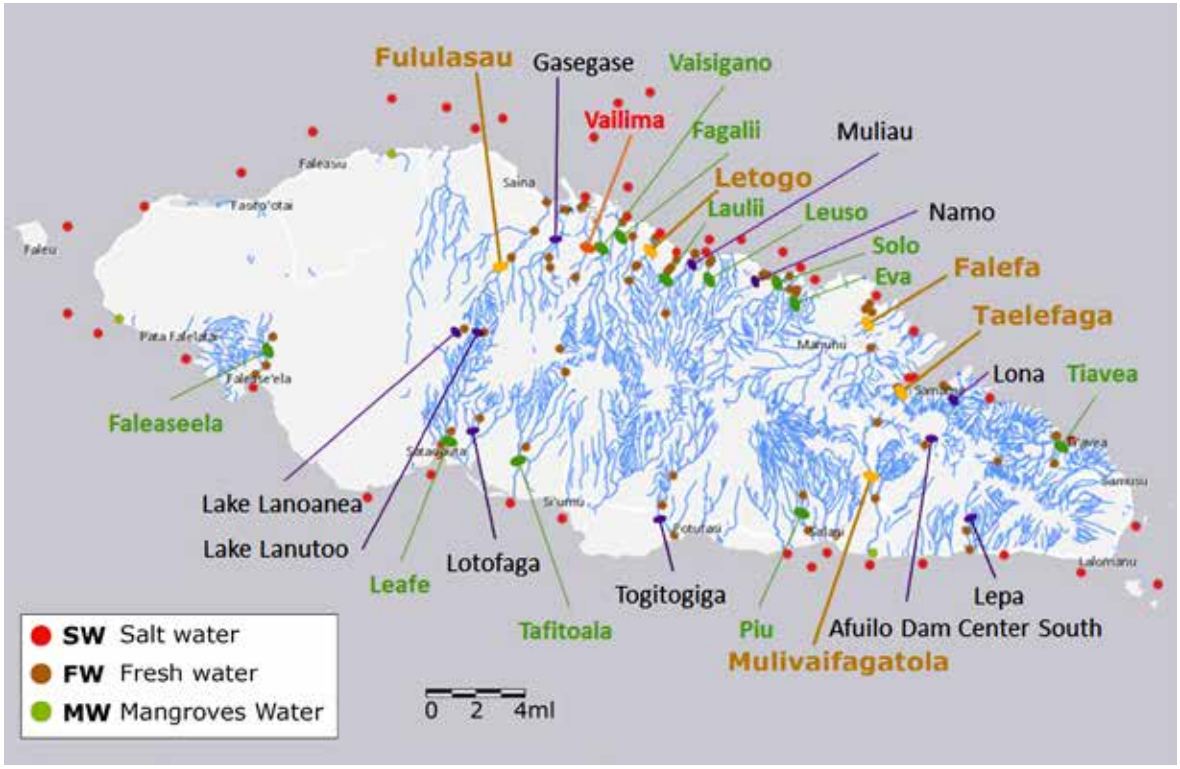
Hon. Fiame Naomi Mata'afa, Prime Minister of Samoa

Why Water?

The map below shows the need for mitigation based on element concentrations, salinity, and presence of *E.coli* and coliform in the rivers and along the coastline of Upolu Island. Ranking is colour coded: **RED** indicates an extreme need for mitigation, **ORANGE** indicates an urgent need for mitigation, **GREEN** indicates a strong need for mitigation. All other areas identified on the map indicate a mild need for mitigation. This map accompanies recommendations of the Research Report on Biosecurity of Fresh and Salt Environmental Water Resources that was led by New York University and New York University of Abu Dhabi in partnership with UNDP, the National University of Samoa and the Samoa Ministry of Natural Resources and Environment under the Joint Programme titled Samoa- Knowledge Society Initiative funded by the UN-India Development Partnership Fund (UN Office of South-South Cooperation).

This map speaks to water pollution and its impact on human health but as water is life, so too is all life in that water, in the natural ecosystem affected by the pollution--the fish, the amphibians, the plants and all living things are vulnerable, above and below the water. And as the rivers flow to the sea, they carry this toxicity and spread its harmful impact into the life of the ocean. Hence water connects and affects everything, giving rise to the name "Vai o le Ola - Water of Life." Water in this context is a barometer for the health of people and nature, the island and ocean ecosystems. .

Figure 2: Mitigation Map



Samoa as an Ocean State

Speaking about the Samoa Ocean Strategy (2020 – 2030), Afioga Toeolesulusulu Cedric Schuster, Minister of Environment and Tourism, explains that Samoa is not a small island developing state:

> *"With 98% of Samoa's domain comprising the ocean, "we are a large ocean state."*

Indeed, in addition to the lush terrestrial land that forms the archipelago, Samoa is also home to exceptional marine and freshwater habitats, such as watersheds, seamounts, coral reefs, mangroves, and oceanic basins, and almost 80% of the population of 205,557[3] reside along the coastal region.[4] The approach this strategy takes is therefore based on the geography of an Ocean state where the land and water, both marine and fresh, are co-dependent for life and livelihoods and form one integrated and whole ecosystem. While the Pacific Ocean and the rich network of watersheds contribute significantly to the national wealth, sustenance and the cultural identity of the Samoan people, it is important to recognise that the island nation is particularly vulnerable to the impacts of climate shocks and natural disasters. Samoa's natural geography also makes it highly exposed to natural hazards such as tropical cyclones, droughts and floods, which can cause substantial damage to the population's wellbeing, and the nation's infrastructure and national economy.

With close to sixty villages starting or ending with "vai," it is clear that rivers and the sea have been important to Samoans for countless generations.

Notably, the Triple Planetary Crisis of climate change, biodiversity and nature loss and pollution and waste, coupled with ongoing public health crises, global conflicts, and the pre-existing socioeconomic vulnerabilities of Samoa, is affecting the ability of its people to enjoy a clean, healthy and sustainable environment, which, as adopted under General Assembly Resolution A/RES/76/300, is a fundamental human right. The three contextual pillars of the Triple Planetary Crisis are closely and inextricably connected: Samoa's geographical isolation from continental landmasses, small size, and lack of biological competition, *inter alia*, gave rise to the evolution of species, some of which are endemic to Samoa, highly sensitive to increasingly extreme weather events and climate variability and the inevitable arrival of invasive species. As a result of heightened pressures from globalisation, pollution from increased human activity, and climate change, all of which are closely interlinked, the biodiversity of faunal and floral species in Samoa is following an overall downward trend, with marine species constituting most of the species in decline.[5]

3 Samoa Bureau of Statistics, Samoa Population and Housing Census 2021, Final Report.
4 Samoa Bureau of Statistics, 2016 Census.
5 Government of Samoa, Samoa's Sixth National Report to the Convention on Biological Diversity 2018, 132.

The large and melodic honeyeater, Maʻomaʻo (Gymnomyza samoensis), has most recently been assessed for The IUCN Red List of Threatened Species in 2016 and the endemic bird is listed as Endangered under criteria C2a(i).

The high density of population and infrastructure along coastal zones coupled with improper land use and inadequate sanitation and waste disposal practices significantly contributed to coastal pollution and contamination of water bodies, which in turn leads to the degradation of coastal and marine environments, as well as biodiversity.[6] All these are further exacerbated by climate change, consequential environmental impacts and extreme weather events.

Recognising the centrality of water systems in sustaining health, livelihoods and environmental integrity in Samoa, a comprehensive water study titled the **Biosecurity of Upolu Fresh and Salt Environmental Water Resources** was conducted by NYU and NYU of Abu Dhabi, jointly with MNRE and NUS in 2019-2020, at the request of the Government of Samoa. This study found that microplastics and heavy metal pollution from human activity and the improper use of chemicals contributed to the water quality decline in Upolu, and led to the deterioration of the island's coral reefs, and therefore its biodiversity. This empirical and contextual finding further echoes the interlinkages between the various elements within the Triple Planetary Crisis.

Climate change and its impacts have been identified by the Pacific Island Forum as the single greatest existential threat facing the Blue Pacific[7].

6 MNRE Samoa's State of the Environment Report 2013
7 Communique of the 51st Pacific Islands Forum Leaders Meeting, 11-14 July 2022

In addition to the direct harm inflicted on the environment and natural systems, climate change and its impacts cause significant damage to the national wealth of Small Island Developing States (SIDS)– the stock of natural, produced and human capital, which underpin the present and future development potential of Samoa.

Based on loss and damage estimations, the Triple Planetary Crisis cost to Samoa in dollar terms amounts to an estimated US$7.01 billion[8] for the period from 1964 to 2019. In the sub-period 2013-2018, Triple Planetary Crisis costs using this same approach amounted to US$0.36 billion or 6.1 percent of GDP for Samoa, roughly 1 percent of GDP per year. In contrast, according to national wealth calculations, costs stemming from natural capital and produced capital movements led to a total Triple Planetary Crisis impact in Samoa of an estimated US$0.69 billion or 14 percent of GDP, roughly 2.3 percent of GDP in Triple Planetary Crisis costs annually. To tackle these issues, Samoa received during this period US$0.16 billion from the international community, indicating loss and damages to the tune of US$0.39 billion over the sub-period.[9][10]

8 Estimates to TPC costs as a ratio to GDP cannot be compiled for the period because GDP for Samoa does not extend backwards to 1964.
9 Using average TPC costs of US$0.55 billion from L&D and Wealth approach estimates.
10 See Quantifying Economic Costs of the TPC: Case of Samoa; and Presentation: Loss and Damage – Estimating the Cost of the TPC in Samoa.

In response, the Samoan Government has made it clear that adapting to the impacts of climate change, is 'the major occupation and priority policy determinant for Samoa',[11] and has made it a national imperative to ensure the sustainable management of their national resources.

Samoa's aspiration is reflected in the Pathway for the Development of Samoa (2021/22 - 2025/26), the overarching framework for Samoa's sustainable transformation.

Key Strategic Outcome 4, "Secured Environment and Climate Change", states that the Government will maintain a safe environment for Samoa and promote sustainable economic use of natural resources. This includes priorities such as building climate and disaster resilience, to better manage waste and natural resources.

The plan of action and interventions needed for these priorities are further set out in important framework documents such as the Samoa Ocean Strategy (2020-2030) (SOS), which focuses on the integrated management of ocean resources, the Samoa Climate Change Policy (2020-2030) (CCP), which guides national efforts in climate resilience building and adaptation and mitigation actions, and the National Water Resources Management Plan (2021-2030) (NWRMP), stating the importance of resilient water resources management while Samoan watersheds and aquifers are in water deficit despite their critical importance. The plan provides a pathway to address not only climate resilience but also sustained economic growth. Its implementation will be critical to the long-term wellbeing of the country.

Why is the approach of the Triple Planetary Crisis different?

While it is abundantly clear that much has been and is being done to address climate change, biodiversity and nature loss and pollution and waste, actions guided by a plethora of laws, policies, and strategic plans, implementation has been largely sectoral, which meant that the interdependencies and interconnectedness of life systems is not recognised within an ecosystem context, and a holistic picture consistent with the way nature works has not emerged.

Following the lessons learnt and successes from the Triple Planetary Crisis work in Pakistan and Thailand, it is the vision of the United Nations in Samoa to frame the Pacific approach as one of Ocean States in addressing SIDS vulnerabilities, and focus on leveraging the interdependence of social, economic, and natural systems in generating opportunities and achieving a balance in the people-nature-economy nexus in these nations. It is essentially presenting a case for identifying loss and damage that a nation's natural wealth experiences due to climate change.

11 UNGA 70th Session

Figure 3: Ocean States in the Pacific[12]

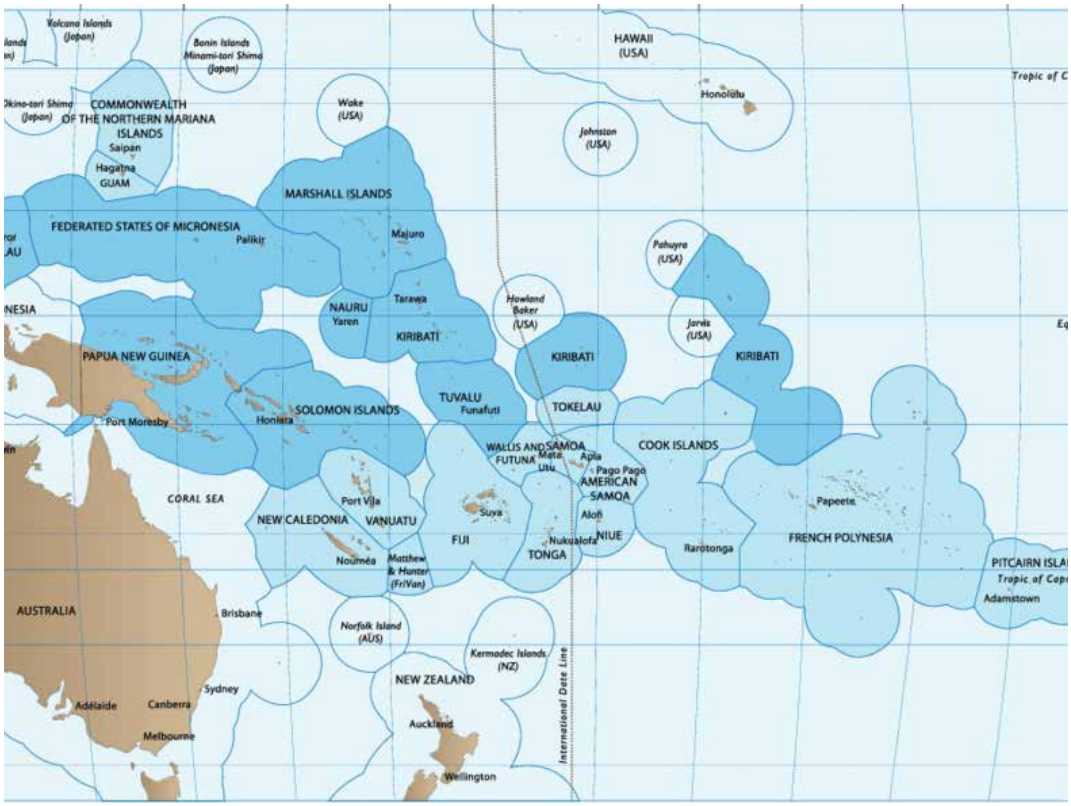
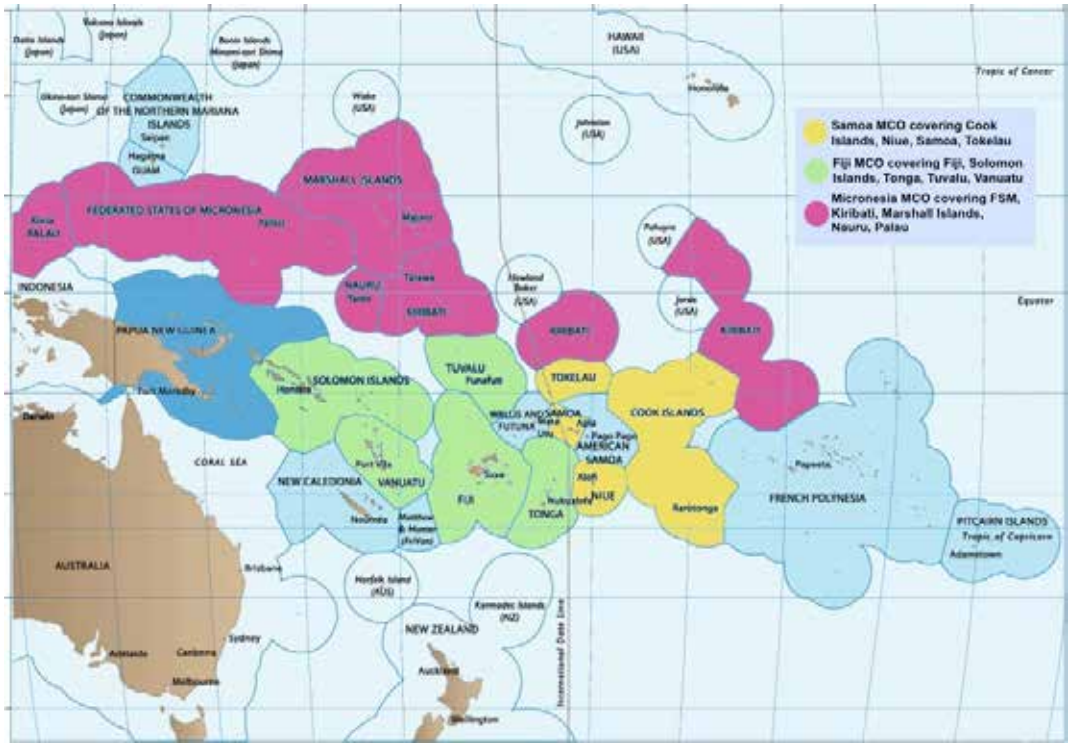


Figure 4: UN Presence in the Pacific



12 Source: https://www.researchgate.net/figure/Estimated-exclusive-economic-zones-EEZs-of-Pacific-Island-countries-and-territories_fig1_257548120

The approach to the Triple Planetary Crisis that is being taken as part of a One UN response is to look at two axes: the geography of an ecosystem and the natural resource thematic entry point. In the case of Samoa, the geography is that of an ocean state where land and ocean are viewed as one co-dependent contiguous ecosystem, and the impact of climate change, biodiversity and nature loss and pollution and waste therefore affect the entire ecosystem and its sustainability. As for the natural resource thematic entry point, the theme that emerged through an iterative consultative process, was that of water.

Rain, rivers, watersheds, groundwater, wetlands, coastal zones and the ocean up to the borders of the Exclusive Economic Zone (EEZ) are all part of the architecture of water for an Ocean state. The ocean between the islands is as integral to the ecosystem of the ocean state of Samoa as is the terrestrial area itself. Hydrological cycles are impacted by climate change which can result in degradation of biodiversity. Impacts are also manifest in ocean currents, saline intrusion and the evapotranspiration affecting the replenishment of watersheds and groundwater. This is particularly significant in the case of volcanic islands, like Samoa.

Using water as the entry point to tackling the Triple Planetary Crisis can also provide strategic linkages to the Multidimensional Vulnerability Index (MVI) for SIDS. The resilience of water systems is one of the vulnerability indicators defined by the high-level panel. Taken together with the water quality study of Upolu, this approach to the Triple Planetary Crisis ensures that water as a vital system is well protected, which in turn ensures the resilience of people, their livelihoods, and nature.

Fine mats made from pandanus leaves are an iconic cultural expression, a form of cultural currency recognised as sustaining identity and social cohesion. Samoans so valued nature they often set boundaries protected by “tapu” that would forbid and punish wrongful exploitation. “Tapu” means forbidden or sacred, and is a word that was later transliterated into English as “taboo.”

As water has multiple cycles, importance and uses, especially for ocean states such as Samoa, this conceptual framework resonates with several institutions that were consulted and each could see a role for themselves and their work in such an integrative systems approach to address the Triple Planetary Crisis in Samoa, where both the Samoa Ocean Strategy and the National Water Resources Management Plan merge and interlink. This may well be the reason why everyone consulted has agreed to placing water, in all its life-supporting forms, at the core of how we may best respond to the Triple Planetary Crisis. This is why we have called this new framework for action: **Vai o le Ola ~ Water of Life**.

"Se'i fono le pa'a ma ona vae."

