



Government of Samoa

SAMOA

NATIONAL ADAPTATION PLAN

Cover image

The cover reflects the resilience and adaptive strength of the Samoan people, rooted in their land and embraced by the ocean, standing together in cultural solidarity as they confront climate change and look toward a sustainable future.

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The National Adaptation Plan of Samoa

Phase 1

Implemented
by



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Foreword



As Minister responsible for the environment and climate change, I am pleased to present Samoa's National Adaptation Plan (NAP), which outlines our strategic response to the growing impacts of climate change and our commitment to building a more climate-resilient Samoa.

As custodians of Samoa's natural heritage and stewards of our sustainable development, we must act decisively in the face of climate change. Our ecosystems, livelihoods, and long-term prosperity are increasingly at risk from climate-induced hazards, including rising sea levels, extreme weather events, changing rainfall patterns, and ocean acidification.

The NAP builds on Samoa's ongoing efforts to address climate risks and strengthen resilience in development planning. It aligns closely with the Pathway for the Development of Samoa (PDS 2021–2026) and supports the implementation of the Samoa Climate Change Policy (2020) and Samoa's Third Nationally Determined Contribution (NDC3.0).

It provides a clear and coordinated pathway to guide Samoa's adaptation actions in the years ahead. It sets national adaptation priorities, identifies key sectors and enabling actions, and supports the integration of climate risks into policy, planning, and budgeting processes. It also strengthens Samoa's ability to access climate finance, meet international reporting requirements, and improve readiness for implementation.

I extend my sincere appreciation to all partners, stakeholders, communities, and individuals who have contributed to the development of this NAP through their leadership, commitment, and ongoing support. Let us continue working together to implement this Plan and ensure a climate-resilient future for our people.

Faafetai ma ia manuia.



Hon. Ale Vena Ale

Minister of Natural Resources and Environment
Government of Samoa

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The Government of Samoa acknowledges with gratitude the many stakeholders whose contributions have shaped the development of this National Adaptation Plan (NAP). This includes the leadership and technical input of government ministries and agencies, the guidance of village leaders and communities, and the insights of civil society organizations, the private sector, and academic institutions. The NAP reflects Samoa's collective commitment to a climate-resilient future, built on years of experience and ongoing national effort.

We extend our deepest appreciation to the Global Green Growth Institute (GGGI) for leading the development of this NAP. GGGI provided technical direction, strategic advice, and coordination support throughout the process. Their partnership has been central to shaping a NAP that is grounded in Samoa's national priorities and responsive to the realities of climate risk and development planning.

The Government of Samoa also sincerely thanks the United Kingdom's Foreign, Commonwealth and Development Office (FCDO) and the Australian Department of Foreign Affairs and Trade (DFAT) for their generous financial support. Their commitment to climate resilience in Samoa has been vital in enabling the development of this Plan.

We also acknowledge the United Nations Development Programme (UNDP) for its valuable contributions through the Third National Communication (TNC) and the NAP Mapping Report, which provided technical inputs and helped identify key adaptation priorities across sectors.

Finally, we recognize the dedicated staff of the Ministry of Natural Resources and Environment (MNRE), along with technical officers and focal points across all relevant government ministries, public bodies, and agencies. Their tireless work and collaboration have been instrumental in bringing this Plan to life.

This NAP is the result of Samoa's long-standing commitment to climate adaptation made possible by shared effort, enduring partnerships, and a clear national vision for resilience.

Table of Contents

1	National Circumstances	10
	Rainfall Patterns	10
	Temperature Trends.....	10
	Extreme Events & Sea Level Rise.....	11
2	Vision Goals and Objectives	12
3	Policy and Regulatory Framework	13
3.1	Climate Adaptation Commitments on the International Level.....	14
3.2	Effectiveness of Current Policies in Addressing Climate Adaptation	16
3.3	Policy Synergies and Gaps Analysis	19
3.4	Other Ongoing Policy Efforts.....	22
3.5	Climate Adaptation Governance	23
3.6	Results from An Institutional Adaptation Capacity Needs Assessment.....	26
4	Inclusive Development and Adaptation: Guiding Principles	28
4.1	Samoa's GEDSI Approach	28
4.2	GEDSI in NAP Sectors and Policies	30
4.3	Gender, Social Inclusion and Adaptation Nexus	31
4.4	Key Recommendations for Gender-Responsive and Socially Inclusive NAP	32
5	Climate Risks and Vulnerabilities.....	33
5.1	Specific Objectives	33
5.2	Institutional Mandate and Primary Users	34
5.3	Sectoral Coverage	34
5.4	CRVA Framework.....	35
5.5	Scenario Frameworks	36
5.6	Observed and recent past vulnerabilities and impacts	39
5.7	Sector-level vulnerability snapshot (RCP 4.5).....	50
5.8	Limitations and Challenges	54
6	Methodology	55
6.1	Applicable risk-reduction and resilience approaches	56
6.2	Sector-specific adaptation menus	59
6.3	Multi-Criteria Analysis	60
6.4	Weighting and Composite Score.....	64
6.5	Tier (Portfolio) Assignment.....	65
6.6	Initial Prioritization Results.....	65
7	Prioritized Actions.....	68
7.1	Agriculture and Fisheries Sector.....	69

7.2	Energy Sector	70
7.3	Environment Sector	71
7.4	Health Sector.....	72
7.5	Tourism Sector	73
7.6	Water, Sanitation and Hygiene (WASH) Sector.....	74
8	Strategic Approaches and Synergies.....	76
8.1	Strategic Clusters.....	77
9	Integration of NAP with Sectoral Plans.....	79
9.1	Integration of Climate Change Adaptation into Samoa's National Development Planning	79
9.2	Alignment of Sector Plans with NAP Priorities	80
9.3	Advancing Policy Coherence for Adaptation and Resilience Priorities	82
10	Resource Mobilization and NAP Financing Strategy	83
10.1	Opportunities to Adaptation Financing in Samoa.....	85
10.2	Proposed NAP Financing Strategies	85
10.3	Institutional Coordination for External and Domestic Finance	86
10.4	Mobilization of Private Investments.....	87
11	MEL Framework	87
11.1	Adaptation MEL Framework	88
11.2	Key Indicators for measuring strategy performance	89
11.3	Best practices for NAP M&E Approaches	90
12	Conclusion.....	91

Abbreviations and Acronyms

ACC	Aid Coordination Committee (MFAT)
ACEO	Assistant Chief Executive Officer
AF	Adaptation Fund
AFOLU	Agriculture, Forestry and Other Land Use
AR5	Fifth Assessment Report (IPCC)
AR6	Sixth Assessment Report (IPCC)
BRD	Bilateral Relations Division
BUR	Biennial Update Report
CASH	Climate Adaptation Strategy for Health
CBD	Convention on Biological Diversity
CCD	Climate Change Division
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
GET	GEF Trust Fund
CSO	Civil Society Organization
CIM	Community Integrated Management
CRICD	Climate Resilience Investment Coordination Division (MOF)
CRVA	Climate Risk and Vulnerability Assessment
CMIP	Coupled Model Intercomparison Project
DMO	Disaster Management Office
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEDSI	Gender Equality, Disability, and Social Inclusion
GHG	Greenhouse Gas
ICAT	Initiative for Climate Action Transparency
IPCC	Intergovernmental Panel on Climate Change
IPR	Intellectual Property Rights
IRD	International Relations Divisions (MFAT)
LEDs	Low Emissions Development Strategy
LDCF	Least Developed Countries Fund
MAF	Ministry of Agriculture and Fisheries
MFAT	Ministry of Foreign Affairs and Trade
MNRE	Ministry of Natural Resources and Environment
MOF	Ministry of Finance
MOH	Ministry of Health
MEL	Monitoring, Evaluation, and Learning
WBG	World Bank Group
MRV	Monitoring, Reporting and Verification

MWCSD	Ministry of Women, Community and Social Development
MWTI	Ministry of Works, Transport and Infrastructure
NAP	National Adaptation Plan
NAPA	National Adaptation Programme of Action
NbS	Nature-based Solutions
NCCC	National Climate Change Council
NCCP	National Climate Change Policy
NDA	National Designated Authority
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NISP	Samoa National Infrastructure Strategic Plan
PDS	Pathway for the Development of Samoa
PPP	Public-Private Partnership
PWD	Persons With Disabilities
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SAFCCP	Samoa Agriculture and Fisheries Climate Change Policy
SBS	Samoa Bureau of Statistics
SDGs	Sustainable Development Goals
SDS	Strategy for the Development of Samoa
SIAMS	Samoa Infrastructure Asset Management Strategy
SIDS	Small Island Developing State
SPCZ	South Pacific Convergence Zone
STA	Samoa Tourism Authority
TNC	Third National Communication
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
WASH	Water, Sanitation and Hygiene

1 National Circumstances

Samoa's National Adaptation Plan (NAP) is grounded in a range of national policy processes that collectively seek to align development planning with climate-resilient strategies. At the core is the Pathway for the Development of Samoa (PDS), the country's apex development framework, which has been a foundational reference for the NAP. Building on the PDS, the NAP process has been enriched through a national policy mapping exercise and informed by Samoa's Third National Communication, including its Climate Risk and Vulnerability Assessment. The adaptation pipelines identified originate from sector level planning under the PDS which are Samoa's Sector Plans and have been expanded through consultations and prioritized using the updated vulnerability and climate data.