Samoan proverb which literally translates to "let the crab take counsel with its legs." Traditional Samoan wisdom recognising the importance of consulting together before embarking on any important undertaking.

It is clear from the mission introducing this approach conducted in September 2022 and subsequent conversations, that the Triple Planetary Crisis framework provides an opportunity to recalibrate our response under this integrated framework to redefine our relationship with the earth we live on.

By bringing together organisations working to address these interlinked issues, the UN system aims to create with the government and the people of Samoa, a unified framework that will leverage the commensurate support needed to reflect the real economic and social costs of climate change, biodiversity loss and pollution. By taking an Ocean rather than Small Island Developing State approach, the UN in the Pacific assists Governments to better integrate their land and ocean economies, build debt sustainability drawing *inter alia* on the market value of natural capital, and more granularly address compounded vulnerabilities occurring in the land-ocean continuum. This is further expounded in the interventions suggested in the Vai o le Ola plan which form the basis of an investment framework for Samoa

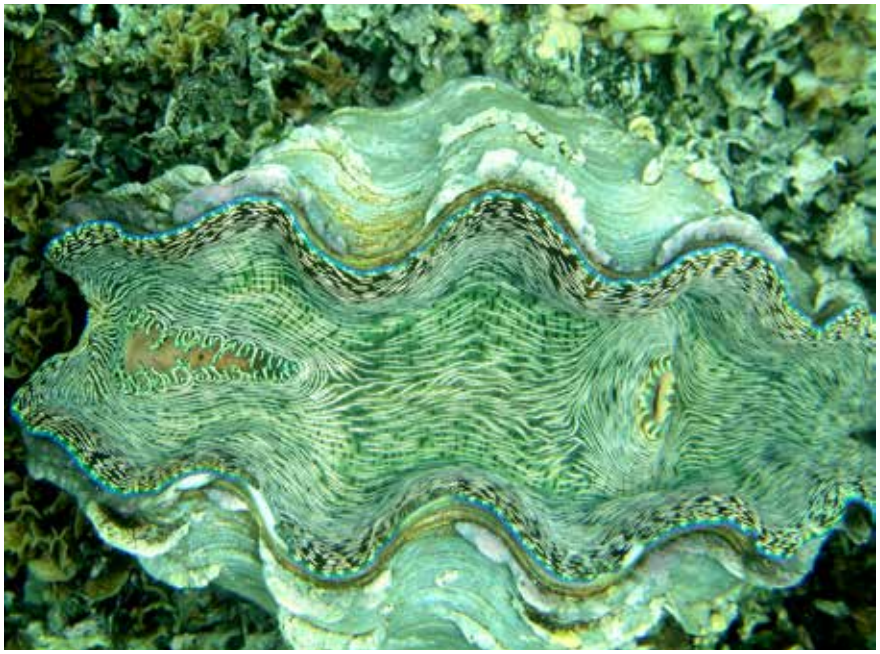
Significance of the Triple Planetary Crisis Framework

Following the positive reception of the stakeholders, an overarching strategy and action plan needed to be formulated and approved for financing to put in place a contextualised Triple Planetary Crisis response. This gave rise to the development of this document which is at heart an investment plan articulating in project form, the strategic priorities of Samoa. Crucially, the strategy will be a living document that is reflective and supportive of the country's mitigation and adaptation efforts,

in line with the Community Integrated Management Plans Strategy (2015), the Samoa Second Nationally Determined Contributions (July 2021), Samoa Ocean Strategy (2020-2030), Samoa Climate Change Policy (2020-2030), the National Water Resources Management Plan (2021-2030) and relevant sector plans and consistent with UNCT priorities stemming from the UN Pacific Sustainable Development Cooperation Framework (2023-2027) and the Country Implementation Plan (2023-2024).

The Triple Planetary Crisis offers an amplifying framework for the Loss and Damage analysis and costing, the operationalisation of which the Government of Samoa has expressed full commitment to following the COP27 decision on funding arrangements for Loss and Damage.

As Samoa assumed the Chair position of the AOSIS on 1 January 2023, the Triple Planetary Crisis response led from Samoa will help advance the climate justice agenda through the development of the Loss and Damage approach for the Pacific SIDS. The Triple Planetary Crisis response plan draws on a policy paper titled **Adaptation, Loss and Damage – The Case for Climate Justice** co-authored with Professor Jeffrey Sachs and his team at the Sustainable Development Solutions Network and published on 4 November 2022 to inform COP27 deliberations on the matter. The Triple Planetary Crisis strategy will also draw on, and be in strategic alignment with, an ongoing Joint Programme on Ecosystem Services, which includes an inventory and the economic valuation of Samoa's natural capital, an important component in the monitoring and assessment of the L&D costs to the country. The plan proposed is based on the needs identified by Samoa and will form the basis of the funding proposition that goes to donors, private sector, and multilateral development banks and into COP#28.



As with many other invertebrates, the natural abundance of giant clams has declined significantly over the years. The giant clam above is in the Savaia clam sactuary where there are three species of clams (Tridacna gigas, Tridacna squamosa, Tridacna derasa) introduced from Palau and Tonga.

As shown in Figure 5 below, there are close to fifty organisations working to address the Triple Planetary Crisis in Samoa, not counting the hundreds of villages. Many of these organisations are implementing multiple projects and while the total combined value is difficult to accurately determine, funding will amount to many millions of Tala. In order to better understand what is being done in Samoa to address the impacts of climate change, biodiversity and nature loss and pollution and waste, a series of meetings were held with many of these organisations in the last quarter of 2022, ending with a roundtable discussion in early December.

Consultations held to date have made it clear that the synergistic approach proposed by this Triple Planetary Crisis response plan provides a timely and much needed framework that will help link climate change, biodiversity loss and pollution to Loss and Damage funding.

It is from these consultations that **water** was identified as the universal entry point through which the interlinked Triple Planetary Crisis issues could be addressed.

The centrality of water, and particularly the ocean surrounding the archipelago, is recognised in the names of villages: some 60 villages and sub-villages have "vai," referencing water, as a prefix or suffix in the name.

All organisations consulted are implementing projects that address Triple Planetary Crisis issues to varying degrees, from ridge to reef and beyond. Nevertheless, some gaps still remain. Drought, an issue that has recently impacted Samoa, highlighted the need to greatly enhance the capacity to monitor groundwater and to develop an early warning system for drought. This slow onset disaster is easy to overlook in a country that has between 3,000 and 6,000 millimeters of rainfall annually.

Figure 5: Organisations in Samoa concerned with the Triple Planetary Crisis

Triple Planetary Crisis Roundtable meeting, Scientific Research Institute of Samoa, 7 December 2023

A number of organisations also expressed the need to strengthen their work in the marine environment including the mangrove ecosystems which play a critical role in the island's overall environmental health.

Data and capacity for data collection and monitoring remain an issue for many organisations. It was noted that while there may be good data sets, being able to interpret the data, data analytics, may be the point of weakness.

The need for skilled personnel also persists in some fields, as does the need to strengthen the participation of women in certain fields.

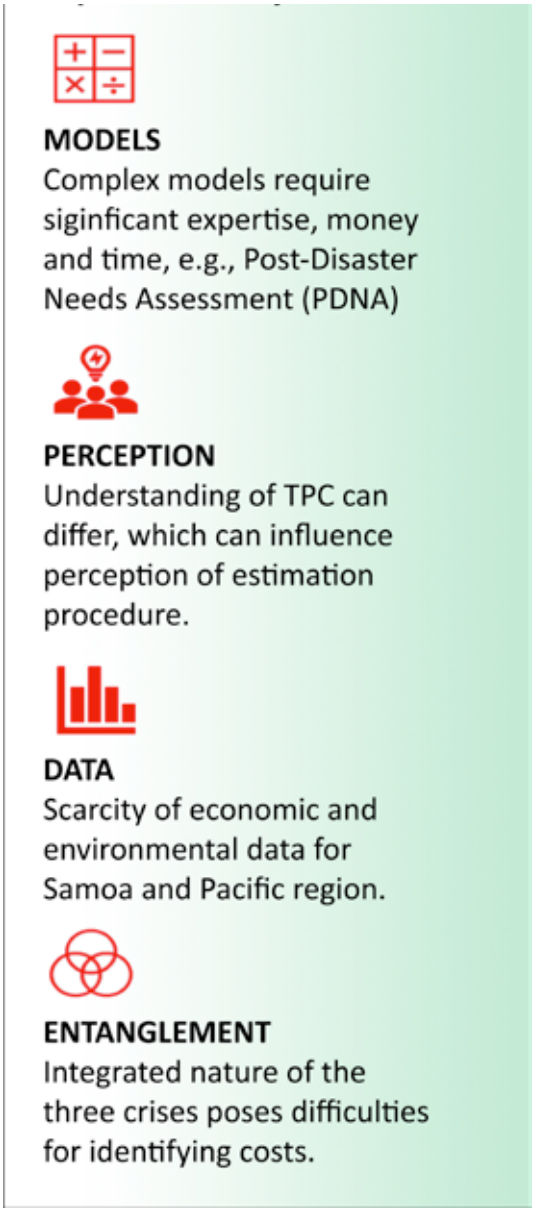
Through their discussions at the UN Conference of the Parties (COP), countries have been focused on reducing greenhouse gas (GHG) emissions.

This is necessary if we are to limit global warming to 1.5 degrees Celsius by 2030. Unfortunately, it seems that inadequate attention has been paid to addressing the interlinked issues of pollution and biodiversity loss, which individually and collectively are critical in the fight against climate change.

"Only by considering climate and biodiversity as parts of the same complex problem, which also includes the actions and motivations and aspirations of people, can solutions be developed that avoid maladaptation and maximise the beneficial outcomes. Seeking such solutions is important if society wants to protect development gains and expedite the move towards a more sustainable, healthy and equitable world for all."

Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change (2021)

Figure 6: Issues estmating Loss and Damage from the Triple Planetary Crisis



The importance of taking a holistic response approach to the Triple Planetary Crisis is evident when determining its connections with loss and damage. Small Island Developing States, after several years of debate and discussion and in collaboration with their partners, achieved a remarkable feat by championing an agreement at COP#27 to setup a loss and damage financing facility.

Loss and damage occur when both climate change mitigation and adaptation efforts are failing, the immediate consequence being a decline in the natural capital and ecosystem services and, implicitly, an adverse impact on livelihoods and the country's long-term growth potential. A methodology to calculate loss and damage has to be agreed upon at the international level and several efforts are already underway, including within the UN system.

> *Samoa's response plan to the triple planetary crisis presents a practical model for determining loss and damage, assessing and quantifying in dollar terms the impacts of the Triple Planetary Crisis impacts in Samoa.*

Recognising loss in natural capital as a main driver for loss and damage, the approach makes a comparative calculation for the Triple Planetary Crisis impacts in Samoa using the World Bank's Wealth of Nations database on natural wealth. Estimates are discussed briefly, and an average is taken as the financial impact of the Triple Planetary Crisis in Samoa. Loss and damage is then measured as the difference between Triple Planetary Crisis financing and the dollar value of the TPC impact.

Triple Planetary Crisis Trends in Samoa

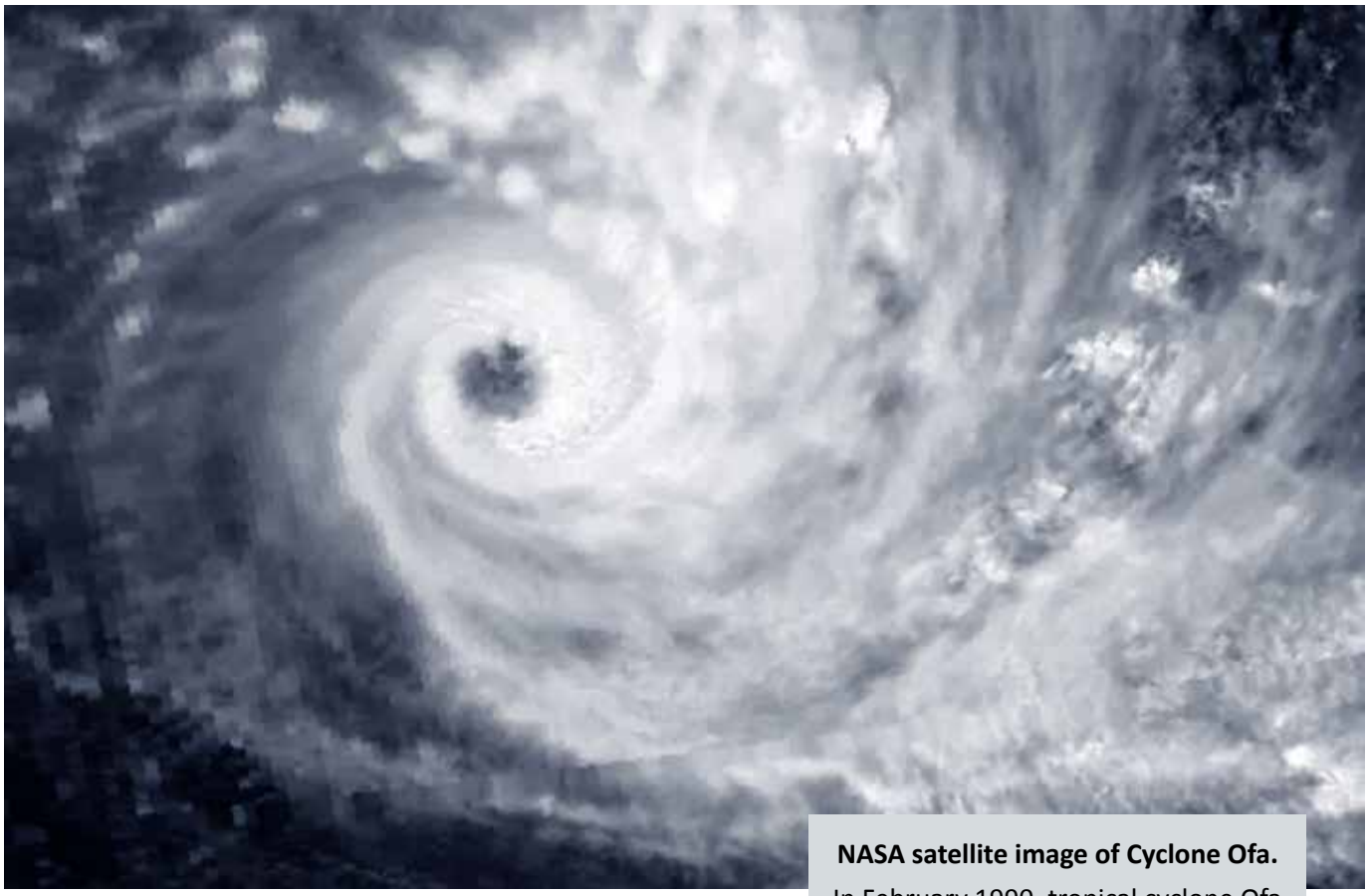
During the years 1964 to 2019, Samoa experienced 10 meteorological disasters (Figure 7), a combination of climatological, geophysical, and hydrological events, and one health shock in the form of a measles outbreak (EM-DAT). The human impact from these disasters saw over 369 thousand people affected and approximately 28 thousand left homeless. However, deaths and injuries resulting from these disaster shocks have been relatively low in comparison. Samoa recorded a total of 534 deaths during the period, and injured persons were estimated at 5,931. However, the number of deaths and disasters could be grossly underestimated.

Figure 7: Composition of Disasters Affecting Samoa (1964 to 2019)

Source: EM-DAT

The World Bank's 2021 Climate Risk Country Profile for Samoa notes:

> *"The tropical cyclone archive for the Southern Hemisphere indicates that between the 1969/70 and 2010/11 seasons, 26 tropical cyclones developed within or crossed the Samoa EEZ, representing an average of 6 cyclones per decade."*



NASA satellite image of Cyclone Ofa.
In February 1990, tropical cyclone Ofa struck Samoa with hurricane winds in excess of 200 km/hr. In December 1991, less than 22 months later, tropical cyclone Val struck the same area with similar intensity. These devastating disasters caused some of the largest losses and damages recorded in the region, estimated to be between US$300 million and US$500 million (PCRFL 2011).

For a small island developing state like Samoa, the estimated value of damages from these disaster events have been significant. Over this period (1964-2019), Samoa's disaster damage totalled approximately US$1.45 billion, with the largest share of estimated losses attributed to tropical cyclones Ofa (1990) and Val (1991).

Direct disaster losses refer to directly quantifiable losses such as the number of people killed and the damage to buildings, infrastructure and natural resources. Indirect disaster losses include declines in output or revenue, and impact on wellbeing of people, and generally arise from disruptions to the flow of goods and services as a result of a disaster.

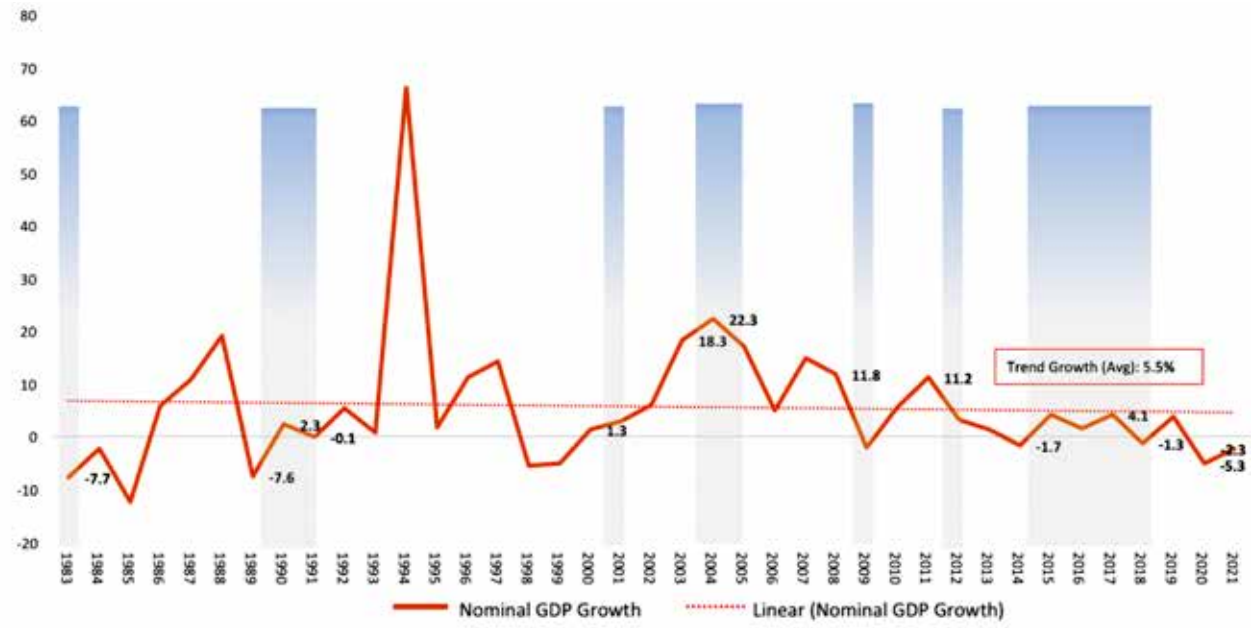
Adapted from Understanding Risk: Evolution of Disaster Risk Assessment (GFDRR, 2014) and the UNDRR Global Assessment Report 2015

While damage estimates or losses focus on damage to infrastructure, there is much non-infrastructural damage which arises from these disaster events, for example, deaths resulting from the 2019 outbreak of measles in Samoa. Similarly, zoonotic diseases such as the COVID-19 pandemic can have significant impacts. As at 2 February 2023 Samoa has recorded 16,087 confirmed cases out of which there have been 29 confirmed Covid-related deaths.

A United Nations survey in Samoa on the impact of the pandemic revealed a loss of 23 percent in individual incomes and over 15 percent of job losses (UN 2021).

Samoa is estimated to have lost an equivalent of 13.2 percent of GDP (Tala $14.7 million) in 1983, the largest loss in Samoa's potential output on record. This is followed closely by losses of 13.1 percent of GDP (Tala $16.4 million) in 1990 and 10.8 percent of GDP in 2020 (Tala $87.2 million), the latter owing to the impact of COVID-19. Interestingly, not all disasters resulted in negative growth for Samoa, but all did cause growth slowdowns. Between 2004 and 2021, Samoa experienced double the amount of disasters when compared to the previous two decades. As a result, since 2004 growth trended sharply downwards from 18.4 percent to -5.3 percent in 2021 (Figure 8).

Figure 8: Samoa GDP Growth and Disaster Episodes (%)

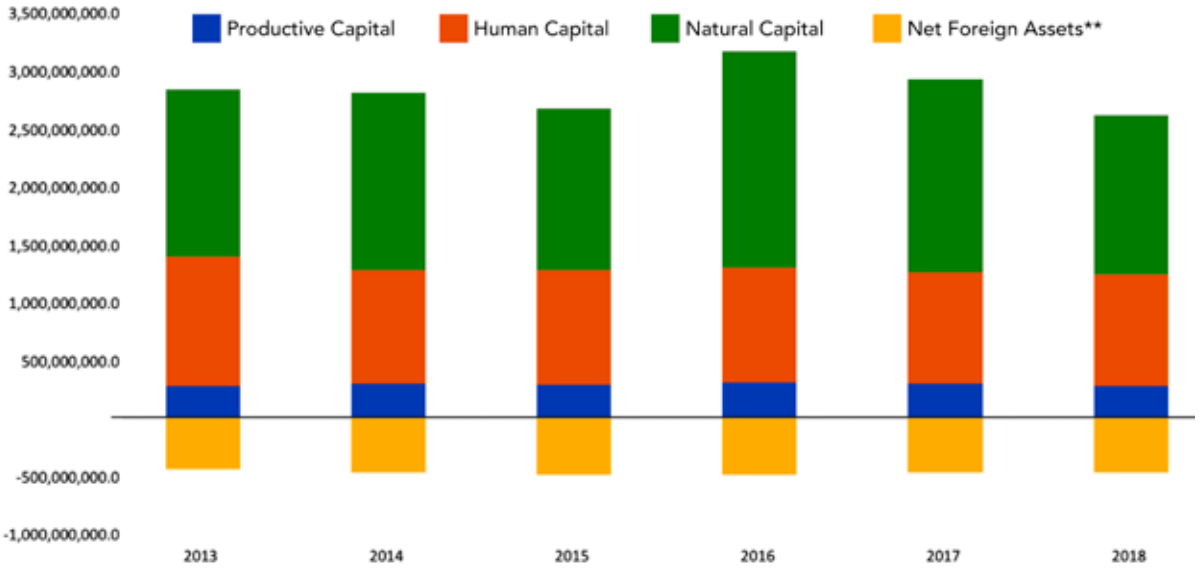


Beyond the impact of the disaster shock events, the Triple Planetary Crisis manifests through a number of slow-moving impacts, including deaths and disease from pollutants in the environment or through biodiversity loss, which ultimately affects food and food systems. The WHO database on health and climate change estimates that 28.1 percent of all deaths in the low and middle-income countries (LMICs) of the Western Pacific are due to the environment, compared to 29.6 percent in South-East Asia, and 29.1 percent in Africa.

Likewise, the burden of disease arising from environmental changes as reflected by Disability-adjusted life years (DALYs) is estimated to be 24.6 percent of the total population on average at the Western Pacific level, marginally below 25 percent in South-East Asia and 28.5 percent in Africa. Applying the LMIC Western Pacific ratios to Samoa, the number of deaths due to the environment shows a slightly downward trend in line with global estimates. On the contrary, the number of persons in Samoa experiencing health issues due to climate induced disease exhibits an upward trend during the period. Diseases due to the environment include respiratory infections, diarrhoeal diseases, soil transmitted helminthiasis, parasitic and vector diseases, and cancers, to name a few.

According to the World Bank Wealth of Nations data, Samoa's total wealth has fluctuated between US$2.5 billion and US$3 billion over the period 2013 to 2018. The largest proportion of Samoa's wealth share is its natural capital. Consequently, declines in natural wealth or renewable resources has been mostly accorded with falls in Samoa's national wealth, reflecting a clear impact of the Triple Planetary Crisis on national wealth. National wealth in Samoa suffered 4 negative growth episodes between 2014 and 2018, all of which, except for 2014, were underpinned by declines in natural capital. In dollar terms, natural capital fell by a total of US$0.63 billion, almost twice the increase in produced capital, recorded at US$0.04 billion for Samoa. Declines in natural capital therefore accounted for 94.2 percent of Triple Planetary Crisis costs, relative to 5.78 percent caused by expansions in produced capital.

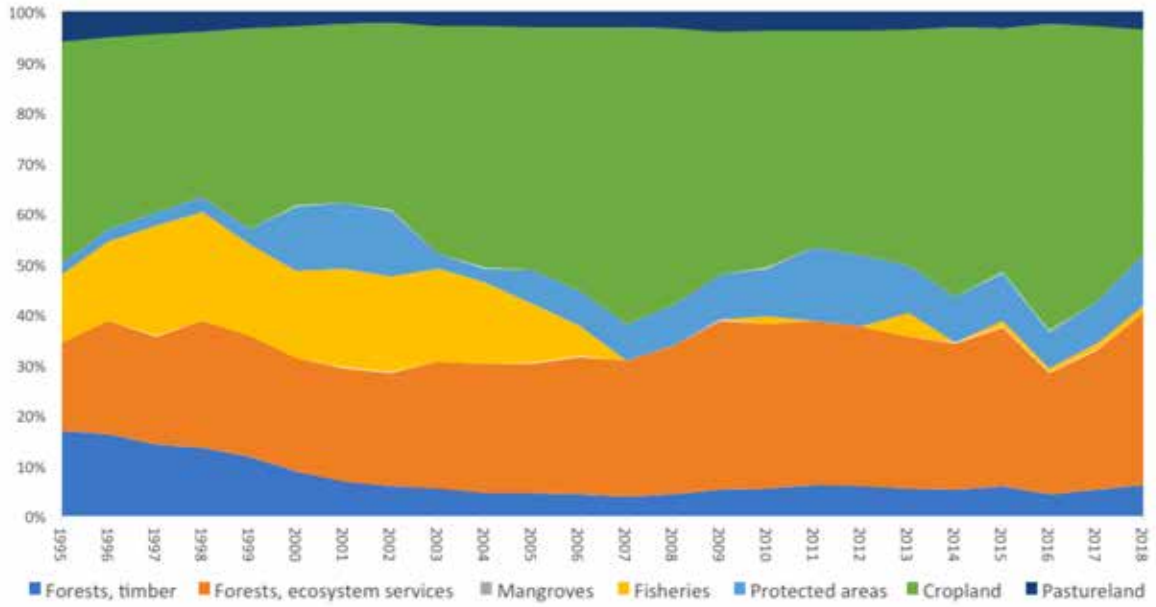
Figure 9: Composition of Samoa's National Wealth



Source: World Bank, The Wealth of Nations Database

Samoa's natural capital has mainly comprised croplands (46%) and forest, ecosystems services (27%), whose ratios have remained relatively steady throughout the review period. The fluctuations in natural capital for Samoa has occurred in fisheries, protected areas, and to a lesser extent pastureland (Figure 10).

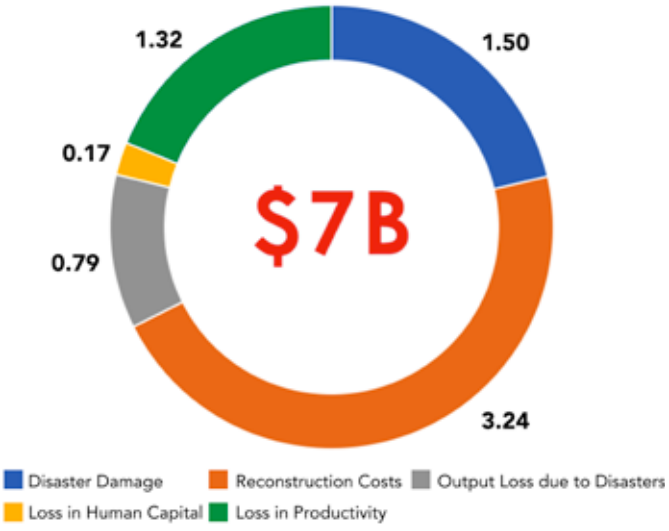
Figure 10: Breakdown and Flows of Samoa's Natural Capital (% Ratios)



The Triple Planetary Crisis Impact in Samoa

Broad "ballpark" Triple Planetary Crisis economic cost estimates for Samoa were derived. Based on these calculations, the Triple Planetary Crisis cost Samoa in dollar terms US$7.01 billion between 1964 and 2019 (Figure 11). The greater portion of TPC costs were due to reconstruction and damage due to disasters estimated at US$3.24 billion and US$1.5 billion, respectively, highlighting the significance of climate change and natural disasters shocks as key manifestations of the Triple Planetary Crisis during the period. There were substantial costs linked to losses in productivity, which from the analysis of Triple Planetary Crisis trends also indicates the significance of environmentally induced health issues. As deaths due to disasters in Samoa tend to be low, and since the deaths due to environmental changes are exhibiting a downward trend, the smallest Triple Planetary Crisis impact came from loss in human capital at US$0.17 billion, whilst output losses due to disasters were moderately higher at US$0.79 billion. TPC costs using the loss and damages approach was also estimated for the period 2013-2018 (Figure 11).

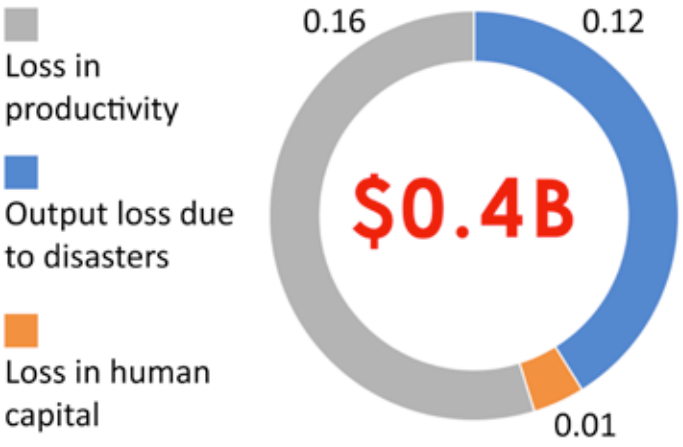
Figure 11: TPC Cost Estimates by Loss and Damage



Source: United Nations calculations

Unlike in the overarching period, there was no infrastructural damage from disasters between 2013 and 2018 according to EM-DAT. Owing to this, Triple Planetary Crisis costs were driven mostly by loss in productivity (US$0.16 billion) and output losses due to disasters (US0.12 billion). In the period 2013 to 2018, Samoa experienced a drought in 2015 and a storm in 2018. Since the storm did not incur quantifiable damage, it could be that the majority of the Triple Planetary Crisis costs in the period stems from the drought in 2015. This indicates as well, the significance of water accessibility, and water as a key Triple Planetary Crisis transmission mechanism. Another factor driving Triple Planetary Crisis costs was Samoa's loss in human capital, costed at US$0.01 billion and underpinned by deaths due to climate induced disease. In total, the economic costs of the Triple Planetary Crisis in Samoa during the sub-period amounted to US$0.3 billion or 6.1 percent of GDP. This translates to an average of 1 percent of GDP in Triple Planetary Crisis losses per year (Figure 12).

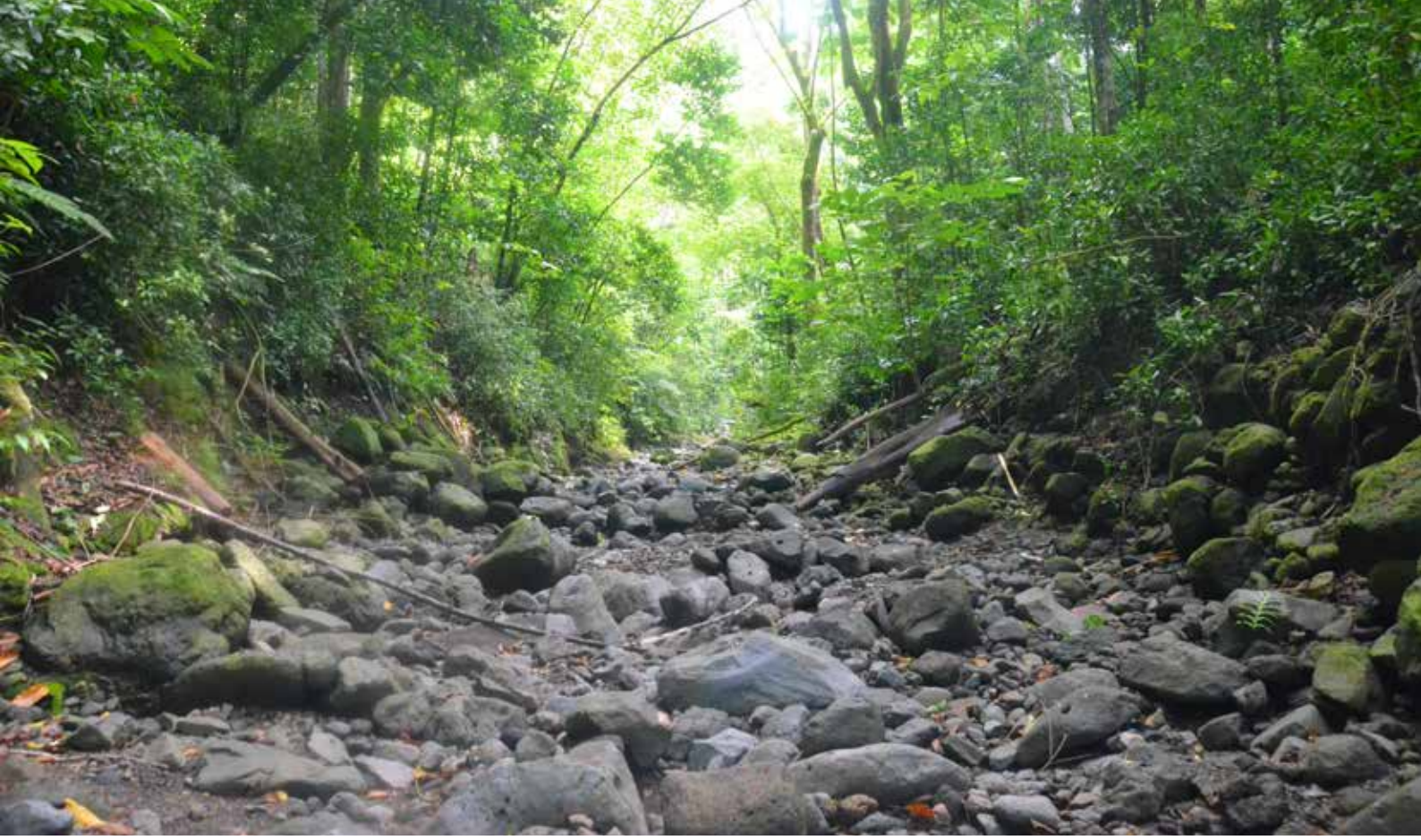
Figure 12: Breakdown of L&D-TPC Costs for Samoa, 2013 - 2018



Source: Author's calculations.

Declines in natural capital has been the main driver of Triple Planetary Crisis costs in Samoa. Triple Planetary Crisis cost stemming from national wealth contractions were identified in 2015, 2017 and 2018, to the tune of US$0.14 billion, US$0.21billion and US$0.29billion, respectively. Produced capital expansions were only observed twice, namely, in 2014 and 2016, at US$0.02billion recorded in both episodes.

Polistes olivaceus is an invasive species of paper wasp native to India and East Asia. Wasps belong to the same large group of insects as ants, and hence share many of their biological characteristics and present much the same problem to native species and habitats.



Samoa has many dry riverbeds for much of the year such as this one at Moamoa taken 31 December 2022, in the middle of what is commonly referred to as the wet season.

Figure 13: Breakdown of Wealth- Triple Planetary Crisis Costs for Samoa, 2013 - 2018

Source: United Nations calculations.

These fluctuations in natural capital and produced capital led to a total Triple Planetary Crisis impact estimated at US$0.69 billion or 14 percent of GDP, and roughly 2.3 percent of GDP per year (Figure 13). Over the period 2000 – 2020, the Organisation for Economic Co-operation and Development (OECD) estimates that Samoa received $0.57 billion dollars to tackle climate change adaptation and mitigation, biodiversity loss and to some extent pollution. This translates to and estimated Triple Planetary Crisis financing envelope of $0.31 billion between 2013 and 2018. However, during that same period, taking the average of the cost estimates from the UN's two estimation approaches, Samoa would have lost an estimated US$0.55 billion, meaning that the loss and damage from TPC was approximately US0.24 billion over the years 2013 to 2018.

SECTION 4: OVERVIEW OF INTERNATIONAL COMMITMENTS AND COUNTRY-LEVEL POLICY FRAMEWORKS

The Vai o le Ola initiative interprets the Triple Planetary Crisis framework in order to create a holistic approach to working at both the ecological and ecosystems level to combating climate change, decline in biodiversity and pollution.

It is important to note, however, that this is not an exercise to reinvent the wheel. Instead, this approach is undertaken with full cognisance of the work that Samoa has done over the years, particularly within the national strategic and policy frameworks that demonstrate the long, medium and short-term vision of the nation, and guide the implementation of the country's national development goals consistent with its international commitments and obligations.

> *"Ia o gatasi le futia ma le umele."*
>
> The sennit ring (*futia*) and its stand tied by a rope (*umele*) for the fishing rod must be of equal strength. Partners in any undertaking must be of one mind. Should one be weak and faint-hearted, the undertaking will fail.

This initiative provides a new conceptual framework and then attempts to assimilate, integrate, and gap-fill. The goal is to learn from and build upon prior ideas and initiatives, and to develop a holistic and coherent response in fulfilling the priorities already identified by the Government of Samoa, thereby creating an investment framework. This Section presents an overview of Samoa's international commitments and country level policy frameworks that inform and contribute to the design of proposed interventions.

International Framework

Following the 27th Conference of Parties at Sharm El-Sheikh, Samoa, together with other small island developing states, has won the high moral ground with the historic decision to establish and operationalise funding arrangements for the Loss and Damage fund, especially for nations most affected by the impacts of the climate crisis. As Samoa took up the chairmanship of AOSIS on 1 January 2023, the interventions proposed under this strategy will allow Samoa to serve as a model on addressing Loss and Damage in the lead up to COP#28 and solidify AOSIS countries' readiness to chart a pathway to respond to loss and damage and begin to achieve climate justice.