Situated in the vast blue sweep of Central Southern Pacific, Samoa stands on the frontlines of a changing climate. Remote and historically resilient and yet deeply exposed, this small island nation faces mounting threats from forces that it has not contributed to. Due to its remote geographical location and exacerbating climate challenges such as warming and rising seas and changeable wind and rain patterns, Samoa is increasingly enhancing its efforts to address adaptation to climate change and building resilient communities. For Samoa, adaptation is not a policy option, it is a lifeline. It is the method by which its environment, economy, and the well-being of its people will remain in balance in the future.

Climate change impacts in Samoa threaten to unravel decades of hard-won progress placing heavy strain on both natural landscapes and human settlements. Those who live closest to the margins, women, children, the elderly, and coastal communities, bear the greatest weight of this unfolding crisis. Samoa is confronting a diverse and interconnected set of climate impacts that threaten its environment, economy, and communities. As a Small Island Developing State (SIDS), it is highly vulnerable to coastal hazards such as erosion, sea-level rise, and storm surges, which endanger vital infrastructure and the livelihoods of coastal populations.

Compounding these challenges are increasing pressures on water resources due to changing rainfall patterns and prolonged dry periods, which strain freshwater availability and complicate sustainable water management. Climate change is also disrupting agricultural productivity through more frequent pest infestations, soil degradation, and shifting growing seasons, placing food security at risk.

The below table provides an overview of Samoa's climate trends (observed and projected):

Figure 1: Overview of Climate Threats

Rainfall Patterns
Observed Trends:
▪ Unclear due to limited data and high natural variability.
Future Projections:
▪ Outcomes range from wetter to drier. ▪ Influenced by South Pacific Convergence Zone (SPCZ) shifts and enhanced equatorial warming. ▪ High uncertainty – larger under higher warming levels. ▪ Planning options must consider both wetter and drier futures.
Temperature Trends
Global Context:
▪ 1.1°C warming already observed (2011–2020). ▪ 1.5°C may be reached by the late 2020s or early 2030s. ▪ Future warming (up to 4°C) depends on emissions pathways.
Samoa-Specific:
▪ Under 2°C global warming, Samoa expected to warm by 1.3–1.9°C. ▪ Tropics experience extreme heat earlier, increasing risk despite lower average warming.

Extreme Events & Sea Level Rise

Tropical Cyclones:

- Fewer cyclones projected overall, but increased intensity likely.
- More extreme rainfall.
- Greater coastal inundation due to sea level rise.

Sea Level Rise:

- Antarctic melts likely greater than earlier estimates.
- 0.51–0.98 m sea level rise by 2090 under high emissions.
- Smaller variation across emissions pathways than for temperature.

Although Samoa has established disaster risk reduction frameworks, significant gaps remain in early warning systems, emergency response coordination, and the resilience of essential services. At the same time, the degradation of critical ecosystems such as coral reefs, mangroves, and forests undermines their natural protective functions and diminishes biodiversity. These environmental stresses are further linked to rising public health risks, including the spread of climate-sensitive diseases like dengue, and the broader health impacts of extreme weather events.

There is therefore significant potential to scale up nature-based solutions, such as ecosystem restoration, which provide sustainable, cost-effective responses to climate impacts while enhancing biodiversity and supporting livelihoods. Samoa faces ongoing constraints in funding, capacity, and localized climate data; factors that limit the ability to implement, monitor, and adapt interventions effectively. Addressing these multifaceted challenges demands an integrated, well-resourced, and equity-driven approach to building long-term climate resilience¹. Samoa's NAP will respond to this with inclusive and participatory governance that ensures the voices of women, youth, and indigenous communities are central in decision-making, and will look to the continued implementation of the CIM (Community Integrated Management) Plans as a key component of the implementation of the NAP.

Given these diverse climate threats the sectors of the NAP have been defined as below.

Table 1: Samoa NAP Sectors

Sector	Relevance to Adaptation and NAP
Agriculture and Fisheries	Agriculture and fisheries, as nature-dependent economic sectors, are highly vulnerable to climate change. In 2023, agriculture, forestry, and fishing together accounted for 11% of Samoa's GDP.
Energy	Samoa's energy infrastructure, especially electricity generation, transmission, and fuel supply chains, is highly vulnerable to extreme weather events (e.g., cyclones, flooding, sea level rise). Damage to energy infrastructure during disasters disrupts essential services like health, communication, water, and emergency response.
Environment	Environment, which covers a broad scope of nature and the complex within it, interacts with climate change in a significant scale and plays a significant role in Samoa's economy and social livelihood. This includes water, marine, forest and land resources, biodiversity, etc.
Health	Health sector is a critical component of climate change adaptation, for its key role in preparing for, responding to, and reducing health risks posed by climate-related hazards such as heatwaves, etc.
Tourism	Tourism is a major contributor to Samoa's economy accounting for 20% and 25% of Samoa's annual GDP. Adaptation helps reduce economic vulnerability in local

¹ Drawn from the NAP Mapping Report (UNDP, 2024)

	communities, promotes the protection of ecosystems, which in long term, will strengthen the overall community resilience.
Trade, Commerce and Manufacturing	Trade, commerce, and manufacturing have limited direct relevance to climate change adaptation compared to sectors more immediately affected by climate risks, but they are growth sectors for Samoa's economy.
Transport and Infrastructure	Infrastructure is essential to the functioning of communities and plays a critical role in building climate resilience. It is a key topic in climate adaptation for two main reasons: (1) Its vulnerability to existing and potential damage from extreme weather events, and (2) Its crucial contribution to enhancing climate resilience at both the local and societal levels. Building early warning systems, climate-resilient or disaster proof infrastructure could directly reduce the vulnerability of local communities.
Water, Sanitation and Hygiene	The water and sanitation sectors, which are highly influenced by temperature and precipitation, are particularly sensitive to climate change. Climate impacts on water and sanitation could result in vulnerability in groups including children, women, and overall, in other aspects in the society e.g., health, agriculture, etc.

2 Vision Goals and Objectives

The Samoa NAP builds off a strong set of national policy instruments in the climate and environment sector, and seeks to operationalize the development of adaptation actions, mainstreaming actions in a first instance across national government, and subsequently spurring the revision and updating of the CIM Plans provide a unique and action-oriented community driven adaptation planning approach. It leverages the Vision that has been established as part of the Pathway for the Development of Samoa which is "Fostering social harmony, safety and freedom for all". Samoa's NAP must ensure that the PDS's vision is climate resilient, and with the society, economy and culture of Samoa safeguarded and strengthened to enable the PDS's vision to become a reality.

The Goals of the Samoa NAP are developed in response to the challenges identified during the consultations undertaken for the NAP mapping report and are as follows:

NAP Goals	
▪	Mobilize and secure sustained financial and technical resources for climate adaptation planning and implementation.
▪	Strengthen institutional and human capacity to effectively design, manage, and implement adaptation programs and projects.
▪	Integrate adaptation actions into national and sectoral planning frameworks to ensure long-term sustainability.
▪	Establish and operationalize a robust national Monitoring, Evaluation, and Learning (MEL) framework for adaptation.
▪	Enhance climate information systems to ensure timely access to reliable, localized data for decision-making.
▪	Ensuring climate policies are backed by actionable, well-resourced implementation plans aligned with national priorities.
▪	Promote inclusive and continuous stakeholder engagement through effective awareness-raising and communication strategies.

**These goals were formulated based on the key challenges identified in the NAP Mapping Exercise.*

Indeed, the NAP is only the first piece in the national planning process for adaptation planning in Samoa, providing the initial phase of action, while the second will consist of the full revision of the CIM Plans, which

constitutes the most detailed adaptation planning level in Samoa, and recognizes the importance of community as the core level for resilience building in Samoa.

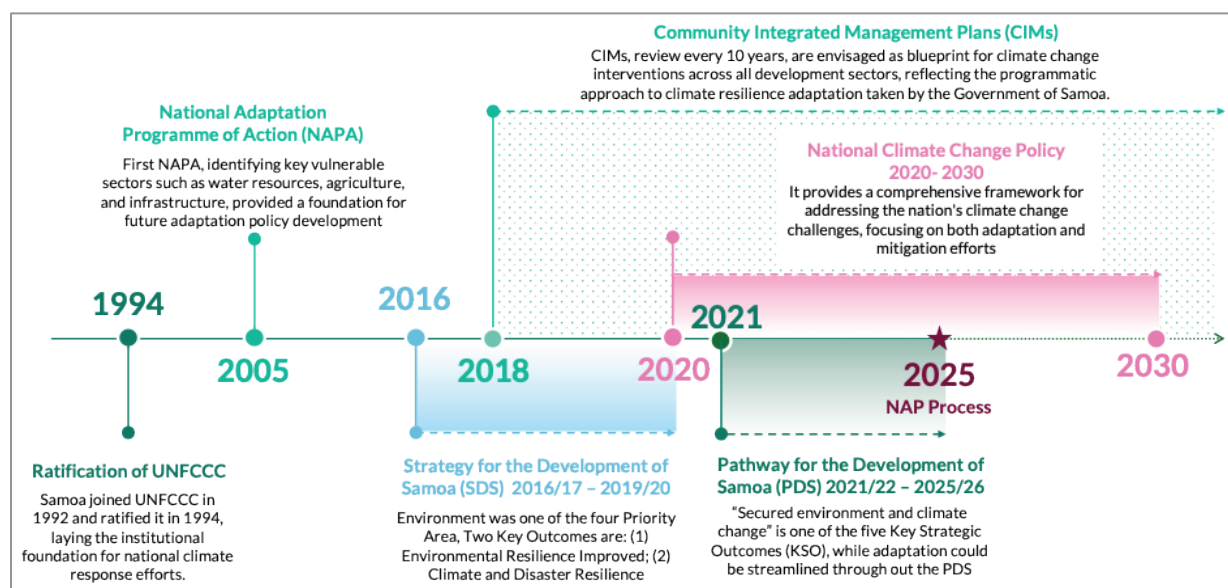
This national pipeline of priorities will then be updated following the update of the CIM Plans, and the connection of this planning framework with the Loss and Damage Framework, constituting one set of measures and strategies for locally driven climate action in the country. The gaps and opportunities in the current policy framework that the NAP and CIM Plan update responds to are explored in the next section.