Most importantly, as a prominent proponent of the adoption of the MVI as a complement to the Gross National Income(GNI) per capita for access to financing by vulnerable states regardless of their income category, Samoa intends to link the measurement of vulnerability to the Triple Planetary Crisis impact and the cost of Loss and Damage to make the case for adequate concessional financing.

As a State Party to the Convention on Biological Diversity (CBD), Samoa is also committed to meeting the CBD targets of conservation of biodiversity, sustainable use and equitable sharing of its benefits. Considering the recent 15th Conference of Parties in Montréal, the groundbreaking adoption of the new Kunming-Montreal Global Biodiversity Framework (GBF) and more recently the High Seas Treaty, all interventions proposed in this document will help Samoa achieve the 30x30 target commitment – to protect at least 30% of land and 30% of sea for nature by 2030 – aimed towards reversing biodiversity loss and establishing a harmonious coexistence between human and nature.

Last but not least, Samoa is a State Party to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), and has affirmed its commitment to promote the equality of rights of women on the same basis as men and take measures for the full advancement of women's rights across agencies and projects. This is also in line with SDG 5, "achieve gender equality and empower all women and girls", which the Government of Samoa has committed itself to. Such international commitments are nationalised through the National Policy for Gender Equality 2021-2031 and the Inclusive Governance Policy 2021-2031. As such, the interventions proposed under the Strategy will seek to align with priorities at community levels, and to maximise the engagement and meaningful participation of women and other marginalised and vulnerable groups. The inclusion of gender-disaggregated indicators and the proper documentation of women's roles in communities during project implementation will also help strengthen the understanding of women's roles in leadership and decision-making, provide equal opportunities for women in employment, and empower women to be change agents within their communities within resilience, disaster preparedness, and biodiversity fields.

National Strategies and Policies

This subsection summarises Samoa's national development goals as contained in each of the relevant country policy and strategic frameworks, and illustrates in detail how each intervention proposed under the initiative aligns those key outcomes.

Preliminary Interventions	Corresponding National Policies and Legislation
1. Watersheds: Nature-based Watershed Management (NBWM): Scaling-up naturebased solutions for watershed management, community-based climate mitigation and flood resilience.	SOS Solution 2: Development Sustainable Ocean Financing Mechanisms PDS KPA15: Build Climate Resilience (International binding mechanisms, including sustainable climate financing support for climate resilience programs strengthened) 2NDC: Need for external funding support CCP Objective 4: Enhance access to sustainable climate finance.
2. Trust Fund: Vai o le Ola Resilience and Conservation Trust Fund	2NDC: Need for external funding support SOS Solution 2: Development Sustainable Ocean Financing Mechanisms CCP Objective 4: Enhance access to sustainable climate finance (incl. Trust funds)
3. Knowledge Platform: A Resilient Samoa Islands Knowledge Platform: Crowd Sourcing Knowledge	SOS Solution 3: Improve Scientific Research, Data Collection and Monitoring within Samoa's Ocean CCP Objective 6: Improved data and information management on CC for informed decision making
4. Climate and Nature Financing: Innovative Climate and Nature Financing (Blue, green, sovereign bonds).	PDS KPA 17: Enhanced Conservation and Sustainable Use of Natural Resources 2NC Adaptation target (expand mangrove forest area) SOS Solution 12: Integrate Ecosystem-based Approaches into existing Climate change adaptation plans.
5. Social Entrepreneurship for Climate and Nature: For Climate Resilience in Samoa.	Samoa 2040: Promoting a Safe, Secure, Inclusive Samoa. KPA 4: People Empowerment, Community empowerment facilitates social harmony and inclusion by enhancing spiritual well-being, gender equality and consideration for the country's most vulnerable.
6. Clean energy: Community Access to Clean Energy across Samoa Islands.	PDS KPA 18: Sustainable Energy Development Enhanced 2NDC Mitigation target (GHG emission reduction) CCP Objective 3: Implement mitigation measures to reduce GHG emissions.
7. Eliminating plastic pollution: Zero Plastic Waste Across Samoa Islands.	PDS KPA 16: Effective Environmental Protection and Management Frameworks (effective monitoring systems, Sustainable solid and chemical waste management) 2NDC Mitigation target (GHG emission reduction) SOS Solution 10: Improve Waste and Marine Pollution Management, including plastic waste.

Preliminary Interventions	Corresponding National Policies and Legislation
8. Samoa Environment Management and Conservation Act: Samoa Islands Environment Management and Conservation Legislation to anchor the Triple Planetary Crisis Framework.	PDS KPA 17: Enhanced Conservation and Sustainable Use of Natural Resources 2NDC Adaptation target (expand forest area) SOS Solution 6: Strengthen Policy and Legislation for Protection of Coastal Ecosystem Services.
9. Protected Areas Network for Samoa: Samoa National Islands Protected Areas Network (protecting and enhancing biodiversity).	PDS KPA 17: Enhanced Conservation and Sustainable Use of Natural Resources 2NDC Adaptation target (expand forest area) SOS Solution 4: Complete Marine Spatial Plan (MSP) SOS Solution 6: Strengthen Policy and Legislation for Protection of Coastal Ecosystem Services SOS Solution 9: Strengthen National MPA Network (30%).
10. Regenerative Tourism: enhancing nature-based tourism for climate resilience and sustainability. Strengthening Nature-based Mitigation and Adaptation efforts through Regenerative Tourism in Samoa.	PDS KPA 8: Tourism Revitalisation (increased socio-economic benefits from diversified tourist attractions/activities across communities (including eco-tourism, cultural and historical sites).
11. Promoting Samoa Islands cultural and biological heritage sites: Samoa Islands Heritage Sites - nominations as World Heritage sites, Biosphere Reserves and Geoparks.	PDS KPA 8: Tourism Revitalisation (increased socio-economic benefits from diversified tourist attractions/activities across communities (including eco-tourism, cultural and historical sites).
12. CCGAP - Climate Change Gender Action Plan	Samoa 2040: Promoting a Safe, Secure, Inclusive Samoa. KPA 4: People Empowerment, Community empowerment facilitates social harmony and inclusion by enhancing spiritual well-being, gender equality and consideration for the country's most vulnerable.
13. Green watershed infrastructure for flood control and mitigation	Samoa 2040: To boost climate and disaster resilient infrastructure to reduce business costs, promote economic growth and improve livelihoods 2NC Adaptation target (expand mangrove forest area) SOS Solution 12: Integrate Ecosystem-based Approaches into existing Climate change adaptation plans. CCP Objective 2: Implement adaptation measures protecting against CC impacts.

Preliminary Interventions	Corresponding National Policies and Legislation
14. Nature-based and Climate Smart Resilient Agriculture	Samoa 2040: To transform agriculture and fishing production through the promotion of large-scale farming, climate-smart technologies, to increase scope for import substitution, ensure food and nutrition security. PDS KPA 7: Agriculture, Fisheries and Aquaculture Productivity (include promoting sustainable agricultural methods and techniques, proper management of agricultural chemicals) 2NDC Adaptation target (increase agroforestry area).
15. Climate Resilience of the Samoa Islands	Samoa 2040: To boost climate and disaster resilient infrastructure to reduce business costs, promote economic growth and improve livelihoods CCP Objective 2: Implement adaptation measures protecting against CC impacts.
16. Samoa Ocean Strategy – Integrated Management for a Blue Recovery through sustainable fisheries and aquaculture.	Fisheries Management Act 2016 Samoa 2040: To transform agriculture and fishing production through the promotion of large-scale farming, climate-smart technologies, to increase scope for import substitution, ensure food and nutrition security. PDS KPA 7: Agriculture, Fisheries and Aquaculture Productivity (include promoting sustainable agricultural methods and techniques, proper management of agricultural chemicals) 2NDC Mitigation target (GHG emission reduction) SOS 2. Develop Sustainable Ocean Financing Mechanisms; 6. Strengthen policy and legislation for Coastal Ecosystem Services protection; SOS 8. Strengthen effectiveness of coastal management using traditional knowledge, innovation and marine science; SOS 9. Strengthen the national MPA Network; SOS 12. Integrate Ecosystem-Based Approach (EBA) into existing climate change adaptation management plans and initiatives
17. Telling the Resilient Samoa Islands Story - Communication and Knowledge management strategy for the Vai o le Ola Framework	SOS Solution 8: Strengthen coastal management via integration of traditional knowledge into marine science CCP Objective 8: Promote effective awareness, education and advocacy activities on CC issues.

Samoa 2040: Complementing the PDS, this document provides a longer-term strategic framework and vision for Samoa's economic growth and development, and guides medium-term priorities as outlined in the PDS. It recognises that investment and reforms should be targeted towards building climate-resilient infrastructure and the sustainable management of its ecosystems which can generate economic gains and lower costs of production.

It also identifies the crucial need to promote gender equality and remove barriers constraining the participation of women in all institutions, employment opportunities and community engagement.

These priorities identified are addressed by interventions for Green infrastructure for Flood Control and Climate Resilience of Upolu Islands.

Agriculture and fishing have been identified as one of the four broad focus areas, the potential of which, once unlocked, can boost income growth and standard of living in Samoa by the year 2040. Not only can they increase the scope for import substitution, raise exports, but they can also improve food and nutrition security. However, there is a need to strengthen research and development in resilience to climate change and to promote sustainable farming and fishing practices. These needs can be fulfilled through interventions focusing on Nature-based Resilient Agriculture and Sustainable Aquaculture and Fisheries Management.

Tourism is another one of the four broad focus areas identified that offers significant opportunities to drive economic growth, given Samoa's pristine natural environment and unique cultural traditions.

While a flourishing tourism industry can have substantial positive spill over effects to the national economy, it is necessary to minimise the negative impacts of tourism on local ecosystems and communities. An intervention for Community-based Ecotourism works to address this objective.

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

The long-range Samoa 2040 goals and the 5-year PDS provide an overarching framework that outlines the national priorities for all aspects of national development, with Strategic Outcomes targeting socio-economic development, governance, the environment, and infrastructure.

Key Priority Area (KPA) 4 of the PDS emphasised the need to improve access to all opportunities for all especially women and other vulnerable groups, and seeks to focus on the community empowerment in facilitating social harmony and inclusion. This is a cross-cutting outcome that will be addressed by all interventions through the strengthening of engagement of women and other marginalised groups, as well as the use of gender-disaggregated data in results reporting which could better inform efforts in conducting gender analysis for the implementation of this Strategy.

Key Priority Area (KPA) 7 of the PDS identifies the need to boost agriculture, fisheries, and aquaculture productivity, including the promotion of sustainable agricultural methods and techniques, and the proper management of agriculture chemicals.

This corresponds to interventions for Nature-based Resilient Agriculture and Sustainable Aquaculture and Fisheries Management. KPA 8 focuses on tourism revitalisation, which can lead to increased socio-economic benefits from diversified tourist attractions or

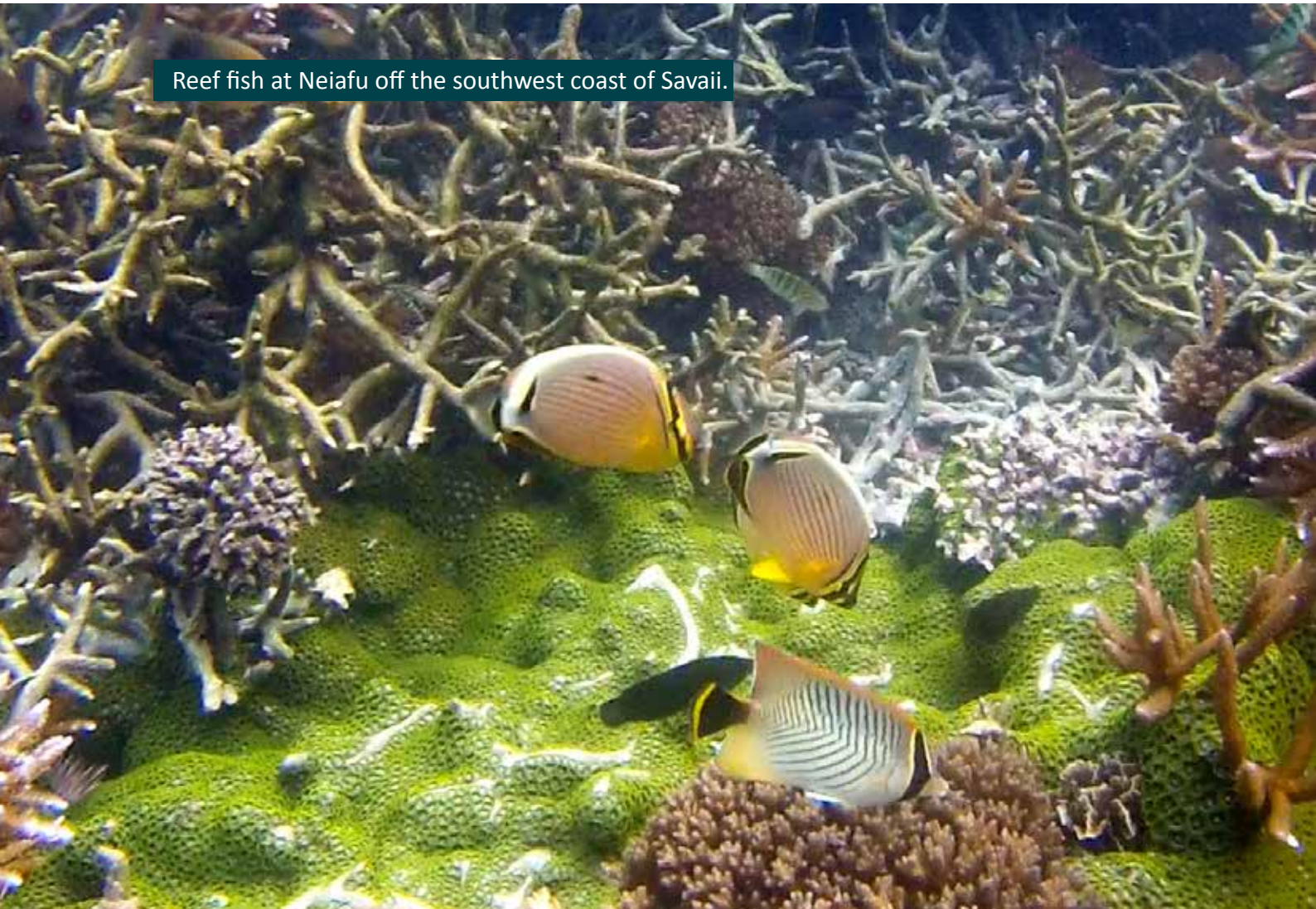
activities across communities, including eco-tourism, as well as the development of cultural and historical sites. This can be fulfilled by the interventions on Community-based Ecotourism and the Upolu Islands Heritage Sites.

KPAs 15 to 18 all contribute towards Strategic Outcome 4: "*secured environment and climate change*". KPA 15 aims to enhance resilience to climate change and prioritises climate financing instruments in its support. This corresponds to the interventions for the Loss and Damage Fund for Vulnerable Countries and Innovative Climate Financing. KPA 16 seeks to protect and better manage the environment, including through strengthening environment monitoring systems and waste management plans, which can be addressed through the intervention on Zero Plastic Waste Across Upolu Islands.

KPA 17 prioritises the conservation and sustainable use of natural resources, through effective watershed management and biodiversity conservation, which informed the development of the interventions for the Samoa Environment Management and Conservation Act, the Protected Areas Network for Samoa, and the Nature-based Watershed Management. Finally, KPA 18 seeks to enhance the development of clean and renewable energy, which can be addressed through an intervention ensuring Community Access to Clean Energy.

Samoa's Second Nationally Determined Contribution (July 2021) (2NDC)

The 2NDC embodies Samoa's commitment to achieving the long-term goals under the Paris Agreement and sets out a series of mitigation and adaptation targets to be achieved by 2030. On mitigation targets, Samoa aims to reduce overall GHG



Reef fish at Neiafu off the southwest coast of Savaii.

emissions by 26% by 2030 compared to 2007 levels, and this economy-wide target comprises the reduction of emissions in the energy, waste and AFOLU (agriculture, forestry, and other land use) sectors. These sector-specific emission reduction targets can be addressed through the interventions ensuring Community Access to Clean Energy, Zero Plastic Waste Across Upolu Islands, and Sustainable Aquaculture and Fisheries Management respectively.

On adaptation, three quantitative targets have been identified to build resilience to the impacts of climate change. In the marine sector, Samoa aims to expand the area of mangrove forests by 5% compared to 2018, which can be fulfilled by the interventions for Green infrastructure for Flood Control and Nature-based Watershed Management. In the AFOLU sector, Samoa seeks to expand the area under agroforestry to an additional 5% of agricultural land by 2030 compared to 2018, which corresponds to the intervention for Nature-based Resilient Agriculture. It also highlights the need for sustainable forest management, as well as to increase total forest cover by 2% in 2030 relative to 2013.

This can be achieved through the interventions establishing the Samoa Environment Management and Conservation Act and the Protected Areas Network for Samoa.

Finally, Samoa's 2NDC also cited the need for "external funding support" for all listed adaptation and mitigation targets, which can be responded to through interventions for the Loss and Damage Fund for Vulnerable Countries, Innovative Climate Financing, and the Samoan Islands Trust Fund.

Samoa Ocean Strategy 2020-30: The SOS establishes a strategic framework for the sustainable and integrated management of Samoa's ocean area and marine resources and outlines the necessary steps to advance ocean priorities with government and other stakeholders that is in alignment with the Fisheries Management Act 2016, a key piece of legislation which outlines guiding principles for the integrated management of Samoa's fisheries resources, as well as other sector plans.

The SOS offers a total of 13 Integrated Management Solutions in response to the multiplicity of threats faced by Samoa's ocean space and commits to organising 30% of the EEZ as Marine Protected Area by 2030 ("30 by 30")

Solution 2 focuses on the development of innovative ocean financing mechanisms for the delivery of and long-term sustainability of the SOS. Interventions on the Loss and Damage Fund for Vulnerable Countries, Innovative Climate Financing, and A Samoa Islands Trust Fund work to respond to this need.

Crown of thorns starfish (Acanthaster planci) Photograph: American Samoa National Park

E fofō e le alamea le alamea, Samoan proverb.
Traditional ecological knowledge in Samoa advises that if you get stung by the poisonous Crown of Thorns (*alamea*), turn the starfish over and place its spongy underside on the wound as it will proceed to suck the poison out. The proverb is interpreted to mean that problems in a community can be solved by that community. An indigenous reference that resonates with community-based adaptation and mitigation against climate change.

Segasegamau'u, Cardinal Honeyeater. As is common with many birds, it is the male that is much more colorful than the female. Considered to be endemic to the region, the government of Samoa considers the bird endemic to Samoa.

Solution 3 highlights the need to improve research, monitoring and data collection of important ecological and biological marine ecosystem features, which builds technical knowledge on which to base management decisions. This can be achieved through an intervention establishing a Resilient Upolu Island Knowledge Platform: Crowd Sourcing Knowledge.

Solutions 4, 6 and 9 focuses on the protection of biodiversity and the preservation of ecosystem services, including through the completion of Samoa's marine spatial planning, strengthening of policy and legislation for the protection of coastal ecosystem services, and meeting the 30% target of Marine Protected Areas (MPAs) as recommended by the global biodiversity framework.

These priorities correspond to interventions establishing the Samoa Environment Management and Conservation Act and the Protected Areas Network for Samoa.

Solution 7 addresses the need to increase capacity and funding towards the implementation and monitoring of illegal and unsustainable activities including illegal, unreported and unregulated (IUU) fishing practices, pollution from vessels, and the unsustainable use of marine resources, and is addressed by the intervention on Sustainable Aquaculture and Fisheries Management.

Solution 8 seeks to improve coastal management by increasing awareness of and respect for the marine environment using traditional knowledge and marine science. This is linked to an intervention on Telling Resilient Upolu Islands Story which focuses on building a communications strategy to transfer knowledge and cultivate awareness of the importance of a healthy ecosystem.

Solution 10 aims to address the current inadequate system of waste management and reduce land-based pollution impacts to marine coastal ecosystems, which forms the basis for the proposed work under an intervention for Zero Plastic Waste Across Upolu Islands. Finally, Solution 12 highlights the importance of utilising ecosystem-based approaches (EBA) in existing climate change adaptation plans, such as mangrove reforestation. This is responded to by the interventions for a Green infrastructure for Flood Control) and Nature-based Watershed Management, both of which integrate EBA in addressing the impacts of climate change.

E au le inailau a tamaitai:

When courting Sina, a beautiful and high-ranking maiden (‘augafaapae) from the village of Falealupo in Savaii, the suitor and his escorts (‘aumoe) are challenged by Sina: he will win her hand if his party can finish thatching (ina’ilau) their half of a traditional Samoan house first while she and her retinue work on the other half. When the men slept that night, the women continued to work thereby completing their side first.

This Samoan proverb is often cited as evidence that in old Samoa, women came to be recognised for the important contributions they are capable of making for the betterment of society. Women are integral to communal wellbeing and are uniquely situated to lead efforts in community-based solutions that respond to the threats posed by the Triple Planetary Crisis.

Samoa Climate Change Policy (2020-2030)

Climate change has been recognised by the Government of Samoa as a major crisis that ought to be addressed with the utmost urgency.

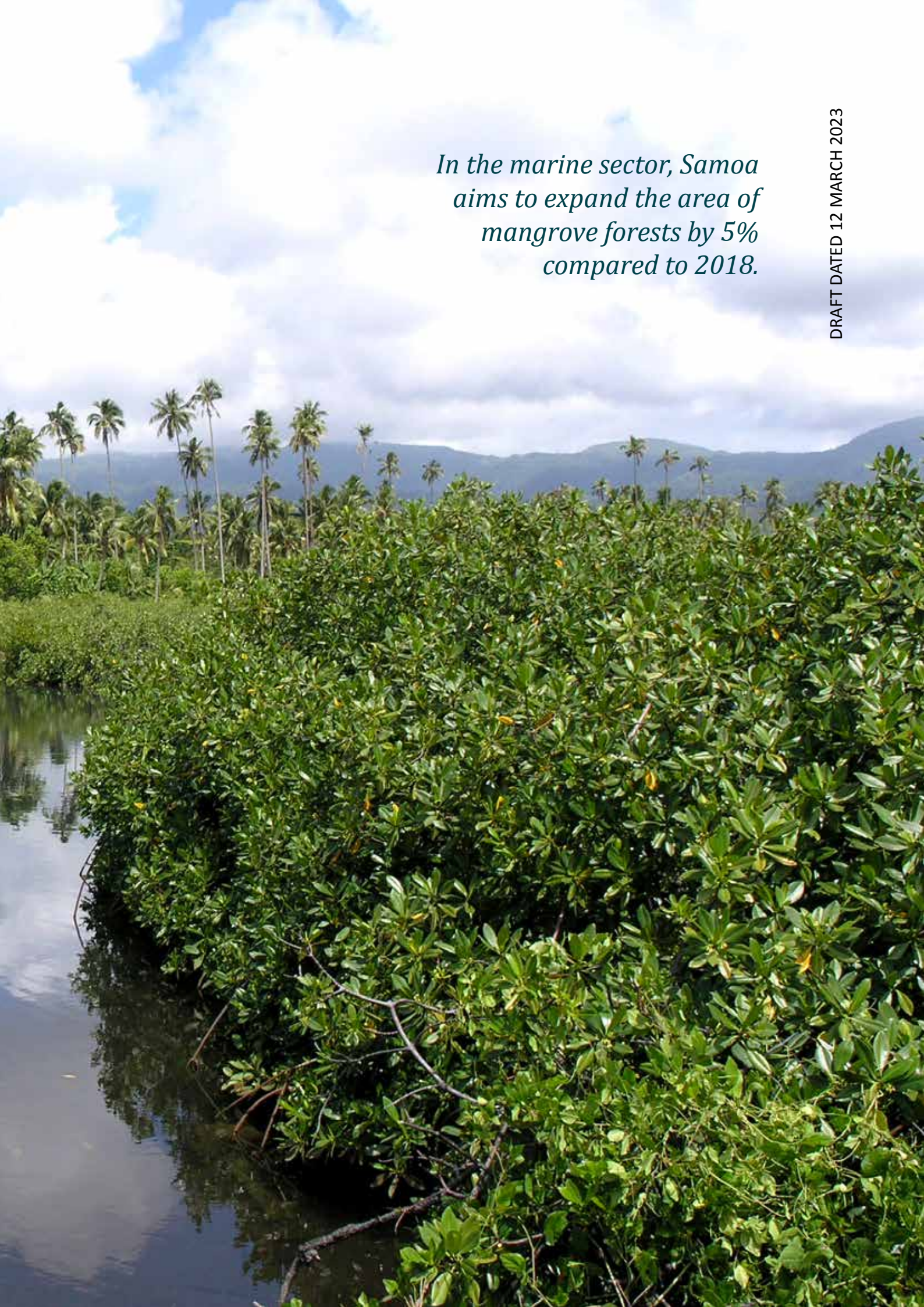
The commitment to combat the impacts of climate change is set out in the CCP, which provides the foundations of actions to guide coherent coordination on climate change adaptation and mitigation activities across different institutions and supports Samoa to meet its international obligations.

Objective 1 of the CCP identifies the need to put in place an effective governance framework for climate action, including establishing infrastructure to support loss and damage research. It is also necessary to promote inclusion of vulnerable groups (women, persons with disability, youth etc.) in climate change planning. This corresponds to the intervention on a Loss and Damage Fund for Vulnerable Countries, as well as other interventions which will be the product of extensive consultations with a focus placed on the engagement of women and other marginalised stakeholders

Objective 2 highlights the importance of strengthening climate adaptation to increase resilience across all ecosystems, which is responded to by interventions for Green infrastructure for Flood Control and Climate Resilience of Upolu Islands.

DRAFT DATED 12 MARCH 2023

In the marine sector, Samoa aims to expand the area of mangrove forests by 5% compared to 2018.



Objective 3 focuses on mitigation measures to reduce greenhouse gas emissions consistent with the targets under the NDC and to enable the transition to renewable energy, which can be fulfilled by the intervention ensuring Community Access to Clean Energy.

Objective 4 seeks to enhance access to climate finance and to strengthen resource mobilisation to support the implementation of climate change projects, including through sustainable financing mechanism such as trust funds. This attainment of this goal can be facilitated by the interventions on the Loss and Damage Fund for Vulnerable Countries), Innovative Climate Financing) and the Samoan Islands Trust Fund.

Objective 6 aims to improve climate change data and information management, and to enhance the accuracy and access of information available, which is supported by the intervention for a Resilient Upolu Island Knowledge Platform: Crowd Sourcing Knowledge.

Finally, **Objective 8** focuses on public awareness, education and advocacy on climate hazards and resilience building, which can be addressed through the intervention Telling Resilient Upolu Islands Story.

National Water Resources Management Plan (2021-2030) for Samoa

The Samoa National Water Resources Management Plan (2021-2030) is a strategic multi-agency plan to ensure the current and future availability of freshwater resources for public and private use. The development use of the Samoa NWRMP is a legal requirement under the Samoa Water Resources Management Act (SWRM Act, 2008) as well as a national necessity given the twin challenges of economic growth and climate change vulnerability.

Community Integrated Management (CIM) Plans

"To be resilient is to be adaptive, responsive and quick to recover so that communities are environmentally, socially and economically sustainable."

(CIM Strategy, August 2015)

The revised CIM Plans recognises the change in approach since the first set of fifteen CIM Plans were developed from 2002-2003 under the World Bank funded Infrastructure Asset Management Project (IAMP), and from 2004-2007 for the remaining 26 districts, under the Samoa Infrastructure Asset Management (SIAM) Project. With a broader geographic scope well beyond the coastal environment, the revised CIM Plans now cover all areas from the ridge-to-reef, and includes the thematic areas of not only infrastructure, but also the environment and biological resources, as well as livelihood sources and governance.

The CIM Strategy, from which the CIM Plans were derived from, was revised in August 2015 to reflect the new expanded approach and it emphasises the whole of government approach for planning and implementation, taking into consideration an integrated ecosystem based adaptation approach and the ridge to reef concept. The timeframe for implementation and review has also expanded from five years to

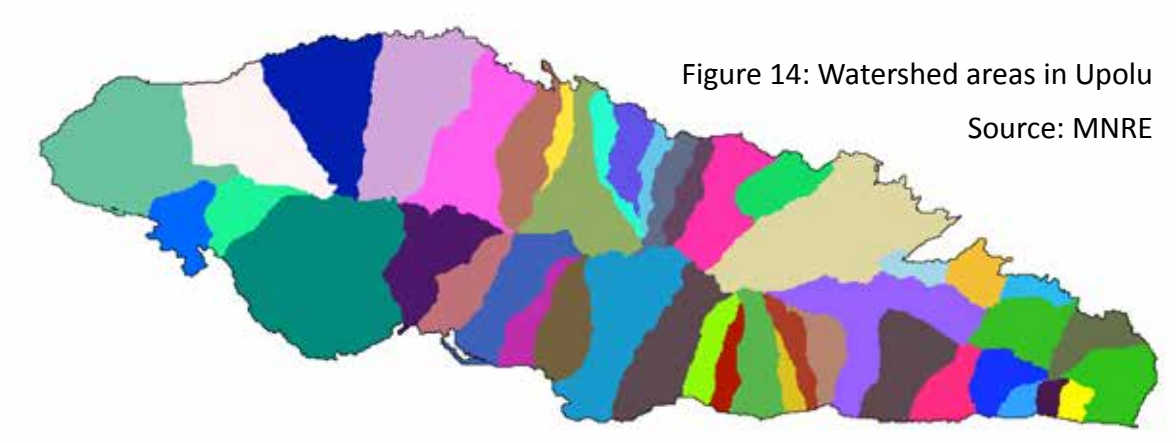


Figure 14: Watershed areas in Upolu

Source: MNRE

ten years as most of the solutions proposed in the CIM Plan may take several years to realise.

The CIM Plans is envisaged as the blueprint for climate change interventions across all development sectors – reflecting the programmatic approach to climate resilience adaptation taken by the Government of Samoa. The proposed interventions outlined in the CIM Plans are also linked to the Strategy for the Development of Samoa 2016/17 – 2019/20 and the relevant ministry sector plans.

The CIM Plan is a Partnership between the Government of Samoa and the villages within each district. The Plan area starts from the ridge extending to the reef broadly covering four thematic areas; Infrastructure; Environment and Biological Resources; Livelihood and Food security; and Governance. Both partners have responsibilities for issues and solutions and the Plan gives an integrated approach to the provision of services and improvement of resilience now and in the future. The aim of the CIM Plan is to help communities and government improve climate resilience by identifying actions and solutions for sustainable development.

The CIM Plan will enable communities and government service providers to:

1. Enhance awareness of hazard risks from the ridge to reef;
2. Improve climate resilience planning and development
3. Better adapt, respond and recover from natural disasters and other extreme events

The CIM Plan consists of two parts each serving a separate and distinct purpose.

- Plan Development, which describes the process undertaken to prepare the CIM Plan in conjunction with representatives of the Communities involved, the Government and other stakeholders with interests in the Plan area.
- Implementation Guidelines, which describes the Plans and Actions recommended as outcomes of the process, together with the partner responsible for implementing these outcomes.

The minnow is a tiny fish yet ascends high waterfalls.

This old Samoan proverb captures the role of small island developing states in their decades-long struggle to be heard in the global discourse addressing the climate crisis, culminating with the loss and damage framework approved at COP#27. Samoa, as chair of the Alliance of Small Island States and in partnership with the United Nations, aims to create a template for this new paradigm for climate justice.

Togitogiga waterfall.

SECTION 5: ILLUSTRATIVE INTERVENTIONS

This section outlines a preliminary and indicative list of illustrative interventions designed to holistically respond to the Triple Planetary Crisis in Samoa, informed by the learnings from the national consultations and in line with international and national policy frameworks. Key to parameters used to classify interventions with detailed descriptions.

TITLE: Elaborates the key impact areas of the intervention

LOCATION: Geographical boundary to which the interventions implementation is limited to, e.g., specific watersheds or village communities in Upolu

Sustainable Development Goals: Specifies which of the 17 SDGs the intervention meets e.g., Gender Equality, Climate Action and Life Below Water to achieve the 2030 Agenda

PRIORITY: In the domain of Business Analysis, the term MoSCoW is generally used to identify Prioritisation. The acronym MoSCoW represents four categories of initiatives: must-have, should-have, could-have, and won't-have, or will not have right now. On the similar lines each intervention has been classified as either:

Must Have - Critical for success

Should Have - Important for the cause but not necessary

Could Have - Interventions that are nice to have but initiative will still be successful if not adopted.

TIMEFRAME: Implementation timeframe to ensure adequate impact and show results

Short Term: Less than 5 years

Medium Term: Between 5 to 10 years

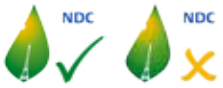
Long Term: Beyond 10 years

STATUS:

New: Proposed as part of the Vai O Le Ola initiative

Ongoing: Currently being executed and requires scale-up /continuity

Piloted: Being experimented at a smaller scale and should be scaled-up based on findings



NDC: Specifies if the intervention contributes to the bindings Nationally Determined Contributions targets agreed by Samoa as per the Paris Agreement

Community Engagement: Levels of community engagement required to implement the intervention

High: Fully dependent on the community

Medium: Not dependent but requires partial community involvement

Low: Does not require community involvement

Public-Private Partnership (PPP): Specifies whether Public-Private Partnership is now necessary for successful implementation

Indicative Cost: Indicative cost range based on a top-down / back-of-the-envelope calculations with a cost horizon, specifying the spending period

S-2040
PDS
SOS
CCP

Indictes alignment with Samoa-2040, the Pathway for the Development of Samoa (2021/22-2025/26), Samoa Ocean Strategy (2020-30), Samoa Climate Change Policy (2020-30).

UNITED NATIONS
COOK ISLANDS, NIUE, SAMOA AND TOKELAU

VAI O LE OLA

1 Watersheds: Nature-based Watershed Management (NBWM): *Scaling-up nature-based solutions for watershed management, community-based climate mitigation and flood resilience.*

The ridge-to-reef concept has long been adopted by Samoa as the basis for work for both water management and land/biodiversity restoration and conservation. Samoa has a total of 60 well defined watersheds from the ridge of each main islands to the coast, a total of 40 watersheds on Upolu and 20 on Savaii while 10 of these watersheds are considered critical landscapes for consumption of water across most villages in Samoa. These watersheds are affected by climate-change induced flooding, soil erosion, droughts and change in rainfall patterns, and the upper catchments are being degraded by forest conversion to livestock blocks and high-altitude agriculture clearing - particularly on Upolu Island.

The total abstracted water from the environment (SBS, 2019) for 2017-2018 is reported as 114,031 Megalitres (ML, 1 ML = 1 Million litres). Of this quantity, (70%) was used by hydropower, (26%) for water supply distribution and (3.6%) directly by private abstractors. The Water Resources Division of the MNRE has initiated Watershed Management Plans for most critical landscapes, and developed the Integrated Watershed Management Plan for the Greater Apia Catchments that covers an important Key Biodiversity Area. Several GEF projects integrating climate risks and resilience implemented between 2012 and 2020, piloted catchment restorations through agro-forestry, reforestation and invasive species management, including ICCRIFS, SMSMCL and the EWACC projects. The EU has also funded watershed restoration as part of its support to Samoa for the Water and Sanitation Sector to approximately 20 hectares per year since 2011. The GCF - Vaisigano Catchment Project is piloting a Payment-for Ecosystems Services aiming at upper catchment restoration with potential benefits to be accrued by customary landowners, while developing upper catchment regulations.

The intervention proposes a paradigm shift in targeting watershed restoration for watershed management at scale and prioritise local community participation in PES schemes. The intent is to scale up the work to a whole of island approach while ensuring coordination and


All watershed areas in Upolu


SDGs: 1, 2, 5, 6, 8 12, 13, 15

Based on the assessment of water deficit for Samoa and capitalizing on PES pilot programme being developed under the GCF project.

Implemented at a small scale but needs to be scaled-up to address the Triple Planetary Crisis.

This intervention contributes to both climate adaptation and mitigation of Samoa's NDC - supporting the production of renewable energy, mitigate flooding and through removals (reforestation/agroforestry) as per 2nd Samoa NDC

High level of community engagement needed to implement the intervention as land tenure in the majority of watersheds and upper catchments is customary and requires village landowners'

PPP with water and electricity utility agencies and private abstractors (bottled-water companies) may be required for implementation of a National Payment-for-Ecosystem Services scheme.


Assume USD1 million per critical watersheds (based on GEF-7 project budget estimates, including completion of Watershed Management Plans). USD10million over a 5-year period.

economy of scale in the response. It builds from lessons learned from Payment-for Ecosystem Services pilots, flood mitigation and SLM projects considering that, IF customary and other landowners are supported and benefit financially through new sources of income to 1) protect and restore upland watershed areas through nature-based solutions, AND 2) reduce gross greenhouse gas (GHG) emissions from the agriculture, forestry and other land uses (AFOLU) sector through SLM practices AND 3) reduce vulnerability and build lowland resilience to flooding in priority watersheds THEN Samoa can accelerate the transformation towards climate-resilient livelihoods and ecosystem services management, and provide more efficient flood mitigation in priority watershed and provide additional benefits towards both semi-urban and rural communities, thereby achieving critical TPC and SDG targets. It will also contribute towards the NDC and the 30:30 CBD target.

2 Trust Fund: *Vai o le Ola Resilience and Conservation Trust Fund*

Unlike most countries in the Pacific, Samoa has never designed and implemented a National Trust Fund for ensuring sustainability of environment and development initiatives. A first Conservation Trust Fund was established with support from IUCN and the World Bank to finance the operational and development costs of the two National MPAs Aleipata Islands and Safata in 2008, but the Trust Fund was eventually discontinued for issues related to financial management. The model proposed follows Conservation Trust Fund (CTF) best practices and guidelines to pool, manage and deploy finance resources in support of activities under the Vai o le Ola Framework. The Government of Samoa could formally establish such a fund, but Conservation Trust Funds are private, legally independent institutions that provide sustainable financing for biodiversity conservation and climate resilience. They may finance part of the long-term management costs of a country 's protected area (PA) system as well as conservation activities and sustainable development initiatives outside PAs. The core business of CTFs has been to mobilise resources from diverse sources – including international donors, national governments and the private sector – and to direct them in the form of grants to multiple conservation programs and projects on the ground through nongovernmental organisations (NGOs), community based-organisations (CBOs) and governmental agencies (such as national parks agencies).