3 Policy and Regulatory Framework

Samoa has developed comprehensive frameworks that address climate change adaptation at both national and sectoral levels. These documents demonstrate a strong awareness and commitment to tackling adaptation challenges and building climate resilience across the country.

Samoa is one of the founding members of the UNFCCC and ratified the convention in March 1994. Following this, it has been committed to practicing its mandates, actively building national enabling environments for actions relating to mitigation and adaptation to climate change. This sub section outlines Samoa's national policies and strategies related to climate adaptation, following the timeline presented in Figure 2.

Figure 2: Samoa's national policy and strategy development in relevance to climate change adaptation



Samoa's first policy document to systematically address climate change adaptation, the National Adaptation Programme of Action (NAPA),² was launched in 2005. It assessed Samoa's climate vulnerability across nine highly vulnerable sectors (including agriculture & food security, water, biological diversity, health, forestry, coastal infrastructure and environment, tourism, urban settlement, and village communities) and identified seven major vulnerabilities that threaten the livelihoods of communities. One highlight of the NAPA is its community-based adaptation approach. NAPA established a first framework for Samoa's climate adaptation

² Government of Samoa. *National Adaptation Programme of Action (NAPA)*. Apia: Ministry of Natural Resources and Environment, 2005.

and systematically identified adaptation needs and laid the groundwork for the future adaptation policy and strategy development.

In 2016, Samoa launched its Strategy for the Development of Samoa (SDS) which outlined the priorities the government would be progressing for the following four-year period. Under the SDS, climate was combined with disaster risk reduction in “Key Outcome 14: Climate and Disaster Resilience”. It recognized that “existing methods and tools of disaster risk reduction provide options for adaptation to climate change.”³

Community remains at the core of Samoa’s sustainable development. Since 2018, Samoa has developed 40 Community Integrated Management Plans,⁴ which aimed to “to help communities and government improve resilience by identifying actions and solutions considered as best approach to issues identified.”⁵ CIM Plans provide a channel for the collaboration between the local communities and the government and could ensure that adaptation measures are tailored to local vulnerabilities, culture, and environmental contexts, they also promote the strengthening of community ownership and stewardship of resources.

In 2020, Samoa published its comprehensive framework for climate change, National Climate Change Policy 2020-2030. It has a mission “to coordinate and enhance Samoa’s response to the impacts of climate change in support of national sustainable development efforts and addressing regional and international obligations.”⁶ It identifies eight objectives, among which those relevant to adaptation include governance framework, implementation of adaptation measures, climate finance, mainstreaming adaptation into national planning, implementation and monitoring, climate data and informational management, coordination across various levels and public awareness.⁷ The National Climate Change Policy provides a comprehensive baseline framework to build a national enabling environment for both adaptation and mitigation actions, and to foster cross-sectoral and multi-level collaboration and participation in adaptation and resilience building across country.

Besides the national level policy on the climate perspective, Samoa has launched its pivotal Pathway for the Development of Samoa (PDS) 2021/22 – 2025/26 in 2021, as an overall national development policy and the continuation of the previous Strategy for the Development of Samoa (SDS), with a vision of “fostering social harmony, safety, and freedom for all” and a theme of “empowering communities, building resilience, and inspiring growth”.⁸ Climate adaptation was not specifically prioritized in its Key Strategic Outcome 4 “Secured Environment and Climate Change” but could also be streamlined throughout the sustainable development plans throughout the PDS to build resilience of on the societal, economy and environmental level reciprocally. This NAP will take up this task of mainstreaming of adaptation considerations, through this national document, and through the subsequent enrichment of the CIM Plans.

3.1 Climate Adaptation Commitments on the International Level

³ Government of Samoa, *Strategy for the Development of Samoa 2016/17–2019/20* (Apia: Ministry of Finance, 2016), 23.

⁴ Statistics based on the dataset from the Ministry of Natural Resources and Environment (MNRE), <https://samoa-data.sprep.org/dataset/community-integrated-management-plans> (Accessed on 12 June 2025)

⁵ Government of Samoa, *Community Integrated Management Plan: Vaisigano 2 District - Savaii* (Apia: Ministry of Natural Resources and Environment, 2018), 9.

⁶ Government of Samoa, *Samoa National Climate Change Policy 2020–2030* (Apia: Ministry of Natural Resources and Environment, 2020), 9.

⁷ Ibid.

⁸ Government of Samoa, *Pathway for the Development of Samoa (PDS) 2021/22 – 2025/26* (Apia: Ministry of Finance, 2021), 6.

Samoa is a strategic member of the Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway, which aims to address the unique challenges faced by SIDS and to support their development. The SAMOA Pathway is the third dedicated development and sustainability agenda for SIDS worldwide, following the Barbados Programme of Action in 1994 and the Mauritius Strategy in 2005. Aside from addressing the unique vulnerabilities that SIDS face with respect to climate change and the actions needed to address them across different sectors and means of implementation, it also calls for international support to SIDS's efforts.⁹

Under the guidance of SAMOA Pathway framework, Samoa has been actively developing and implementing its national level sustainable development and climate change policies. Progress of countries towards SAMOA Pathway framework is reviewed every five years with indicators. The 2019 review found that critical gaps for SIDS in advancing climate adaptation include but not limited to accessing sufficient affordable financing,¹⁰ the need to ease debt burdens,¹¹ diverse approaches to address climate change, inter alia ecosystem-based approaches,¹² data collection and technology.¹³ The next review of SAMOA Pathway will be in 2025/26.

Samoa has made adaptation commitments when updating its NDCs in 2021. Samoa submitted its first NDC in 2015, which primarily focused on mitigation measures. The Second NDC in 2021 significantly strengthened the adaptation component, introducing quantitative targets, means, and requirements for adaptation in the marine sector and the AFOLU (agriculture, forestry, and other land use) sector, as shown in Table 2. Furthermore, although specific targets and implementation pathways were not outlined for all sectors, Samoa's Second NDC recognized the impacts of climate change on other sectors including agriculture, health, tourism, forestry, and water, as well as coastal infrastructure and marine ecosystems.

Table 2: Samoa's adaptation targets, means and requirements in its 2nd NDC¹⁴

Sector	Target	Means	Requirements
Marine	Expand the area of mangrove forests in Samoa by 5 percent by 2030 relative to 2018.	Mangrove restoration and planting programs in coastal areas.	Samoa requires external funding support and technical assistance to support mangrove restoration and planting.
AFOLU	Expand the area under agroforestry to an additional 5 percent of agricultural land by 2030 relative to 2018	Awareness raising activities and targeted support, including provision of seedlings.	Samoa can promote the expansion of agroforestry with external financial support and external technical assistance.
	Manage the use of forest sustainably and increase total forest cover by 2	Develop a program for reforestation and forest restoration	Samoa requires external financial support and technical assistance to manage forests sustainably and

⁹ United Nations, *Small Island Developing States Accelerated Modalities of Action (SAMOA) Pathway*, A/RES/69/15 (New York: United Nations, 2014), para. 44.

¹⁰ United Nations General Assembly, *Mid-Term Review of the SAMOA Pathway: High-Level Political Declaration*, A/RES/74/3 (New York: United Nations, 2019), para. 19.

¹¹ Ibid, para. 20.

¹² Ibid, para. 27.

¹³ Ibid, para. 28 and 29.

¹⁴ Government of Samoa. 2021. *Second Nationally Determined Contribution*. Apia: Ministry of Natural Resources and Environment.

	percent by 2030 relative to 2013.	supported by incentive payments.	incentivize reforestation and forest restoration.
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3.2 Effectiveness of Current Policies in Addressing Climate Adaptation

By building on and innovating existing adaptation policy assessment frameworks, the following framework to evaluate adaptation policies is proposed, specifically tailored for high-risk, capacity-constrained contexts such as SIDS. The framework assesses adaptation policies across six key dimensions: Relevance, Stakeholder Engagement, Financial Readiness, Knowledge & Capacity, Resilience & Integration and Contribution to Adaptation.

Table 3: Overview of the framework

Category	Description
Relevance	Assesses alignment with national and global goals (e.g., NDCs, SDGs), and the presence of clear objectives and timelines
Stakeholder Engagement	Evaluates how well the policy includes local communities and marginalized groups, and whether meaningful consultations were held
Financial Readiness	Reviews budget transparency, funding sources, long-term financial sustainability, and cost-effectiveness
Knowledge & Capacity	Examines the use of up-to-date data, institutional capacity, and learning systems to inform decision-making
Resilience & Integration	Measures the long-term viability, integration into governance systems, and adaptability over time without ongoing external support
Contribution to Adaptation	How much the policies directly contribute to climate adaptation

Rating Criteria

0: Very Poor – No significant efforts or frameworks in place

1: Poor – Limited actions, lacks clarity or structure

2: Fair – Some positive actions, but significant challenges or gaps remain

3: Good – Significant efforts with clear goals, but the long-term execution and sustainability remain uncertain

4: Very Good – Strong frameworks and measures in place, though minor gaps or risks remain

5: Excellent – Comprehensive, well-structured, and actionable

Table 4: Detailed assessment tool and evaluation of key existing policies

Category	Metric	Detailed Description	National level		Local level
			NCCP	PDS	CIM Plan ¹⁵
Relevance	Strategic Alignment	Alignment with national development strategies, NDCs, and SDGs	(5/5) Aligned with SDGs, NDCs, Paris Agreement, PDS, CBD ¹⁶ , CCD ¹⁷	(2/5) Aligned with SDS and CIM, but lacks alignment with international commitments	(3/5) Aligned with SDS, PDS

¹⁵ Using CIMP - Gagaemauga 3 District - Savaii as an example for evaluating the local Implementation guideline, https://pacific-data.sprep.org/system/files/485fce9e-7c3a-4164-88aa-cd7c6ddac0b6/Gagaemauga-3_District_Signed_Formatted_Original.pdf

¹⁶ Convention on Biological Diversity

¹⁷ Convention to Combat Desertification

	Defined Goals	Clearly articulated short- and long-term goals to provide direction and measurable outcomes for success	(4/5) Eight strategic objectives clearly defined, no measurable goals	(4/5) Five Key Strategic Outcomes clearly defined, measurable goals	(4/5) Clear local adaptation and risk-reduction actions, no measurable goals
	Implementation Timeline	A detailed timeline to track progress and ensure accountability throughout the project's lifespan	(3/5) Midterm review scheduled after year 5 with responsible agencies identified, but milestones are vague	(3/5) Implementation period defined but no clear milestone	(3/5) Reviewed every 10 years and monitored on a five yearly basis, but no detailed timeline
Stakeholder Engagement	Community Involvement	Active and meaningful participation of local communities, especially those with customary land rights, in planning and implementation	(3/5) Primarily targets national-level stakeholders, with less focus on the direct involvement of local landowners	(3/5) Focus on private sector involvement, limited active participation of customary landowners	(4/5) Participatory planning with local leaders and groups
	Marginalized Group Empowerment	Specific strategies to engage and support marginalized populations, such as women, youth, and indigenous communities	(4/5) Women, youth, and elderly mentioned	(4/5) Women and youth mentioned in empowerment goals	(2/5) Women-related ministries are mentioned but not thoroughly elaborated
	Consultative Process Quality	Thorough documentation of stakeholder consultation processes, feedback received, and how it influenced the policy design	(4/5) Nationwide consultation with communities with detailed description	(3/5) Consultations across districts and sectors, but lack supporting evidence	(4/5) Consultations have been conducted and proposed solutions to address the raised issues have been outlined
Financial Readiness	Budget Transparency	Evidence of secured and long-term funding, with percentages showing financial stability beyond initial phases	(2/5) Calls for investment planning, no clear budget detail	(3/5) Enhance access to state-financed incentives and improved accountability	(1/5) No budget included, assumes alignment with government funding
	Financial Sustainability	Evidence of secured and long-term funding, with percentages showing financial	(2/5) Seeks long-term and multilateral funding mechanisms (GCF,	(2/5) Relies on international aid and investment	(2/5) Dependent on sectoral and donor program integration, local funding

		stability beyond initial phases	GEF, Adaptation Fund)		structures underdeveloped
Knowledge & Capacity	Data Utilization	Use of relevant, accurate, and current data to inform planning, monitoring, and evaluation activities	(3/5) Highlights the importance of data management, privacy protection and public access	(2/5) Identifies the importance of data, some macro data use	(4/5) Use of mapping, hydrology and geomorphology data
	Institutional Capacity Building	Investment in strengthening local institutions' abilities to manage and sustain the project	(3/5) Local capacity and governance will be improved, but no specific action plans are outlined	(2/5) Capacity building and knowledge sharing within communities	(3/5) Invests in training farmers, PWDs ¹⁸ , community leaders, and village councils
Resilience & Integration	Long-term viability	Long-term viability of the project without reliance on ongoing external support or funding	(3/5) Investment planning process will assess resource needs, with multi-funded projects ensuring outcomes	(3/5) Relies on external financing, especially in the private sector development	(3/5) Largely depends on external donor support, also seeks funding from PPP collaborations
	Governance Integration	Integration into existing governance structures to enhance legitimacy, coordination, and sustainability	(3/5) Emphasizes cross-sectoral coordination, but limited local governance integration	(3/5) Emphasis will be placed on strengthening governance and management practices and cementing inclusive and participatory decision-making processes	(4/5) Highly community-driven, with strong local governance through village councils
Contribution to Adaptation		How much the policies directly contribute to climate adaptation	(3/5) Largely focused on adaptation, but implementation still requires more explicit actions	(3/5) emphasis "people first" approach, focusing on integrating climate resilience into macroeconomic and fiscal policies	(4/5) Highly adaptation-centric, with strong local integration of climate resilience and community-driven climate actions

National Level:

- NCCP excels in its alignment with international frameworks, such as the SDGs and the Paris Agreement. While it provides clear strategic direction, it lacks measurable goals and a transparent

¹⁸ People With Disabilities

financial plan, which could hinder its implementation. Nonetheless, it remains a strong framework for addressing climate challenges and promoting national development and climate action.

- PDS offers a strong foundation for integrating climate adaptation into the country's economic planning and public financial management. However, effective implementation will require improvements in data availability and quality, which are essential for evidence-based decision-making, and institutional capacity building, particularly at sectoral and local levels.

Local-Level:

- CIM Plan stands out for their robust local-level engagement, placing a strong emphasis on local adaptation, community resilience, and participation. Despite facing financial challenges and lacking clearly measurable goals, its participatory approach and integration of local leaders and communities make it effective for fostering climate resilience at the local level.

Overall:

All three policies play crucial roles in tackling climate change at both the national and local levels. NCCP aims to establish a comprehensive framework at the national scale, while PDS, despite its stronger focus on economic development, still seeks to incorporate climate change considerations. The CIM Plan, although more localized, excels in community-driven climate action. Each policy clearly outlines its objectives and demonstrates efforts to engage marginalized groups and diverse stakeholders during consultations and the policy design process. However, all policies share common gaps, including the absence of specific milestones, transparent budgets, and long-term financial sustainability, as much of their funding relies on external multilateral sources.

3.3 Policy Synergies and Gaps Analysis

Samoa's existing national policies, National Climate Change Policy (NCCP), Pathway for the Development of Samoa (PDS) and the Community Integrated Management Plans, which all highlighted the necessity of climate change adaptation to address the country's vulnerability, have distinct role in the national policy framework, showing the country's various efforts in strengthening resilience across sectors and levels.

NCCP focuses on climate governance, adaptation and mitigation implementation, climate finance, climate change policy mainstreaming, data and information, multi-level coordination, and public awareness at the national level; PDS is the overarching national sustainable development strategy elaborating priorities across sectors including agriculture, tourism, health and many other sectors; CIM Plans operate at the local community level to improve resilience by identifying issues and solutions considered the best approach.

3.3.1 Synergies as Basis of NAP

Synergies exist between the NCCP, PDS, and the CIM Plans, providing a solid foundation for Samoa's NAP process, as illustrated in Table 5.

Table 5: Synergies between the NCCP, PDS and CIM Plans

Synergies	Explanation
Climate adaptation and resilience building as a long-term goal.	The three strategies jointly pursue a long-term development direction that is sustainable, resilient, and inclusive, while CIM Plans localizes national strategies at the community level.

	• NCCP: “a resilient, safe and prosperous Samoa addressing climate change and associated impacts while achieving sustainable development goals”¹⁹ • PDS: “empowering communities, building resilience, and inspiring growth”²⁰ • CIM Plans: “Resilience – Community Livelihoods, Infrastructure, Environment and Natural Resources to Climate Change and Natural Disasters.”²¹
Coordination across institutions and policies	All of the three strategies called for enhanced coordination. For NCCP, the coordination will be on the national policy and institutional levels; for PDS and CIM Plans, the coordination will be local and community level. • NCCP: (1) an effective governance framework and support system, establishment of National Climate Change Council, formalization of climate change governance arrangements; (2) mainstreaming climate change adaptation into national planning, implementation and monitoring processes; (3) effective coordination and representation at the national, regional and international level. • PDS: community development - good governance and management practices strengthened & resilience and capability to operate essential services within each district encouraged and stimulated. • CIM Plans: implementation is considered as joint responsibility of both the villages and the government in partnership.
Community resilience and empowerment	Community-based approach is regarded as the fundamental basis for Samoa’s sustainable development across the three strategies. • NCCP: capacity building at the community level, climate change streamlined at the community planning level, Community-based adaptation projects integrated with CIM Plans, etc. • PDS: e.g., District Development Planning program to be strengthened, etc. • CIM Plans: themselves aim to strengthen the community resilience and empowerment by leveraging the collaboration between village and government.
Nature resources protection and management	All the three policies have emphasized the protection and sustainable management of natural resources, which provides opportunities for nature-based solutions, ecosystem-based adaptation, etc. that aim to promote climate adaptation by leveraging the potential of nature. • NCCP: enhance adaptation approach to increase resilience across the focal areas including ecosystems, ecosystems services, biodiversity, forestry, etc. • PDS: sustainable management and innovative use of nature across various sectors, etc. • CIM Plans: “natural resources and environment” is one of the key categories of solutions.
Climate finance and resource mobilization	Climate finance and resource mobilization plays an important role in both the NCCP, PDS and CIM Plans. • NCCP: one of the objectives is to “enhance access to sustainable climate finance”, with expected outcomes of enhanced partnership with development partners, PPP, sustainable financing mechanism, etc.