S-2040
PDS
SOS
CCP

PDS KPA 17: Enhanced Conservation and Sustainable Use of Natural Resources.
2NC Adaptation target (expand mangrove forest area).
SOS Solution 12: Integrate Ecosystem-based Approaches into existing Climate change adaptation plans.

Across all watersheds and village communities.

SDGs: 5, 8, 11, 13, 14, 15, 17

MUST HAVE

The Trust Fund would be an essential tool to fast track repositing funds needed for activities sustainability.

SHORT TERM

Estimated period for the Trust Fund Design, Deed, Location, Trustees and Financial Management would be less than a year

Piloted - being implemented at small scale but needs to be scaled-up.

PILOTED

Not directly - but in the longer-term, this intervention will contribute to funding climate adaptation and resilience actions as per 2nd Samoa NDC.

NDC

Low level of community engagement needed to implement the Trust Fund apart from stakeholders' consultations.

COMMUNITY

DRAFT DATED 12 MARCH 2023

Over time, CTFs have proven to be institutions of innovation, leading some to develop new business areas outside of grant-making. Many CTFs now play roles in policy making, capacity building and strengthening of civil society as well as provide services to design financial mechanisms, ensure fiduciary management for the assets of indigenous communities or support corporate responsibility actions in the private sector.

The objective of the Trust Fund is to provide a central repository of funds dedicated exclusively to the implementation of activities under the Framework - Samoa requires this key tool to reposit funds directed from a blended financial mechanism and innovative financing vehicles such as Green/Blue Bonds, Risk Insurance, donor grants towards capitalisation - from both domestic and international sources for reallocation through a well-managed and transparent accountable system. Experience exist across the Pacific, with UN agencies and global NGOs to set-up such a Trust Fund for Samoa as a matter of priority to build sustainability from the onset. Its capitalisation could potentially be partly funded through a debt-for-nature swap (as per the Seychelles Trust Fund).

PPP is not necessary but could be envisaged in the design phase of the Trust Fund with the financial and accounting private sector and in seeking corporate funding for capitalization of the endowment.

Assume the capitalization of an endowment fund equivalent to USD0.5 million per watershed, or USD30 million, would be required based on the set-up and funding experience of the Fiji Sovi Basin Trust Fund and the Micronesia Challenge Trust Fund. This would provide grants from a pool of available funding of USD1.5million per year, less financial management costs.

S-2040
PDS
SOS
CCP

2NDC: Need for external funding support

SOS Solution 2: Development Sustainable Ocean Financing Mechanisms

CCP Objective 4: Enhance access to sustainable climate finance (incl. Trust funds)

3 Knowledge Platform: *A Resilient Samoa Islands Knowledge Platform: Crowd Sourcing Knowledge*

Samoa lacks a decision support system that integrates community, field and survey data with geographic information system layers that should be central to decision-making. This is despite information technology, and the use of GIS being a key pillar of development and being readily available. Such a system was to be put in place for the multi-sectoral management of critical landscapes, an earlier GEF project, but sectors from water resources, forestry, tourism, health and agriculture remain managed in silos, which means policies and strategies are not necessarily aligned. An excellent example of successful use of information technology in Samoa has been the Climate Early Warning Systems development that informs decision-making by the National Emergency Operation Centre on location, intensity

All watershed areas in Upolu

SDGs: 5, 6, 7, 11, 12, 13, 14, 15, 17

SHOULD HAVE

Short-Term - the Trust Fund would be an essential tool to fast track repositing funds needed for activities sustainability. Estimated period for the Trust Fund Design, Deed, Location, Trustees and Financial Management would be less than a year.

SHORT TERM

Being implemented at small scale but needs to be scaled-up.

PILOTED

Not directly - but in the longer-term, this intervention will contribute to funding climate adaptation and resilience actions as per 2nd Samoa NDC.

NDC

and duration of climate-induced natural hazards including droughts, rural fires, cyclones and flooding, among others – this knowledge platform being centralised and managed by the Samoa Meteorology Division of MNRE, but it is entirely dependent on automated technical weather equipment, without integrating crowd sourcing information from local communities and businesses.

The UNDP Accelerator Lab is currently piloting and testing a Crowd Intelligence platform that would allow sourcing data from individuals, customary landowners, farmers and organisations to develop a database and interface which identifies and measures impact of invasive alien species on the Samoan environment. This initiative proposes to create a national inter-sector Digital knowledge Portal that could facilitate research and analysis for decision making on actions for securing the health of watersheds across the islands, that would integrate both new research and survey data with crowd sourcing information via the portal. This would ensure achieving cost effectiveness, timeliness and accuracy in achieving critical Triple Planetary Crisis and SDG targets.

Low level of community engagement needed to implement the Trust Fund apart from stakeholders' consultations.

COMMUNITY

PPP is not necessary but could be envisaged in the design phase of the Trust Fund with the financial and accounting private sector and in seeking corporate funding for capitalization of the endowment.

PPP

Assume the capitalization of an endowment fund equivalent to USD0.5 million per watershed, or USD30 million, would be required based on the set-up and funding experience of the Fiji Sovi Basin Trust Fund and the Micronesia Challenge Trust Fund. This would provide grants from a pool of available funding of USD1.5million per year, less financial management costs.

S-2040
PDS
SOS
CCP

SOS Solution 3: Improve Scientific Research, Data Collection and Monitoring within Samoa's Ocean

CCP Objective 6: Improved data and information management on CC for informed decision making.

4 Climate and Nature Financing: *Innovative Climate and Nature Financing (Blue, green, sovereign bonds).*

Climate and Nature Financing beyond the current national budget and donor assistance, including project funding from Vertical Funds, will be required to ensure sustainability of interventions under the Vai o le Ola Framework. A 2021 UNDP report provided key analytical insights on the current trends of climate finance in the Pacific to unpack the effectiveness challenges currently face by PSIDS. Samoa continues to face significant challenges accessing external finance to effectively support their resilient development and has not yet included potential financing mechanisms such as PES, access fees and carbon and biodiversity offsets, among others, to finance sustainable climate and nature projects. Like other PICS, Samoa is therefore needs

Across all watersheds and village communities.

SDGs: 5, 13, 14, 15, 17

MUST HAVE

Based on the need for comprehensive assessment in the Samoa context and awaiting development of the blue bond market standards and principles.

2030

Proposed as part of the TPC framework to be based on experience in Fiji and other SIDS using Green/Blue bonds as financial instruments.

NEW

This intervention does not contribute, but will assist in financing the investment plan and projects identified in Samoa's NDC strategy.

NDC

DRAFT DATED 12 MARCH 2023

to look beyond development assistance to innovative financing mechanisms. The sustainable bond market falls into this category and comprises several thematic bond types. These include green bonds, transition bonds, Sustainable Development Goal (SDG)-linked bonds, social bonds, and blue bonds. These bonds all contribute to the broader goal of advancing the SDGs in the global market, but they differ slightly in terms of structure and design. In October 2017, the Reserve Bank of Fiji issued its first green bond, raising Fijian Dollars (FJD) 100 million, to channel capital towards initiatives aimed at increasing the country's resilience to the impacts of climate change. A full case study is provided in a recent joint analysis of green and blue bonds by PIFS and UNDP that would inform the set-up of innovative financing tools for Samoa.

A blue bond is a relatively new form of a sustainability bond. It is a debt instrument that is issued by governments, development banks or others to raise capital from investors to finance marine and ocean-based projects that have positive environmental, economic and climate benefits. Compared to green bonds, blue bonds are an emerging, innovative funding instrument that are designed to specifically focus on funding ocean and marine-related solutions, creating sustainable opportunities for the blue economy and signaling responsible ocean stewardship commitments to the market. This would be particularly relevant for sustainable financing key outcomes of the Samoa Ocean Strategy and the recent Climate Change Strategy. This initiative proposes for the Government to pilot one or several performance bonds linked to proposed activities under the Vai o le Ola and achieve critical TPC and SDG targets. It will also contribute financing towards the NDC and the 30:30 CBD target.

5 Social Entrepreneurship for Climate and Nature: *For Climate Resilience in Samoa.*

Recent projects on the economy-wide adaptation and watershed flood mitigation caused by climate change in Samoa have shown that the involvement of social and environmental enterprises is an integral part of the solution to improve the health of the environment while also creating livelihood opportunities, particularly for youth and women. These "ecosystem-based adaptation alternative enterprises" have been piloted across several villages in the Greater Apia Catchments area where the Apia Urban Area covers more than 50 villages in coordination with the Community

Low level of community engagement needed to implement the intervention.

COMMUNITY

No PPP will be required other than technical assistance from international banks and financial institutions.

PPP

Assume USD500,000 for the set-up of a pilot green/blue bond scheme for Samoa and yearly GoS financial management estimated at USD20,000 per year over 5 years.

S-2040
PDS
SOS
CCP

SOS Solution 2: Development Sustainable Ocean Financing Mechanisms

PDS KPA15: Build Climate Resilience (International binding mechanisms, including sustainable climate financing support for climate resilience programs strengthened)

2NDC: Need for external funding support

CCP Objective 4: Enhance access to sustainable climate finance

All watershed areas in Upolu

SDGs: 1, 2, 5, 6, 8, 9, 10, 13, 14, 15, 17

SHOULD HAVE

Based on the completion, monitoring and evaluation of CSSP – VCP projects, success stories, lessons learned, best practices from beneficiaries before scaling-up social enterprises for climate resilience.

2030

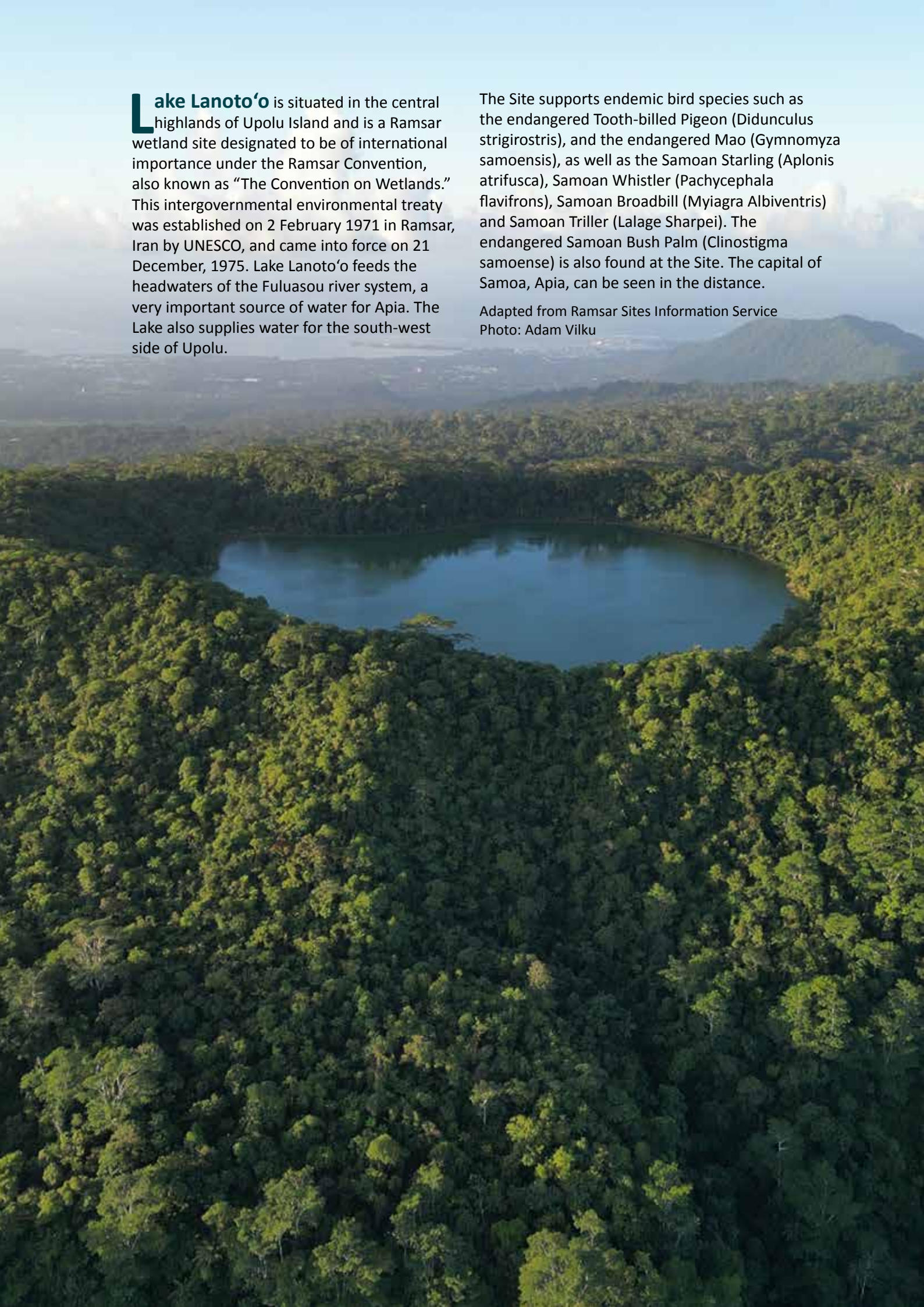
MEDIUM TERM

Implemented at small scale but needs to be scaled-up.

Lake Lanotoʻo is situated in the central highlands of Upolu Island and is a Ramsar wetland site designated to be of international importance under the Ramsar Convention, also known as "The Convention on Wetlands." This intergovernmental environmental treaty was established on 2 February 1971 in Ramsar, Iran by UNESCO, and came into force on 21 December, 1975. Lake Lanotoʻo feeds the headwaters of the Fuluasou river system, a very important source of water for Apia. The Lake also supplies water for the south-west side of Upolu.

The Site supports endemic bird species such as the endangered Tooth-billed Pigeon (Didunculus strigirostris), and the endangered Mao (Gymnomyza samoensis), as well as the Samoan Starling (Aplonis atrifusca), Samoan Whistler (Pachycephala flavifrons), Samoan Broadbill (Myiagra Albiventris) and Samoan Triller (Lalage Sharpei). The endangered Samoan Bush Palm (Clinostigma samoense) is also found at the Site. The capital of Samoa, Apia, can be seen in the distance.

Adapted from Ramsar Sites Information Service
Photo: Adam Vilku



Social Services Programme (CSSP) and the Samoa Business Hub (a local incubation centre). More than 400 small enterprises were supported across the main agricultural sector focusing on green businesses as alternatives to business-as-usual land conversion and increasing climate resilience in critical watersheds. Projects included reforestation, agro-forestry plantations, beekeeping, fruit trees/horticulture, eco-tourism, hydroponics, medicinal plants, pisciculture, organic farming, waste collection and recycling, ornamental plants, flower production, among others.

This intervention models social entrepreneurship piloted by these recent projects covering four key watersheds in the Apia Urban Area, to be replicated across all communities serviced and living in Samoan watersheds of Upolu and Savai'i - most of them in rural Samoa. This will also require strong awareness campaigns, business and technical training and collaboration across agencies and NGOs engaged in community development.

Intervention contributes to both climate adaptation and mitigation of Samoa's NDC - supporting ecosystem-based adaptation enterprises and projects.

High level of community engagement needed to implement the intervention as land tenure in the majority of watersheds and upper catchments is customary and requires village landowners' support.

PPP with small cottage local businesses and sole traders to develop Social and Environmental Responsibility Plans and adaptive enterprises projects.

Based on GCF VCP investment in ecosystem-based enterprises, assume ten (10) social enterprises projects per watershed at USD20,000 x 56 each over a five-year programme (USD10 million) plus awareness, technical and business training, monitoring and reporting of USD1 million over a 5-year period.

S-2040
PDS
SOS
CCP

This would be particularly relevant for sustainable financing key outcomes of the Samoa Ocean Strategy and the recent Climate Change Strategy.

DRAFT DATED 12 MARCH 2023

Samoa e lo'u atunu'u pele i le loto e,
E mitamita lo'u agaga ia te oe
O Ou vaitafe lemu ma le sami e iila,
Pe'a suluia mai e le masina,
O atu mauga faasolosolo,
lafoia ona paolo i vaituloto,
Sa 'ou folaulau ai ma 'ou lagilagi pese,
Ma 'ou fa'alogo i le tausani o manu lele.

O Samoa, my beloved country of the heart // My soul swells with pride for you // Your gently flowing streams and a glimmering sea // when the moon shines down upon it // the rolling hills // cast their shadows in valley rivers // where I journeyed in song // and I hearkened to the singing of birds.

Lyrics of a popular modern Samoan song composed by the Malifa Faletoese with one of the verses composed by the late Tuiletufuga Henry Hunkin, Luafetasaga Kalapo, and Auelua Enari of the Royal Samoan Serenaders, musicians who have all passed away but whose song remains.

6 *Energy across Samoa Islands: Community Access to Clean Energy across Samoa Islands.*

Samoa remains committed to implementing the Paris Agreement and its NDC pledge to generate 100% of electricity from renewable energy sources by 2025. As of 2020, 45.8% of electricity was generated from renewable energy sources. UNDP's Global Environment Facility (GEF)-funded Improving Performance and Reliability of Renewable Energy Power Systems in Samoa (IMPRESS) project has significantly contributed to the sustainable and cost-effective production of renewable energy in Samoa through a combination of climate adaptation and mitigation interventions, including the construction of the Afolau 750 kW Biomass Gasification Plant, with biomass currently representing the fourth national renewable energy source. The electricity divide in Samoa is yet to be closed with currently 98.8% of the population having access to grid electricity. This means that an estimated 2,400 people in Samoa do not have access to electricity, with remoteness and affordability remaining key underlying factors in achieving SDG 7. On the one hand, a number of households are outside the electricity grid network. On the other hand, with over half the national electricity mix still reliant on diesel, this is significant exposure to the unit cost of electricity for villages, particularly community-run centers including schools, churches and village halls. This intervention seeks to achieve universal access to electricity through the provision of clean, reliable, and affordable, biomass-powered energy, solar-powered lighting and stand-alone solar systems, based on the implementation of the NDC investment Plan. Interventions would be concrete and limited to strengthen biomass, hydro and solar energy production to support increase in electricity generated from renewable sources, thus contributing to the achievement of Samoa's NDC for the energy sector target to reduce GHG emissions by 32% in 2030 compared to the 2007 baseline.

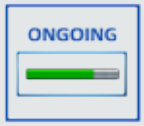
National

For clean energy to remote communities currently not on the grid, communal village facilities, and a focus on Savai'i Island clean energy.

SDGs: 5, 6, 7, 8, 11, 12, 13, 17

Based on the assessment of water deficit for Samoa and capitalizing on PES pilot programme being developed under the GCF project.

Being implemented at small scale through private sector, hydro schemes, biogas and solar energy schemes but needs to be scaled-up



Yes - this intervention contributes to climate mitigation of Samoa's NDC - supporting the production of renewable clean energy, as per 2nd Samoa NDC.

Medium level of community engagement needed to implement the intervention as land tenure in the majority of watersheds and upper catchments is customary and requires village landowners' support.

PPP with electricity utility agencies and solar companies (EPC, EDF).

Based on IMPRESS project activity budget and NDC Investment Plan, for access to 100% clean energy. (USD8 million).

S-2040
PDS
SOS
CCP

PDS KPA 18: Sustainable Energy Development Enhanced.
2NDC Mitigation target (GHG emission reduction).
CCP Objective 3: Implement mitigation measures to reduce GHG emissions.