¹⁹ Government of Samoa, *Samoa National Climate Change Policy 2020–2030* (Apia: Ministry of Natural Resources and Environment, 2020), 9.

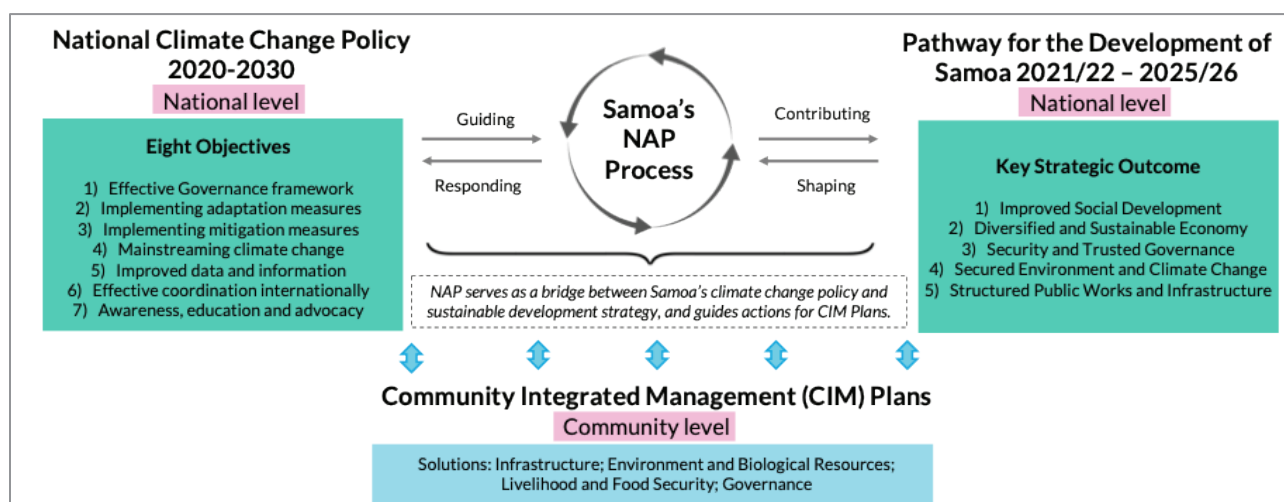
²⁰ Government of Samoa, *Pathway for the Development of Samoa (PDS) 2021/22 – 2025/26* (Apia: Ministry of Finance, 2021), 6.

²¹ *Community Integrated Management Plan: Fa’asalele’aga 1 District – Savaii* (Apia, Samoa: Ministry of Natural Resources and Environment, 2018), 8.

	• PDS: international binding mechanisms, including sustainable climate financing support for climate resilience programs strengthened. • CIM Plans: funding will be sourced through several mechanisms, based on criteria.
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Samoa's NAP process will serve as a bridge between the NCCP and the PDS. On one hand, the NAP could act as an implementation roadmap for the NCCP to achieve its climate adaptation objectives. On the other, by strengthening Samoa's resilience to climate change, the NAP contributes to the achievement of the PDS. Meanwhile, the NAP provides guidance at the community level by adopting a locally led approach, as illustrated in Figure 3.

Figure 3: Samoa's NAP its existing policy framework as an intersection



3.3.2 Gaps that the NAP Addresses

Despite synergies between the major policies and strategies, gaps exist at the same time, which impeded the concerted efforts throughout the country to build resilience to climate change. NAP could play a vital role in addressing those gaps:

1. Fragmentation between the key policies and strategies, without a comprehensive climate adaptation national policy/strategy. Despite of existence of NCCP, PDS, and CIM Plans, along with their focus on the resilience building, the absence of a comprehensive national-level climate adaptation strategy has resulted in incoherent and misaligned adaptation needs, targets, and plans across sectors and governance levels.

2. Multiple planning and implementation processes led by various entities and stakeholders. The NCCP process will be mainly led by the Ministry of Natural Resources and Environment, the PDS led by Ministry of Finance, while the CIM Plans will be collaborated between the local government and the villages. This multiplicity of responsibility structures hinders the streamlined execution of adaptation initiatives.

3 Needs for data and information system and early development of monitoring, reporting and verification (MRV). The current three major policies have not developed an effective system for information collection and MRV. A coherent and effective MRV system will enhance coordination and transparency across ministries, levels and sectors and will provide evidence-based decision support for policymakers.

4. Limited access to adaptation finance from international resources and private sector²². Building a robust enabling environment—through clear policies, strong institutional frameworks, and bankable project pipelines—is essential to attract and effectively utilize international climate finance and leverage private sector investments. The NAP process should support capacity building, improve readiness for accessing funds such as GEF, GCF and AF, and promote innovative financing mechanisms that de-risk private investments in adaptation.

3.4 Other Ongoing Policy Efforts

Samoa's other ongoing efforts that could enhance the country's resilience to climate change impacts and the NAP include its development of a national loss and damage policy framework and an NDC tracking and monitoring framework.

3.4.1 Loss and Damage Fund and Policy Framework

Samoa is establishing a national fund and a policy framework to address Loss and Damage from the adverse impacts of climate change, in collaboration with GGGI and other development partners, which aims to complete in 2025.

- The Ministry of Finance (MOF) is leading the establishment and operationalization of Samoa's national Loss and Damage Fund which is under a support of NZD 2 million under New Zealand climate change programme in Samoa.
- The Climate Change and GEF Division under the Ministry of Natural Resources and Environment (MNRE) is also developing a Loss and Damage Policy Framework as policy support to the Fund.

The development of Samoa's Loss and Damage Fund and Policy Framework, which address unavoidable impacts or losses caused by climate change, will be complementary to the NAP process, which aims to limit potential damage from climate change. Together, they could significantly enhance Samoa's overall resilience and the CIM Plan revision provides an opportunity to establish a joint project pipeline which is founded based on local climate resilience.

3.4.2 NDC Tracking and Monitoring System

With the support from the Initiative for Climate Action Transparency (ICAT), starting from April 2024, Samoa is developing a framework to manage and track the implementation of its second NDC. The framework will enable regular collection and management of the necessary data, including those needed to project GHG emissions/removals, assess the impact of relevant policies and measures, and develop appropriate indicators for reporting on progress achieved.²³

Due to inclusion of adaptation components in its 2nd NDCs, this NDC tracking platform will enable the impact assessment of certain adaptation measures in sectors of marine and AFOLU sectors as well. However, a complete measurement, reporting and verification (MRV) system is yet to be ready for a comprehensive monitoring of the country's adaptation actions and progress, which could be a component of Samoa's NAP process.

²² The IMF estimates that Samoa requires 650M per year in Climate Finance.
file:///C:/Users/NicholasSimonTaylor/Downloads/1WSMEA2022001.pdf

²³ Initiative for Climate Action Transparency. *Samoa*. Accessed June 17, 2025. <https://climateactiontransparency.org/country/samoa/>.

3.5 Climate Adaptation Governance

Samoa has 15 ministries under the Cabinet, among which the Ministry of Natural Resources and Environment (MNRE) is primarily responsible for climate change adaptation, while the Ministry of Finance (MoF) is responsible for the financing of adaptation projects.

3.5.1 Key Governmental Entities and Responsibilities Relevant to Adaptation

Samoa's climate adaptation efforts are mainly led by the Ministry of Resources and Environment (MNRE) with CCGEF and other thematic divisions, in collaboration with the Ministry of Finance (MOF) and Ministry of Foreign Affairs and Trade (MFAT) in terms of financing support from the national budget or bilateral/multilateral development cooperation. Adaptation policies and projects benefit local communities through the Ministry of Women, Community and Social Development (MWSCD); in turn, communities ensure the inclusivity of adaptation through the MWSCD.

Samoa's Gender Governance Framework also integrates gender considerations into all levels of governance to promote gender equality and women's empowerment. It includes policies, laws, and initiatives aimed at ensuring women's equal participation in all spheres of life, including political, economic, and social sectors. Samoa has developed a governance framework aimed at integrating gender equality and social inclusion into national policies and development planning. Collectively, these frameworks demonstrate Samoa's commitment to embedding gender equality and social inclusion into its national governance and policy-making processes.

Table 6: Key government level actors supporting climate adaptation

Ministries	Responsibilities Relevant to Adaptation
Ministry of Natural Resources and Environment (MNRE)	MNRE leads the management of Samoa's environment and natural resources, with 16 Divisions working across various environmental thematic areas, in partnership with other ministries, CSO/NGOs, the private sector and other partners.
MNRE - Climate Change Division (CCD)	The Climate Change Division (CCD) is the division leading climate change activities within the MNRE, with functions of (1) coordination and facilitating climate change integration and actions; (2) policy development; (3) coordination of various programs; (4) reporting on climate change action, implementation; (5) promotion of adaptation and mitigation measures.
National Climate Change Council (NCCC)	The establishment of National Climate Change Council (NCCC) is planned in the Samoa Climate Change Policy 2020 -2030. The NCCC oversees the implementation, coordination, monitoring and evaluation of national climate change policies and strategies. ²⁴
Ministry of Finance (MOF)	MOF is responsible for national finance and budgeting.

²⁴ Government of Samoa, *Samoa National Climate Change Policy 2020-2030* (Apia: Ministry of Natural Resources and Environment, 2020), 17.

MOF - Division of Aid Coordination & Management (ACEO)	Division of Aid Coordination & Management (ACEO) the coordination and management of the development aid from bilateral and multilateral development partners. The ACEO, with its four units (Aid Coordination Unit; Project Management & Monitoring Unit; Financial Management & Procurement Oversight Unit; Portfolio Monitoring, Compliance & Policy Unit) has functions including but not limited to:²⁵ 1) Coordinating development cooperation programs at the ministry and sector levels in partnership with development partners; 2) Advising to Cabinet on the composition and prioritization of development cooperation programs to support government's priorities 3) Ensuring external financing requirements of all sectors are secured and then providing guidance and advice to ensure optimal utilization of this external assistance; 4) Guiding national budget processes on development partner's funding commitments; 5) Facilitating requests from ministries to development partners through the Aid Coordination Committee; 6) Monitoring aid-funded projects and sharing updated progress with partners.
MOF - Climate Resilience Investment and Coordination Division (CRICD)	Key functions:²⁶ 1) Leading the coordination and provision of policy advice regarding substantial climate and disaster resilience investments to the Cabinet; 2) Fulfilling the Ministry's role as the National Designated Authority for major climate funds and facilitate access to contingent disaster financing in accordance with the Disaster Risk Financing Policy.
Ministry of Foreign Affairs & Trade (MFAT)	Responsible for the administration of Government's business with foreign countries and their governments as well as international organizations.
International Relations Divisions (IRD)	The International Relations Division (IRD) provides policy advice on multilateral issues including sustainable development, human rights, peace and security; rule of law; disarmament, climate change and oceans. ²⁷
Bilateral Relations Division (BRD)	The BRD focusses on strengthening and enhancing Samoa's bilateral relations with its development partners both new and traditional, including diplomatic and international resident missions, with a focus on bilateral cooperation policy dialogue; development cooperation programmes and technical assistance. ²⁸
MFAT - Aid Coordination Committee (ACC)	The Aid Coordination Committee (ACC), now housed under the Ministry of Foreign Affairs & Trade (MFAT), has a key function of assessing project

²⁵ Ministry of Finance – Government of Samoa. "Policy Management Department: Aid Coordination & Management Division." Accessed June 22, 2024. <https://www.mof.gov.ws/our-services/policy-management-department/aid-coordination-management-division>.

²⁶ Ministry of Finance of Samoa. *Climate Resilience Investment and Coordination Division*. Accessed June 23, 2025. <https://www.mof.gov.ws/our-services/policy-management-department/climate-resilience-investment-and-coordination-division>.

²⁷ Ministry of Foreign Affairs and Trade of Samoa. *International Relations Division*. Accessed June 23, 2025. <https://www.mfat.gov.ws/ird/>.

²⁸ Ministry of Foreign Affairs and Trade of Samoa. *Bilateral Relations Division*. Accessed June 23, 2025. <https://www.mfat.gov.ws/bilateral/>.

	submissions and decides on the use of Grant vs Loans including prioritization of projects.²⁹ All aid programs must be endorsed by the ACC before consideration and agreement is reached in conjunction with donor partners. The Pathway for Aid Management includes four steps including (1) appraisal monitoring implementation by MOF; (2) endorsed/declined by CDC; (3) if approved for external financing, ACC identifies/confirms source financing; (4) submission to relevant Donor through MFAT.³⁰
Ministry of Women, Community and Social Development (MWSCD)	MWSCD focuses on its commitment and overall performance for the achievement of community and social development outcomes, ³¹ with division playing critical roles in various perspectives. ³²
MWSCD-Division for Social Development	Coordinating all the social areas, elimination of family violence, childcare and protection, health, education and law & justice outcomes. Also including the infrastructure outcome.
MWSCD-Division for Economic Development	Strengthening the linkages between economic development at a national level and at a community level, to reduce poverty and hardship.
MWSCD-Division for Governance	Ensuring inclusive governance and environmental leadership in villages and districts.
MWSCD-Division for Research, Policy & Planning	All Ministry and Sector frameworks and processes are aligned and including policy & research, planning and reporting.

3.5.2 Current Climate Adaptation Governance Structure

Currently, governmental entities contributing to Samoa's climate adaptation can be categorized into three major groups: (1) policy and planning, (2) resource mobilization, and (3) inclusivity and community engagement, as shown in Figure 4.

Figure 4: Samoa's Current Climate Adaptation Governance Framework³³

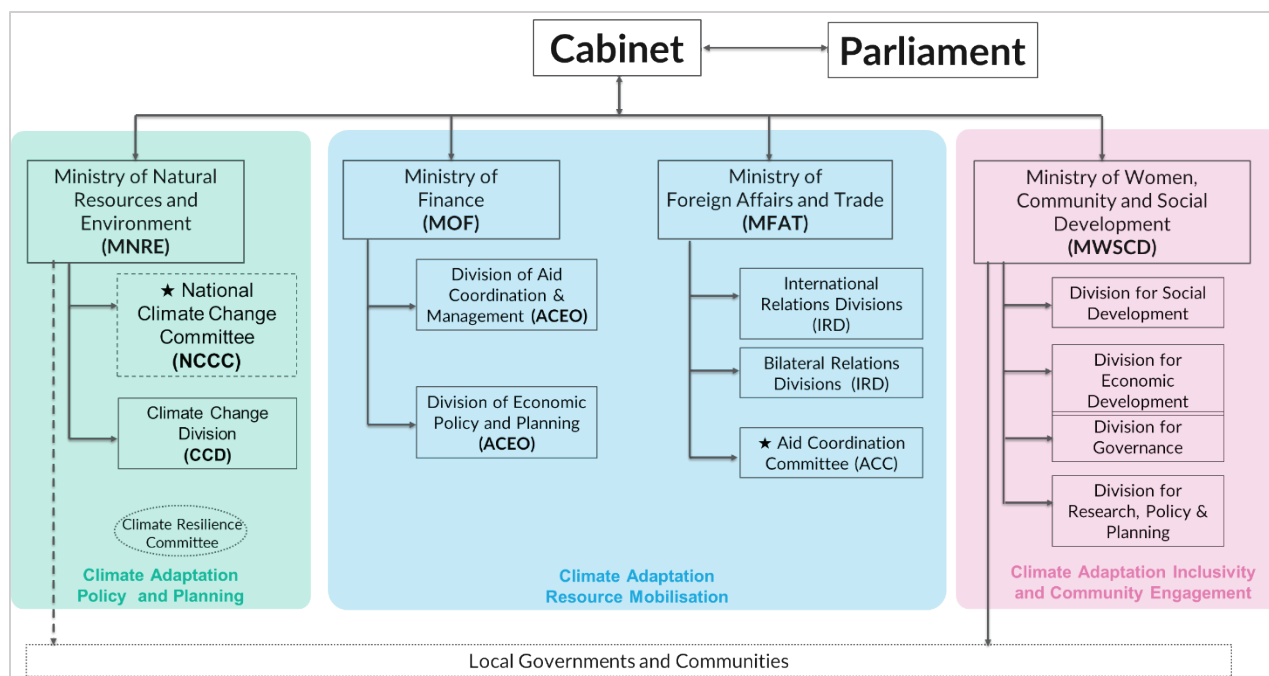
²⁹ Samoa Ministry of Foreign Affairs and Trade. "Aid Coordination Committee." <https://www.mfat.gov.ws/aid-coordination-committee/>.

³⁰ Ibid.

³¹ Ministry of Women, Community and Social Development, *Ministry of Women, Community and Social Development* (Apia, Samoa: MWSCD, 2025), accessed June 22, 2025, <https://mwcsd.gov.ws/>.

³² Ministry of Women, Community and Social Development, "Divisions", Ministry of Women, Community and Social Development (Apia, Samoa: MWSCD, 2025), accessed June 22, 2025, <https://mwcsd.gov.ws/divisions/>.

³³ Revised based on Government of Samoa, *First Biennial Update Report to the United Nations Framework Convention on Climate Change* (Apia: Ministry of Natural Resources and Environment, 2023), 29.



Samoa's current adaptation governance demonstrates the following **strengths**:

- (1) **Whole-of-government process:** Climate adaptation is addressed by multiple government entities with clear divisions of roles and responsibilities, which ensures adequate institutional resource allocation.
- (2) **Dedicated entities for climate adaptation:** Specific entities focusing on Samoa's climate adaptation, such as the National Climate Change Council (to be established), entities under MOF and MFAT responsible for resource mobilization and aid management, community-focused entities under MWSCD, etc.
- (3) **Flexible arrangements:** A project-based mechanism (Climate Resilience Committee, which manages the project portfolio and oversees implementation) also exists to enable cross-ministerial interaction on a project basis.