DRAFT DATED 12 MARCH 2023

UNITED NATIONS
COOK ISLANDS, NIUE, SAMOA AND TOKELAU

VAI OLE OLA

Ua sau le va'a na tiu, tau mai i le va'a na tau
ae o lo'o mamau pea lago o le va'a na faō a folau.

This old Samoan fishing proverb refers to three canoes. The first canoe is returning from the deep sea with its catch of fish. The second canoe is at berth on the lagoon and the third canoe lies in the boat shelter. The first canoe carries the fisherman heading home from a deep-sea fishing expedition, the fish-carriers, 'au taliva'a, are in the shallow lagoon and the village elders are in the shelter praying for the seafarers' success and safe passage home - the tapua'iga.

In the context of how we respond to the Triple Planetary Crisis, the first canoe refers to how humanity's collective ingenuity and creativity unlocks the gifts of the natural world upon which we all depend. The second canoe refers to an expectant humanity, beneficiaries of these gifts: past, present and future generations. The elders at the third canoe remind us that while humankind has unlocked many of the secrets of nature that can reshape the physical world thereby allowing humans to benefit from the boundless potential before us, a phenomenon referred to earlier in this document as the *anthropocene*, we must be conscious of how that same power, when motivated by unfettered short-term and often profit-oriented gains, can bring about catastrophic and potentially irreversible harm to the planet. As the dangers of unsustainable production and consumption become ever more manifest, from the impacts of climate change to biodiversity and nature loss to pollution and waste, humanity will be forced to develop a more coherent and unified approach to living in harmony with nature.

Adapted from an interpretation made by the Government of Samoa on the occasion of the nation's 50th anniversary of independence.

7 Eliminating plastic pollution: *Zero Plastic Waste Across Samoa Islands*

Although organic waste represents the largest waste stream in Samoa, accounting for 57% of the national waste composition, plastics is the second largest and most problematic. This is underpinned by the country's heavy reliance on packaged and packaging imports, which in 2019, accounted for USD 16.9 million worth of plastic. At the household and commercial level, plastics comprise of 14.4% (954.4 tons/year) and 21.9% (1,157.3 tons/year) of all waste produced every year respectively. Current plastic recycling efforts remain small-scale and focused on higher-value plastic resin types, such as PET and HDPE. A recent assessment of freshwater and saltwater on Upolu found that nearly all freshwater and seawater samples contain microplastics with highest concentrations in the northern settled coast and in the vicinity of Apia. Microplastics also found in fish, affect coral reef health and growth, and have species-specific impacts that diminish coral biodiversity and endanger marine wildlife. In view of the above the Government of Samoa continues to prioritise the effective management of waste, seeking domestic and innovative solutions for low-value waste streams, prioritising plastic waste, that facilitate a transition to a circular economy. The intervention proposes to scale-up the modular approach of the UNDP CERO Waste Project to accelerate the transition to a plastic waste-free Samoa by reversing trends of increasing plastic consumption and disposal, by enabling technological innovation for plastic waste recovery at scale, including 1) process all plastic resin-types into a high-value, light-weight construction aggregate, as the most economically and operationally viable, as well as environmentally-benign scalable solution for Samoa and 2) reducing reliance on plastic imports and its consumption by exploring the production of local biopolymer alternatives in Samoa. This can be done effectively by leveraging the private sector and scaling up existing initiatives, including plastic awareness, segregation, collection and design of incentives. In view of the recent agreement on the UNEP Plastics Pollution Treaty which Samoa should be a party to, there is a range of funding possibilities to tap into this work.

Across all watersheds and village communities.

SDGs: 5, 6, 11, 12, 13, 14, 15,17

Based on the urgency to reduce plastic litter at the landfill and micro-plastic in the marine environment capitalizing on lessons learned from CERO pilot programme on zero plastic.

Piloted - being implemented at small scale but needs to be scaled-up.

This intervention doesn't contribute to Samoa's NDC Strategy.

High level of community engagement needed to implement the intervention through consultations, awareness campaign, engagement in collection and management of plastic waste.

PPP already established with private sector waste management and recycling companies.

Estimate USD5 million over for purchase of scaled-up equipment based on research and testing results, including awareness, training and waste collection app development (based on costs from CERO Waste project budget).

S-2040
PDS
SOS
2NDC
CCP

Samoa 2040: To boost climate and disaster resilient infrastructure to reduce business costs, promote economic growth and improve livelihoods.
2NDC Adaptation target (expand mangrove forest area).
SOS Solution 12: Integrate Ecosystem-based Approaches into existing Climate change adaptation plans.
CCP Objective 2: Implement adaptation measures protecting against CC impacts.

DRAFT DATED 12 MARCH 2023

UNITED NATIONS
COOK ISLANDS, NIUE, SAMOA AND TOKELAU

VAI O LE OLA

8 Samoa Environment Management and Conservation Act: *Samoa Islands Environment Management and Conservation Legislation to anchor the Triple Planetary Crisis Framework.*

The ecological protection of Samoa's watersheds, coral reefs and the biodiversity and health of its ocean resources needs a new national legal and institutional framework that will focus on both conservation and green development for Samoan Islands to better inform and ensure a holistic planning and management of land and marine resources. In terms of the environment and conservation the key pieces of legislation in Samoa include, amongst others, the Lands Surveys and Environment Act 1989, the Fisheries Act 1988, the Waste Management Act 2010, the Marine Pollution Prevention Act 2008, the Water Resources Management Act 2008 and the Forestry Management Act 2011. In addition, Samoa is a party to the five (5) key global Multilateral Environmental Agreement (MEA) or Treaties. They are:

- The Convention on Biological Diversity (Samoa is also a Party to its Protocol on Biosafety);
- The Ramsar Convention on Wetlands;
- The World Heritage Convention;
- The Convention on International Trade in Endangered Species (CITES) and
- The Convention on Migratory Species (CMS).[13]

Samoa's most recently drafted the Environment Management and Conservation Bill 2013 while its latest draft, a 2018 version[14], remains on the MNRE drawing board. This legislation, if updated in the context of the TPC would provide an excellent basis for anchoring the Vai o le Ola Framework. This new updated Act would trigger the formation of a High-level government authority or Board, to support the protection and management of the environment and to promote green and sustainable development in full compliance with Samoa's international environmental obligations, while being aligned with the climate adaptation and mitigation components of the Paris Agreement.

13 Ministry of Natural Resources and Environment, Secretariat of the Pacific Regional Environment Programme, 2012, Guidebook to Conservation Laws in Samoa, Apia, Samoa.
14 Ministry of Natural Resources and Environment, 2018, Draft Environmental Management and Conservation Bill 2013, Apia, Samoa.

National – all Samoan Islands and its ocean EEZ cover.

SDGs: 5, 6, 11, 12, 13, 14, 15

Short-Term - based on the need to anchor the O Le Ola Vai initiative on strong legal platform/foundation from the onset.

Work on a holistic Environment and Conservation Bill has started but stalled – the Bill needs updating and to be scaled up to address the Triple Planetary Crisis.

This intervention doesn't contribute to Samoa's NDC Strategy.

Low level of community engagement needed to implement the intervention, mainly through stakeholder consultations.

PPP is not required for implementation of the legislation.

Estimate USD200,000 in legal drafting costs and fees for the updating of the draft Environmental Management and Conservation Bill 2013 in collaboration with the Office of the Attorney General for enactment by Parliament.

S-2040
PDS
SOS
2NDC
CCP

PDS KPA 17: Enhanced Conservation and Sustainable Use of Natural Resources.

2NDC Adaptation target (expand forest area).

SOS Solution 6: Strengthen Policy and Legislation for Protection of Coastal Ecosystem Services.

The objectives of this Act would be to anchor the Samoa O Le Ola Vai scheme, to assist in the co-operative implementation of Samoa's international environmental obligations and, among other responsibilities, to provide for the protection of the environment; to protect Samoa's environment while allowing for development that maintains the ecological processes on which life depends both on land and in the ocean; to provide for the protection and conservation of Samoa's heritage; to value assets and services of natural resources and to recognise the inherent importance of control of pollution, the disposal of waste and conserving biological diversity and maintaining ecological integrity. The Commission or Board should have a full mandate of enhancing the capacity of implementing agencies, civil society and the private sector to achieve the goals of the O Le Ola Vai initiative.

9 Protected Areas Network for Samoa: *Samoa National Islands Protected Areas Network (protecting and enhancing biodiversity)*

Samoa has a rich biodiversity. On land it includes many thousands of insect species, 770 species of native plants, 64 native land snails, 31 breeding birds, 14 reptiles and 3 native mammals. In the seas around Samoa there are more than 890 coral fish species, over 200 corals, several turtles, and marine mammals such as dolphins and whales. Key biodiversity Areas for the conservation of this globally significant biodiversity have also been assessed and mapped[15], while on-going projects and surveys improve data and information on the status of these species. The conservation of this biodiversity is important to keep ecosystems intact and functioning, and makes an important contribution to the sustainability of Samoan culture and economic development, both of which are influenced by the way we use and manage both terrestrial and marine biodiversity. Although Samoa established the first National Park in the Pacific, the O Le Pupu Pue on the south coast of Upolu in 1978, it took a further 20 years to establish two community-based conservation Areas through a first GEF Biodiversity Conservation project in the Pacific executed by SPREP, further National Parks were created in 2009.

15 CI Pacific, MNRE and SPREP 2010. Samoa's Key Biodiversity Areas for conservation. Apia, Samoa

National – to cover all existing Protected Areas, including National Parks and Community-based Conservation Areas in Samoa

SDGs: 5, 13, 14, 15, 17

Short-Term - based on upcoming legislation for environment and biodiversity conservation in Samoa and support from MNRE for a registry and learning network.

Ongoing – this is being implemented by MNRE for National Parks and various NGOs and CBOs for community-based areas, but requires scaling-up to achieve 30 by 30 targets and a strong PA learning network for continuity and sustainability.

Yes - this intervention contributes to both climate adaptation and mitigation of Samoa's NDC – by increasing the areas under protection and removals for GHG emissions in the long-term.

High level of community engagement needed to implement the interventions as the majority of mangroves, forested watersheds and upper catchments are on customary land and requires village landowners' support.

PPP not necessary for implementation but could be supported by the private sector through the work of environmental NGOs and CBOs.

DRAFT DATED 12 MARCH 2023

Despite these early efforts, Samoa's sixth national report (2018) to the Convention on Biological Diversity concluded that Samoa's protected area efforts are still way under target despite increased nominal area coverage.

A Protected Area Advisory Committee (PAAC) was created in 2019 to improve collaboration and data collation on PA related programs and since then data have been collected from many stakeholders with related PA programs implemented. A report to the CBD on protected areas in Samoa[16] stated that effective conservation of all identified key biodiversity areas would result in increasing PA coverage from 9% to 27% of Samoa's land area. However, incomplete data and data validation concerns remain a big challenge. There are many PAs including community conservation areas (CCAs) identified as inactive with management issues, land disputes and limited financing that require more actions and sustained support. This intervention follows the work of the IUCN Biopama project for Samoa and aims at setting-up a Protected Area Network as a registry, monitoring, technical assistance and learning network. It will contribute to developing a new and costed Protected Area Action Plan for Samoa and the status of Samoa's Protected Area Roadmap 2011 will be reviewed in this process. As a first step in addressing major shortcomings in Samoa's PA efforts, will be to developing a registry system to acknowledge community-based conservation efforts as well as improving data collation and collaboration and coordination amongst both marine and terrestrial PAs in Samoa. This intervention will help secure the long-term conservation in Samoa by developing the infrastructure and capacity required at both community level and nationally for sustained, effective and coordinated conservation action. Improving CCA management in a rapidly changing global climate, especially in a financially challenged post covid world, will have tremendous benefits in Samoa, a country where many CCAs are no longer functioning, or only nominally functioning.

16 Ministry of Natural Resources and Environment, 2011, Action Plan for Implementing the Convention on Biological Diversity's Programme of Work on Protected Areas, Apia, Samoa

Assume costs for 1) adoption of Environment and Conservation Bill to establish registry of PAs in Samoa (USD250,000) and 2) establish and maintain a PA Learning Network (USD250,000) and USD100,000 per year over 5 years for implementation. Total estimated: USD1 million.

S-2040
PDS
SOS
2NDC
CCP

PDS KPA 17: Enhanced Conservation and Sustainable Use of Natural Resources.

2NDC Adaptation target (expand forest area).

SOS Solution 6: Strengthen Policy and Legislation for Protection of Coastal Ecosystem Services.

Dendrobium mohlianum, a native ground orchid photographed by Art Whistler. The largest family of flowering plants in Samoa is the orchid family (Orchidaceae), with 101 native species. No other islands of Polynesia have such a rich orchid flora.

10 Regenerative Tourism – enhancing nature-based tourism for climate resilience and sustainability: *Strengthening Nature-based Mitigation and Adaptation efforts through Regenerative Tourism in Samoa.*

Climate change-related risks to the tourism sector and its various value chains continue to materialise either directly through physical changes, loss and damage from natural stressors and extreme events, or indirectly through reduced revenues and loss of jobs, including in interdependent sectors. Samoa's iconic natural tourist attractions, namely pristine beaches, crystal clear seas, vibrant coral reefs and cascading waterfalls are at stake with rising sea level and temperatures along with increased weather events such as cyclones and flooding.

Tourism is one of Samoa's driving economic sectors, accounting for around a quarter of the national GDP, 15% of the workforce (direct tourism employment supports one third of all jobs in Samoa) and a third of the country's foreign-exchange earnings.[17] Additionally, the tourism sector is largely characterised by small-scale and family-owned businesses, predominantly in rural coastal areas, which account for 70.5% of the labour force within accommodation and food services alone[18], of which 44.5% are women and 0.32% persons with disabilities (PWDs). This makes the sector an integral part of local communities, especially amongst vulnerable groups such as women, and a key income-generating supplement of subsistence rural livelihoods.

Tourism operators and associated communities in Samoa are very heavily dependent on the countries natural resource base. Samoan's prime tourist attractions are its tropical climate and pristine beaches, its tropical coastal and lush inland ecosystems, waterfalls and landscapes, and the traditional culture very closely attached to the use of land-based, coastal and marine environmental resources. The tourism sector is also amongst the most severely impacted sectors by recent disasters, including a devastating tsunami in 2009, a destructive flood from cyclone Evan in 2012, severe measles outbreak in 2019 followed by the COVID-19 pandemic.

17 Government of Samoa (2021) Samoa 2040 Development Strategy
18 Samoa Bureau of Statistics. (2017). Samoa Labour Force Survey 2017.

National – all Samoan Islands.

SDGs: 1, 2, 5, 6, 8, 10, 12, 13, 14, 15, 17

Short-Term - Short-Term – as urgency in re-inventing a nature-based and resilient tourism sector for Samoa.

Piloted - being implemented at small scale but needs to be scaled-up to address the Triple Planetary Crisis.

This intervention does not contribute to climate adaptation and mitigation of Samoa's NDC in the short-term.

High level of community engagement needed to implement the intervention.

PPP with tourism sector businesses, hotels, resorts, tour operators will be required for climate resilient, nature-based tourism, and resilient asset protection.

USD80-90 million over the five year of the Samoa Tourism Sector Plan 2022-2027 investment budget, including the financing of the Samoa Tourism Resilience Asset Protection (STRAP) Facility.

DRAFT DATED 12 MARCH 2023

S-2040
PDS
SOS
2NDC
CCP

PDS KPA 8: Tourism Revitalisation

With the onset of the ongoing pandemic and consequent preventive measures adopted by the Government of Samoa, the tourism sector took the hardest hit. International air arrivals dropped by 88.2% in 2019-2020 alone[19] . Climate change, pollution, both land and marine, pose a threat to community-based tourism operators and their vital assets located in highly vulnerable coastal areas. Beach tourism is a highly climate-dependent activity, relying heavily on vulnerable natural coastal resources and most National Parks and Reserve, and natural landscape are not designed to be integrated in the tourism product development strategy despite their natural and biodiversity values.

Long-term solutions at the national level are needed to enhance the capacity of the Samoan Tourism Authority in coordination with related government institutions and private sector associations to create a suitable enabling environment for climate resilient tourism businesses.

Management plans integrating climate risks were developed in the six (6) Tourism Development Areas of Samoa as a key outcome of a first climate resilience project for the tourism sector[20]. Despite several flaws identified in these plans, they provide a solid basis for re-engaging the approach towards climate resilience without reinventing the wheel.

A visitor enjoys a private beach in Savaii, the larger but less populated of the two main islands.

19 The Pacific Private Sector Development Initiative (2021) Looking Forward Vol. 1: Evaluating the Challenges for Pacific Tourism after COVID-19

20 UNDP. (2018). Terminal Evaluation Report of the project Enhancing Resilience of Tourism reliant communities to Climate Change Risks in Samoa.

Tourism and related activities in Samoa also have over time resulted in damaged coral reefs, mangrove forests, seagrass beds and coastal wetlands, and driven beach and shoreline erosion, degradation of coastal waters and land, increased pressure on energy and water supply, increased plastic waste pollution and greenhouse gas emissions[21]. These combined with other human activities beyond the sector such as sand mining, deforestation, poorly planned coastal development, land reclamation projects and destructive fishing, are adding pressure to an already fragile environment and thereby placing tourism development at further risk of the adverse impacts of climate change[22].

Samoa's rich natural environment offers significant opportunities for tourism as a long-term driver of inclusive economic growth, including through inter-dependent sectors employment-generating opportunities, particularly amongst women and youth. With natural resources as the main driver of tourism in Samoa, economic gains can be realised in the sector. However, attaining its full potential is only possible if tourism development adopts a whole-of-society approach geared towards regenerative and resilient tourism that prioritises climate mitigation and adaptation along with systematic ecosystem restoration.

Samoa may wish to consider a 'tourism tax' in the way Bhutan has done, where a flat tax is imposed on each tourist per day to cover the cost of the impact on the environment and which goes to a National Trust Fund which works on restoration of the environment and on projects that enhance climate resilience.

The intervention is thus promoting a gender- and climate-responsive, resilient, and sustainable tourism sector capable of (1) enhancing and diversifying Samoa's post-COVID tourism offer, (2) increasing the attraction and retention capacity of the tourism sector, particularly amongst women and youth, and (3) catalysing national pools of nature-based ecosystem safeguards and attractions, advocates and stewards, which would ultimately contribute to greater socio-economic prosperity and environmental integrity in Samoa. Guided by the Glasgow Declaration on Climate Action in Tourism[23], launched at COP26, the programme takes a portfolio approach to deliver on the decade of tourism-led climate action, in direct support of the Samoa 2040 roadmap, aimed at unlocking transformative long-term economic opportunities within the tourism sector and is fully aligned with the Samoa Tourism Sector Plan 2022-2027 and its investment strategy. This includes promoting a dedicated facility providing Tourism Resilience Asset Protection for provision of sustainable and green interventions in partnership with the private sector[24]. The overall aim of the programme is to transform Samoa's tourism by enabling sector-wide systematic integration of climate adaptation and mitigation for inclusive and regenerative sector development that promotes empowered and resilient tourism-dependent communities and businesses. Tourism plans must consider how to balance sustainability and growth. The tourism sector can lead sustainability initiatives, including energy and water efficiency, climate proofing hotels and other tourism facilities, and investing in low-carbon transport and greener infrastructure.

21 SPREP. (2018). Environmental Impact Assessment Guidelines for Coastal Tourism Development in Pacific Island Countries and Territories.

22 Samoa Tourism Authority (2012) National Tourism Climate Change Adaptation Strategy for Samoa 2012 – 2017.

23 One Planet Sustainable Tourism Programme (2021) – Glasgow Declaration: A Commitment to a Decade of Climate Action

24 Government of Samoa. (2022). Samoa Tourism Sector Plan 2022-2027.

11 Promoting Samoa Islands cultural and biological heritage sites: *Samoa Islands Heritage Sites - nominations as World Heritage sites, Biosphere Reserves and Geoparks*

Samoa's archipelago Polynesian culture, language and tradition are unique on the planet and of global universal value. Its volcanic geology provides for more than 500 volcanic cones across the islands and under the sea, and is responsible for its geographic forms and watersheds constructs. Overall, Samoa has one of the most diverse flora in Polynesia with about 25% of the native plant species are endemic to Samoa and 32% endemic to the Samoan archipelago. In terms of faunal diversity, there are 13 species of terrestrial mammals, 44 species of land birds, 21 seabirds, 15 reptiles, 59 species of insects, 64 species of land snails and 28 species of butterflies. In particular, Samoa's fish fauna is regarded as among the richest in the world, with up to 991 species recorded .

There have been many surveys and projects to identify, research and map the key natural sites for conservation and heritage in Samoa, starting in the 1970's. Most recently, the "Priority sites for Conservation in Samoa: Key Biodiversity Areas (KBAs)" (CI Pacific, MNRE and SPREP 2010) were identified that include healthy habitats for all threatened species. The KBAs include 8 terrestrial and 7 marine sites in Samoa that together include all major native ecosystems in Samoa and cover around 1/3 of the land area of Samoa and 23% of the inshore lagoon.

Many of the KBAs are already under some form of conservation, either as Government run National Parks and Reserves or community-managed Conservation Areas, where women play an important role as community custodians of natural resources and management of food systems. Existing protected areas are priorities for improved management while those not under conservation are priorities for the further expansion of the conservation and heritage area network.

Although Samoa is a UNESCO member since 1981 and joined the World Heritage Site Convention in 2001, after 22 years, Samoa has only two sites on its nomination list recorded in 2006 receiving support funding of only $35,000 during that entire period. The two sites on the nomination list are: Fagaloa Bay - Uafato Tiavea Conservation Zone and the Manono, Apolima and Nuulopa Cultural Landscape, but their listing is now 17 years old. No Biodiversity Reserves are listed nor

Potential natural sites on Upolu and Savaii, Manono, Apolima Nuulopa, and a potential transboundary site to cover the Samoan Archipelago.

SDGs: 5, 6, 10, 11, 12, 13, 14

Medium-Term – need first to revive the National World Heritage Committee and its national list of potential sites.

New – Samoa has no classified built, cultural or natural heritage sites nor Biosphere Reserves nor Geoparks despite its cultural and biological universal value.

No, this intervention does not contribute to both climate adaptation and mitigation of Samoa's NDC.

High level of community engagement needed to implement the intervention as land tenure over much potential sites and a transboundary site are customary and requires village landowners' support.

assessed although with more than 20 National Parks, reserves, marine conservation areas – there is the potential for several sites to accede to this status. Several of the community-based conservation areas in the Pacific established in the 1990's (Palau, FSM) have become biosphere reserves, another a World Heritage site (Rock Islands of Palau) – Samoa has many potential biosphere reserves including one recently proposed on Savai'i as the Pulemelei Research and Biosphere Reserve. Two National Parks, the O Le Pupu Pue NP and the Lake Lanotoo NP, have been designated by Samoa as Wetlands of International Importance (Ramsar Convention Sites), with a surface area of 5,489 hectares.

More recently, Savai'I Island was proposed as a UNESCO Geopark for eco and geotourism development . But there is a lack of concerted effort to pursue listing that would confirm globally recognised protected status (like Ramsar Sites) and help Samoa achieve its Aichi targets under the CBD with positive impact on sustainable tourism, ecotourism and geotourism under the umbrella of the new Tourism Sector Plan.

PPP will be required. Mainly with tour and tourism operators.

PPP

An investment of USD1.5 million will be required for serious listing, inscriptions and assessments for UNESCO and the World Heritage Convention over a period of 5 years.

S-2040
PDS
SOS
2NDC
CCP

PDS KPA8:
Tourism Revitalisation.

The Samoan archipelago was also considered in the early 2000, as a potential transboundary hybrid World Heritage site (Samoa/American Samoa) as being culturally, archeologically and biogeographically of global universal value - being unique on the planet. An approach that the Maldives are considering for their entire Biosphere reserve archipelago nomination. This could be promoted under the agenda of the Two Samoas Commission.

The intervention aims at a concerted effort to review the entire protected area system in Samoa and to revise and update its WHS Tentative List for Samoa in light of latest assessments of sites to be considered to be cultural and/or natural heritage of outstanding universal value suitable for inscription on the World Heritage List. This will need feasibility assessments and stakeholders' consultations with the participation of a wide variety of partners, including IUCN, site managers, local and regional authorities, local communities, especially women resource managers, NGOs and other interested parties and partners. This will include a feasibility study for a potential transboundary hybrid WHS across the entire archipelago based on preliminary research conducted by UNESCO in the early 2000 and further confirmed by a comprehensive biogeographical study of the Samoan Archipelago by NOAA scientists . Further identify potential sites for Biosphere Reserves across the islands and prepare a work programme towards inscription with the Man & Biosphere Programme of UNESCO while completing a full feasibility assessment of Savai'i Island for its inscription as a UNESCO Geopark. This is about creating heritage sites that will support the objectives of the Vai o le Ola initiative.

12 CCGAP - Climate Change Gender Action Plan

Samoa is a State Party to the CEDAW, and has reaffirmed its commitment to advance gender equality and the empowerment of all women and girls as stipulated in the text of the Convention and other international obligations.

While the Government of Samoa recognises the importance of gender responsiveness and the role of women in all parts of its social fabric, as demonstrated through the targeted efforts of the Ministry of Women, Community and Social Development and through the development of the National Policy on Gender Equality and Rights of Women and Girls 2021-2031, implementation gaps and challenges remain, as the direct and socio-economic impacts on women and girls are exacerbated by climate change, natural disasters and global health crises.

In particular, Priority Area 7 of the National Policy on Gender Equality illustrated the need to increase visibility, contribution and engagement of women and girls in agriculture, climate change, natural resources management and disaster preparedness and response, and noted the lack of rigorous gender assessment and analysis when formulating strategic framework and reports regarding natural resources and climate change.

As such, it is worth considering the requirement for funding specifically dedicated to a Climate Change and Gender Action Plan, which can introduce a gender transformative approach to advancing the people's right to a healthy environment, and can be incorporated across all aspects of climate change and diaster risk reduction. A ccGAP intervention can cover the entire country. Such plans have been developed for many other countries in the world, funded by GCF readiness grants and it is proposed that Samoa also consider such an intervention.

A ccGAP builds on a country's national development and climate change policy, and identifies gender-specific issues in each priority sector. It is country specific and through a participatory multi stakeholder process ensures gender responsive climate action. If Samoa wishes to develop a ccGAP, the main steps for consideration are:

An understanding of the political, socio-economic, and environmental situation, as well as an overview of the legislative and policy framework and through this an identification of priority sectors by the country (e.g. integrated coastal management, forests and biodiversity, agriculture and food security, etc.). This is followed by capacity-building on targeted priority areas to ensure strong engagement and ownership and an inclusive participatory multi-stakeholder process in the development of the ccGAP. An essential part of this process is to ensure women's organisations, and individual women from academia, civil society, and government departments are involved in the ccGAP discussions from the beginning of the process, and lead it.

Readiness-phase support (up to USD 1m) is available from the Green Climate Fund (GCF) as is technical guidance from the International Union for Conservation of Nature (IUCN). The ccGAP could be developed under the guidance of the MWCSD and with the support of UN women. Once the ccGAP is in place it leads to further funding in the sectors recommended by most donor agencies who are committed to gender-based support.

For further details, please refer Annex II, References, The Path to a ccGAP,

NOTE

Not all illustrative Interventions have been described as at the time of printing this draft.

SDGs: 5, 13, 14

High level of community engagement needed to implement the intervention.

PPP not required.

Estimated at $1 million for readiness-phase support

S-2040
PDS
SOS
2NDC
CCP

S-2040: Obkective: to promote gender equality and remove barriers constraining women's participation
KPA-4: improve access to all opportunities for all, especially women and other vulnerable groups
CCP Objective 1: to promote inclusion of vulnerable groups including women in climate change planning.

PDS KPA8: Tourism Revitalisation.

Using the framework of the Triple Planetary Crisis response as the context for assessing loss and damage, this section presents the recommendations and future directions for implementation set out across three areas: (i) Institutional Governance, (ii) Implementation Arrangements, and (iii) Financing.

Institutional Governance

The United Nations will work closely with the Government of Samoa and other partners in the implementation of this plan within the framework of the UN Joint Programme on Ecosystem Services.

Figure 15: Areas of Action

Taking into account the nature of the Triple Planetary Crisis, the Ministry of Natural Resources and Environment will play a leading role in guiding the implementation of the Triple Planetary Crisis response.

The findings and proposed actions within this response plan will be further considered in the framework of the UN Joint Programme on Ecosystem Services funded by the Joint SDG Fund and implemented by UNESCO, UNESCAP, and UNEP jointly with the Ministry of Natural Resources and Environment and the Scientific Research Organisation of Samoa. The Steering Committee of the Joint Programme on Ecosystem Services will be the main decision making mechanism in the pursuit of the Triple Planetary Crisis Response.

The programme management of the Ecosystem Services will exercise oversight of the the Triple Planetary Crisis response plan.

Implementation Arrangements

The implementation arrangements for the initiatives to be reviewed by the Steering Committee include:

First, the development of an outreach and communications strategy to guide the advocacy and awareness-raising efforts in obtaining consensus and buy-in from government ministries, civil society, communities, and other relevant stakeholders.

It is important to engage with the wider society in fostering a sense of mutual ownership of decisions for the subsequent success on the implementation of interventions.

The second element of implementation pertains to the execution of projects created out of the proposed interventions.

Depending on the lead ministry for the projects, they will be responsible for the prioritisation of initiatives, the development of proposals, as well as the formulation of budgets for each project. The United Nations Office of the Resident Coordinator will provide oversight of this Triple Planetary Crisis response within its prerogatives in the coordination of the Ecossystem Services Joint Programme.

As agreed by the Steering Committee, other UN Agencies may support the response as relevant.

Financing

Given the breadth of the interventions required to reverse the impact of the Triple Planetary Crisis over the ecosystem of Samoa, additional financing instruments will be identified as needed.

While the vision for Samoa's Triple Planetary Crisis response is clear, there can be no concrete action towards its attainment without the alignment of development finance. Several of the interventions proposed under this response plan introduce the use of innovative financing instruments, such as blue, green and sovereign bonds and debt for nature swaps, to leverage

The image on this page is of Mount Vaea taken from the south. Apia, the capital of Samoa, is in the background. Many of the trees now found all over Samoa are invasive species such as the fa'apasī or African tulip tree (Spathodea nilotica), tamaligi pa'epa'e (Albizia falcataria) and tamaligi uliuli, (Albizia chinensis). Samoa's forests are important to biodiversity, supporting some of the most intact native ecosystems of any Pacific Island group. Tamaligi and the tulip trees are adversely affecting the native ecosystem, capable of displacing lowland native rainforests.

[Photo: Adam Vilkus]

the commensurate support needed for the realisation of the vision. The proposals developed for the interventions after obtaining Cabinet approval, would be submitted to development banks, as well as bilateral and multilateral donors for financing.

Ultimately, the successful execution of the Triple Planetary Crisis response in Samoa can constitute an amplifying framework for the nation's Loss and Damage analysis and costing, as the three interlinked elements of the Triple Planetary Crisis – climate change, decline of biodiversity and pollution – are "stressors" that exacerbate the Loss and Damage suffered by the country throughout the analysis.

Given Samoa's chairmanship of the AOSIS since January 2023, there is a real opportunity for such a model to provide the framework for other countries in the region and beyond, to advance their own Loss and Damage agenda and contribute to the attainment of the goals set forth in the 2050 Strategy for the Blue Pacific Continent, as well as national and regional adaptation plans. The contribution to adaptation plans could further present wider opportunities for more direct sources of funding.

The island of Apolima, pictured above, is situated between the two main islands of Upolu and Savaii and is surrounded by rugged cliffs. Access is through a narrow channel that can be treacherous as there is no reef to weaken what can be a very powerful ocean surge. The 2021 Census recorded a population of 81 inhabitants, down from 96 recorded in 2016.

There are very few places on the planet where a traditional way of life, interacting with the land and the sea, creates a sustainable natural and cultural environment that has flourished for thousands of years. It is for this reason that Apolima and the adjacent islands of Manono and Nuulopa, were submitted in 2006 by the Government of Samoa to form part of its Tentative List for potential UNESCO World Heritage sites as a cultural landscape. Fagaloa Bay - Uafato Tiavea Conservation Zone was also included the same year in Samoa's Tentative List.

The body perceives a favourable wind.

When preparations for a journey by sea are complete, voyagers will await a favourable wind. And when a gentle breeze suddenly brushes the skin, they are delighted knowing the weather works in their favour. The proverb reflects the joy of expectations met.

“E lē la‘a le uto i le maene pe sopoa‘e le tai i le ‘ele‘ele.”

A prophetic verse in an old Samoan song from the village of Asau in Savaii literally meaning “the floater (*uto*) cannot change places with the sinker (*maene*), nor can the sea (*tai*) walk on the land (*eleele*).”

The song makes direct reference to how natural and socio-cultural barriers have been compromised by exploitative human behaviour, resonating in today’s world of anthropogenic climate change.

Young mangroves take root in the foreshore of the seat of Government at Mulinuu in Apia.

ANNEXES

Annex I: List of Stakeholders Consulted

Preliminary Consultations (September 2022)

- Ministry of Natural Resources and Environment (MNRE)
- Secretariat of the Pacific Regional Environment Programme (SPREP)
- Le Siosiomaga Society Inc. (OLSSI)
- Scientific Research Organisation of Samoa (SROS)
- Pacific Water and Wastewater Association (PWWA)
- United Nations Development Programme (UNDP)
- United Nations environment Programme (UNEP)
- World Meteorology Organisation (WMO)
- United Nations Country Team (UNCT) (including UNDP, ILO, WMO, FAO, ESCAP, UNWOMEN, WHO, UNEP, WFP, UNESCO)
- Donors (including UK, Australia, Japan, New Zealand, PACER+, US)

Second Round Consultations (November 2022)

- SROS
- WMO
- UNESCAP
- South Pacific Tourism Organisation (SPTO)
- Conservation International (CI)

Roundtable Discussion (7 December 2022)

- MNRE
- Ministry of Foreign Affairs and Trade (MFAT)
- SROS
- Lands and Transport Authority (LTA)
- Samoa Water Authority (SWA)
- CI
- OLSSI
- Matuaileoo Environment Trust Incorporate (METI)
- SPREP

Annex II: Bibliography

Barbedo, J., M. Miguez, D. Van der Horst and M. Marins. Enhancing ecosystem services for flood mitigation: a conservation strategy for peri-urban landscapes? Ecology and Society (2014)

COP27 Decision -/CP.27 -/CMA.4, Funding arrangement for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage

Government of Pakistan Ministry of Climate Change, Living Indus: Investing in Ecological Restoration (2022)

Government of Samoa, Pathway for the Development of Samoa FY2021/22-FY2025/26 (2021)

Government of Samoa, Samoa 2040 (2021)

Government of Samoa, Samoa Ocean Strategy 2020-2030 (2019)

Government of Samoa, Samoa's Second Nationally Determined Contribution (2021)

Government of Samoa, Samoa's Sixth National Report to the Convention on Biological Diversity (2018)

IMF, Country Reports – Samoa: Technical Assistance Report – Climate Macroeconomic Assessment Program (2022)

IUCN Global Gender Office, The Art of Implementation: Gender Strategies Transforming National and Regional Climate Change Decision Making (2012).

IUCN, Ministry of Climate Change, Government of Pakistan, Climate Change Gender Action Plan, (2022)

MNRE, Climate Change Report Card 12th Edition, (2021)

MNRE, Draft National Water Resources Management Plan 2021-2030 for Samoa (2021).

MNRE, National Environment Sector Plan 2017-2021 (2017)

MNRE, Samoa Climate Change Policy 2020-2030 (2020)

MNRE, Samoa's National Diversity Strategy and Action Plan 2015-2020 (2015)

MNRE, State of the Environment Report 2013

MNRE, Water and Sanitation Sector Plan: Framework for Action 2016-2020 (2017).

NYU, MNRE, Biosecurity of Upolu Fresh and Salt Environmental Water Resources Final Report (2020)

Sachs, J., I. Massa, L.B. Diaz, G. Lafortune, S. Marinescu, Adaptation, Loss and Damage: The Case for Climate Justice (2022)

Samoa Tourism Authority, Samoa Tourism Sector Plan 2022/2023-2026/2027, (2022).

Thomas, A., I. Menke, O. Serdeczny, Loss and Damage Costing and Financing Mechanisms: Carribean Outlook.

UNDP, Demystifying Green and Blue Bonds for the Pacific Region (July 2022)

UNEP, Concept Note on Malekula Water Supply Project: Increase Resilience of Vulnerable and marginalised Communities of Malekula Island through Integrated Water Resource Management and Ecosystem-based Interventions, Vanuatu. (2019).

UNEP, Convention on Biological Diversity, COP15, Kunming-Montreal Global biodiversity framework: Draft decision submitted by the President.

UNEP, For People and Planet: Medium-Term Strategy 2022-2025 (2022)

UNEP, Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies (2021)

Vári, Á., Kozma, Z., Pataki, B. et al. Disentangling the ecosystem service 'flood regulation': Mechanisms and relevant ecosystem condition characteristics. (2022).

Annex III: Vai o le Ola poster

THE TRIPLE PLANETARY CRISIS of climate change, biodiversity and nature loss and pollution and waste offers an ideal framework for the conceptualization of Loss and Damage funding approved at the 27th United Nations Climate Change Conference of Parties (COP27) held in November 2022 in Sharm El Sheikh, Egypt.

In their entirety, losses and damages include deterioration of the environment, depleting natural resources and ecosystem services as well as unrealized growth potential and economic costs that governments and societies bear together.

Out of the three components of the national wealth: natural, human, and productive capitals, the natural capital as a critical component to enable growth is the most sensitive to climate change, biodiversity loss, and pollution.

Through regular economic valuation, governments can assess changes in national wealth and the resulting loss of growth potential generated by the TPC. Loss and damage occur when both mitigation and adaptation efforts are failing, the immediate consequence being a decline in the natural capital and ecosystem services and, implicitly, an adverse impact on livelihoods and the country's long-term growth potential.

Vai o le Ola is Samoa's response plan to the Triple Planetary Crisis and has been prepared with the invaluable contribution of key ministries of the Government of Samoa, civil society, regional organisations, and academia.

Lūtia i Puava, 'ae mapu i Fagalele.

Distress at Puava, rest at Fagalele.

Puava, a cape between Papa and Falealupo, Savai'i, has rough, dangerous cross currents but Fagalele, a protected bay beyond Pu'ava, is a safe haven where seafarers can find rest.

The proverb offers hope that humanity, with expeditious effort, will overcome the threats we face and restore the balance needed to live in harmony with nature.