Some gaps also exist in Samoa's current adaptation governance, which includes:

- (1) **Lack of a centralized climate adaptation entity/mechanism:** Samoa's current climate adaptation governance also presents fragmentation, as there is no institutional mechanism that can centrally oversee climate adaptation efforts and effectively bridge policy, financing, and community engagement. While the NCC
- (2) **Climate financing responsibilities are dispersed across different ministries:** For example, the CCGEF, responsible for GEF financing, is under MNRE; the Aid Coordination and GCF National Designated Authority (NDA) functions are under MOF; and other development cooperation entities sit under MFAT. Additionally, the ACC under MFAT holds the right for final approval over aid arrangements.
- (3) **Lack of an MRV (Monitoring, Reporting, and Verification) mechanism:** the current adaptation governance focuses primarily on project development and implementation, with limited attention to post-project management. An MRV system would support better policymaking and provide feedback for future project development.

3.6 Results from An Institutional Adaptation Capacity Needs Assessment

A climate change capacity and technology needs assessment report, prepared in April 2025 for Samoa's Third National Communications (NC3) has identified the capacity gaps in Samoa's current climate change governance structure, as shown in Table 7.

Table 7: Gaps in Each Perspectives of Samoa's Current Climate Change Governance³⁴

Perspective	Top 3 Capacity Gaps
Institutional Policy and Legal Frameworks	- Effectiveness of Government Coordination Mechanisms of International Climate Change Conventions at the national level (High Priority). The national focal point for Climate Change in Samoa is MFAT, and the operational arm is the MNRE. - Effectiveness of Government Coordination Mechanisms of climate change initiatives at the national level (High Priority) - Effective political engagement on climate change priorities (Medium Priority)
Planning, Implementation, Monitoring and Evaluation of climate change Projects and Programs	- Established Integrated information management systems (MIS) for climate change programming - Existing climate change technologies meet the increasing mitigation and adaptation demands/ needs - Technology needs assessment and barrier analysis conducted
Climate Change Knowledge Management	- Accessibility of local govt and stakeholders to regional/ national climate change trainings/ capacity building - Climate change Knowledge shared and accessible through appropriate Media - Technical capacities required to review and evaluation climate change programs
Community Engagement and Climate Related Awareness	- Communities engaged in the assessment of climate change programs and responded to - Communities' mobilization and piloting around climate change priorities - Gender issues are mainstreamed to enable women to engage and mobilize around climate change priorities

The **barriers** that hinder the technology transfer were summarized as below:³⁵

- (1) **Financial Constraints:** High costs of acquiring, adapting, and maintaining climate technologies often exceed the financial capacities of developing nations.
- (2) **Limited Infrastructure:** Inadequate infrastructure, such as unreliable energy grids or transportation systems, restricts the deployment of advanced technologies.
- (3) **Intellectual Property Rights (IPR):** Stringent IPR regulations can limit access to critical technologies, making them unaffordable or inaccessible.
- (4) **Capacity Gaps:** A lack of technical expertise and skilled personnel to adapt and operate new technologies poses significant challenges.
- (5) **Policy and Regulatory Barriers:** Weak governance frameworks and unclear policies can slow down or complicate technology transfer processes.
- (6) **Cultural and Social Factors:** Resistance to change, lack of awareness, and misalignment with local needs can impede the adoption of new technologies.
- (7) **Knowledge Sharing:** Ineffective communication and collaboration between technology providers and recipients can limit understanding and application.

³⁴ Summarized from: UNDP and Ministry of Natural Resources and Environment, *Capacity and Technology Needs Assessment Report in Climate Change: Prepared for Samoa's Third National Communications Report* (Apia, April 2025), 52–55.

³⁵ Ibid, 50.

NAP's enabling structures will seek to plug the gaps identified above in its implementation phase, and the sectoral assessment provided below will also pinpoint the sectoral focus areas where these enabling areas will be developed.

4 Inclusive Development and Adaptation: Guiding Principles

4.1 Samoa's GEDSI Approach

Samoa's approach to inclusive development and adaptation is guided by several key national frameworks, particularly the Pathway for the Development of Samoa (PDS) 2021/22–2025/26 and the National Policy for Persons with Disabilities 2021–2031. These documents outline principles and strategies aimed at ensuring that all citizens, especially marginalized groups, benefit from national development efforts. Some core principles drawn from these frameworks include:

Recommendation Area	Actions
1. Strengthen Community Engagement	- Use village councils and women's committees to promote inclusive decision-making. - Conduct awareness campaigns to shift cultural behavior and perception toward inclusion.
2. Build Institutional Capacity	- Train government officials and service providers in inclusive governance and service delivery. - Develop inclusive standards and guidelines for education, health, and infrastructure.
3. Improve Data and Monitoring	- Collect disaggregated data (by gender, disability, age) to inform policy and track progress. - Establish feedback mechanisms for communities to report on service accessibility.
4. Foster Cross-Sector Collaboration	- Create inter-ministerial task forces to align efforts across education, health, finance, and climate adaptation. - Encourage partnerships with NGOs and development agencies.
5. Prioritize Inclusive Climate Adaptation	- Ensure disaster risk reduction plans include provisions for persons with disabilities and other vulnerable groups. - Invest in accessible infrastructure and early warning systems.
6. Consolidate and Scale Successful Models	- Document and share best practices across sectors.

Another policy that emphasizes Inclusivity is the Samoa National Policy on Inclusive Governance 2021–203, it is a foundational policy aimed at ensuring that all Samoans regardless of gender, ability, age, and background are included in decision-making processes at every level of governance. The policy was developed in response to persistent social and economic inequalities, impacts of crises like the 2019 measles outbreak and COVID-19 and the need to align with international commitments such as CEDAW, CRPD, and the SDGs.

The policy seeks to promote inclusive governance by ensuring that all voices, especially those from marginalized and vulnerable groups, are represented in decision-making structures, from national government to village councils.

Samoa's strong village governance and communal culture provide a foundation for inclusive development. However, traditional norms can sometimes limit participation by women, youth, and persons with disabilities. The policy integration principles are embedded across multiple national strategies, including:

- National Policy for Persons with Disabilities (2021–2031) which focuses on equity, access, and empowerment.

- Inclusive Education Demonstration Program that highlights challenges and successes in integrating children with disabilities into mainstream education.

Samoa's governance and policy landscape for a gender-responsive and socially inclusive NAP (National Adaptation Plan) is characterized by a commitment to gender equity and social inclusion across various sectors and levels of governance, informed by international agreements and national policies. This includes the integration of gender perspectives in national planning mechanisms, policies, strategies, and legislation, as well as the promotion of women's empowerment and leadership. Samoa has made commitments at international levels to achieve gender equality and empowerment, including the 2030 Agenda and Goal 5. These commitments are reflected in national policies and strategies. Samoa's National Gender Equality and Advancement of Women Policy 2016-2021 adopts both gender mainstreaming and gender transformational approaches, recognizing the importance of addressing both visible and underlying systemic issues of inequality.

The policy framework includes provisions for promoting women's rights, addressing violence, and ensuring equal access to education, economic opportunities, and healthcare. Samoa's commitment to inclusive governance is reflected in the involvement of village-based groups, civil society organizations, and other stakeholders in policy development and implementation. Efforts are being made to increase women's representation in decision-making roles, including constitutional amendments and other measures. The NAP process should be informed by these commitments and policies, ensuring that climate adaptation plans are gender-responsive and socially inclusive. The Community Sector Plan (CSP) guides the delivery of services and programs that contribute to the well-being of all Samoans, including women, girls and other vulnerable groups of people.

Samoa National Climate Change and Gender Strategy for Climate Actions (2023) ³⁶

The Gender Equality, Disability, and Social Inclusion (GEDSI) objective in the context of Samoa's National Climate Change and Gender Strategy for Climate Actions focuses on ensuring that climate change responses are inclusive, equitable, and empower all members of society, especially women, people with disabilities, and other marginalized groups. Objectives of the Samoa NCC and Gender Strategy include:

1. Empowerment and Leadership - Promoting the leadership and participation of women and marginalized groups in climate decision-making at all levels.
2. Inclusive Resilience Building - Design and implement climate and disaster risk reduction strategies that are gender-responsive and inclusive of people with disabilities.
3. Economic Empowerment - Support income-generating activities and financial literacy for women and people with disabilities to enhance community resilience.
4. Knowledge Access and Capacity Building- Ensure equitable access to climate information and capacity-building opportunities, integrating traditional and local knowledge.
5. Policy Influence - Enable women and marginalized groups to influence national and regional climate policies and practices.

Another key national plan which aims to reduce vulnerability is the Community Sector Plan 2024/2025–2027/2028 does target climate change as part of its strategic direction. The plan is designed to foster sustainable development and community resilience, and it aligns closely with the Pathway for the Development of Samoa (PDS) 2021/22–2025/26, which includes “Secured Environment and Climate Change” as one of its five key strategic outcomes.^{37 38}

Key Climate-Related Focus Areas in the Community Sector Plan

³⁶ gggi365.sharepoint.com/:b:/s/SamoaNAP/EaMIYZKjGrTkm3i6491XSBEbiX2EPoUtGCq07_oWSwFrSA?e=C2hXZz

³⁷ [//mwcsd.gov.ws/wp-content/uploads/2024/09/Community-Sector-Plan-2024-2028.pdf](https://mwcsd.gov.ws/wp-content/uploads/2024/09/Community-Sector-Plan-2024-2028.pdf)

³⁸ [Pathway for the development of Samoa](#)

- **Nature-Based Solutions:** The plan supports capacity building for implementing nature-based solutions to climate adaptation, particularly through partnerships with the Ministry of Natural Resources and Environment (MNRE) ³⁹
- **Community Resilience:** Emphasizes strengthening local governance and empowering vulnerable groups to respond to climate-related challenges.
- **Integrated Planning:** Works in tandem with Community Integrated Management Plans, which serve as blueprints for climate resilience interventions at the district level ⁴⁰

Challenges and areas for improvement remain including gender-based violence, despite public education programs and response initiatives, gender-based violence remains a significant issue in Samoa. There is a need to ensure that the most vulnerable women and girls are meaningfully engaged in the design and implementation of programs and policies. More data needs to be collected on persons with disabilities, youth, and other vulnerable groups to better understand their needs and tailor interventions accordingly. ⁴¹

Samoa faces vulnerabilities to natural and economic shocks, as well as challenges of social transformation, requiring ongoing efforts to strengthen essential services and improve the well-being of vulnerable populations. ⁴²

4.2 GEDSI in NAP Sectors and Policies

The Samoa NCC and Gender Strategy supports Samoa's UNFCCC reporting obligations (Third National Communication, First Biennial Update Report), builds Institutional capacity through a learn-by-doing approach and is grounded on existing policies such as the Climate Policy 2020-2030, National Adaptation Plans (NAPA), Sustainable Development Pathway, and Gender Equality & Rights Policies across sectors. The strategy outlines the direct involvement of women, persons with disabilities, youths and SOGIESC individuals in climate actions. It also encourages the embedment of gender inclusion across sectors while offering specialized interventions for vulnerable groups and use of disaggregated data and gender analysis to inform strategy and programming. Overall, the strategy provides a cultural-awareness framework that strengthens gender-responsive climate action, reinforces national and international commitments, and ensures inclusive, equitable climate resilience outcomes in Samoa.

GEDSI Integration in Climate Policies

Focus on Vulnerable Groups

- The NAP emphasizes the inclusion of women, youth, persons with disabilities, and elderly populations in climate adaptation planning and implementation.
- It recognizes that remote and rural communities face greater exposure to climate risks and often have limited access to services and infrastructure.

Community-Based Criteria

- Projects are selected based on community vulnerability, with a focus on livelihoods, cultural heritage, and environmental sustainability.
- This ensures that local knowledge and priorities are central to adaptation efforts.

³⁹ mwcsd.gov.ws

⁴⁰ [Community Integrated Management Plans | Samoa Environment Data Portal](#)

⁴¹ [pacpartnership_phase_ii-samoacountrybrief-final_0.pdf](#)

⁴² [disasters-vaw-pacific.pdf](#)

Policy Alignment

- Samoa's NAP aligns with national frameworks like the PDS and international commitments such as the UNFCCC, SDGs, and CEDAW.
- It supports decentralized planning through Community Integrated Management Plans, which are tailored to the needs of specific villages and districts.

4.3 Gender, Social Inclusion and Adaptation Nexus

In Samoa, existing gender norms often reflect a traditional patriarchal structure where men are seen as the primary income providers and decision-makers, while women are primarily responsible for domestic tasks and childcare. Vulnerable groups include women, youth, people with disabilities, and the elderly. Adaptation strategies must consider these vulnerabilities, ensuring that all groups benefit and that existing inequalities are not worsened. While societal roles are evolving, traditional roles prevail expectation that men are the primary breadwinners and decision-makers, while women focus on domestic work and childcare. The Samoan culture emphasizes respect for elders, family, and village traditions, which can influence gender roles and expectations. The matai system, where chiefs hold significant power and influence, can also impact gender dynamics within families and communities.

While traditional norms persist, there's growing recognition of the importance of gender equality and the need to empower women in various aspects of life. Women are often more vulnerable due to existing gender inequalities, including limited access to land, economic opportunities, and decision-making power. Young people, especially those transitioning into adulthood, may face challenges related to education, employment, and navigating social norms. Individuals with disabilities often face barriers in accessing services, employment, and social inclusion. The elderly, particularly those without family support, may be at risk of social isolation and poverty. Other vulnerable groups include children, individuals and households recovering from disasters, and those facing other socioeconomic challenges. Climate change impacts, such as sea-level rise, drought, and extreme weather events, disproportionately affect vulnerable groups, exacerbating existing inequalities.

Women and children are often more vulnerable during disasters, due to factors like limited access to resources and the gendered nature of labour during recovery. Adaptation strategy efforts need to be inclusive and address the specific needs of vulnerable groups, ensuring that they have access to resources, information, and decision-making power to effectively adapt to climate change impacts. Gender Responsive adaptation should be designed with a gender perspective, considering the different needs, roles, and capacities of men and women. Informal and traditional social protection mechanisms can play a crucial role in supporting vulnerable groups during and after shocks, such as disasters.

Inclusive Adaptation Finance Interventions in the Country

In Samoa, adaptation finance interventions with gender and social inclusion components are primarily implemented through a mix of government ministries, international organizations, and partnerships. While specific funding allocations for GEDSI (Gender and Social Inclusion) are often embedded within broader project budgets, there isn't always a clear description of the exact amount allocated. Some examples of adaptation projects with GEDSI considerations include those related to coastal resilience, agriculture, and water resource management.

Implementing Agencies and Partners include the Ministry of Natural Resources and Environment (MNRE), are responsible for managing natural resources and environmental protection, including climate change adaptation initiatives. Ministry of Agriculture and Fisheries focuses on climate-smart agriculture and fisheries management to support Samoan communities. Ministry of Health addresses climate change impacts on public health and provides health services to vulnerable populations. The United Nations Development Programme (UNDP) also works in partnership with the Samoan government to implement national adaptation programs. Major funding source for environmental projects, including adaptation measures, is the Global Environment Facility (GEF). Other implementing partners in adaptation projects include Civil society organizations, NGOs, and private sector entities.

GEDSI considerations are often integrated into project budgets through activities like training, community consultations, and ensuring participation of women and vulnerable groups. While a specific breakdown of funds allocated to GEDSI is sometimes difficult to ascertain, many projects incorporate gender-responsive budgeting strategies. This involves allocating resources to promote gender equality and social inclusion through public services, infrastructure, and social protection. This involves allocating resources to promote gender equality and social inclusion through public services, infrastructure, and social protection.

Projects focused on building coastal defenses and protecting communities from sea-level rise often include GEDSI considerations to ensure women and marginalized groups are not left behind. Climate-Smart Agriculture Initiatives aimed at adapting agriculture to climate change may include training for women farmers, providing access to resources, and empowering women in decision-making processes. Projects that focus on community-led adaptation initiatives often prioritize the involvement of women and other vulnerable groups in planning and implementation.

4.4 Key Recommendations for Gender-Responsive and Socially Inclusive NAP

Table 8: Recommendations for Gender Inclusion in Samoa's NAP

NAP Element	Recommendations	Tailored to Samoa's Context
1. Institutional Arrangements	- Establish gender and social inclusion focal points in climate institutions. - Strengthen inter-ministerial coordination on gender and climate.	- Leverage the role of the Ministry of Women, Community and Social Development (MWCSO). - Involve village councils (fono) and women's committees.
2. Stakeholder Engagement	- Use inclusive consultation processes, ensuring women, youth, elderly, and persons with disabilities are heard.	- Engage church groups, village matai councils, and women's committee to ensure participation in community-driven adaptation.
3. Gender-Responsive Data and Analysis	- Collect sex, age, and disability disaggregated data to inform adaptation decisions. - Conduct gender analysis of climate risks and impacts.	- Partner with Samoa Bureau of Statistics, stakeholders and local NGOs to generate community-level gender data and climate vulnerability profiles.
4. Adaptation Planning and Prioritization	- Include adaptation priorities of women, vulnerable groups, youths and people living with disability.	- Prioritize livelihoods, water security, and resilient agriculture in rural areas where women are active in farming and fisheries.

	- Use participatory tools like gender-sensitive vulnerability assessments.	
5. Implementation of Adaptation Actions	- Ensure equitable access to resources (finance, technology, training). - Promote women-led and inclusive adaptation projects.	- Support women's cooperatives, micro-enterprises, and local NGOs working on resilience in outer islands and rural communities.
6. Capacity Building	- Train policymakers and local leaders on gender mainstreaming in adaptation. - Build climate awareness among marginalized groups.	- Develop community-based training with bilingual materials in Samoan and English, especially for rural and older populations.
7. Monitoring, Evaluation, and Learning	- Include gender and social inclusion indicators in the M&E framework. - Monitor adaptation benefits and burdens across different social groups.	- Collaborate with academic institutions and civil society to track how adaptation actions are impacting gender equality and vulnerable groups.
8. Financing Mechanisms	- Apply gender-responsive budgeting in adaptation financing. - Make funds accessible to grassroots, women's organization, youth groups and disability organization.	- Earmark funding for community-driven adaptation initiatives and gender-equal benefit-sharing mechanisms.

5 Climate Risks and Vulnerabilities

A Climate Risk and Vulnerability Assessment (CRVA) support Samoa in meeting National Adaptation Plan (NAP) requirements under the United Nations Framework Convention on Climate Change (UNFCCC). Per the UNFCCC Cancun Adaptation Framework,⁴³ elements of NAPs include an “assessment of available information on climate change impacts, vulnerability and adaptation, measure taken to address climate change, and gaps and needs, at the national and regional level.”⁴⁴

Additionally, development of CRVA supports delivery of national policy mandates and planning priorities. This includes strengthening operationalization of Objective 2 of the *National Climate Change Policy*⁴⁵ to “implement adaptation measures to protect Samoa from the impacts of climate change” and its vision of “a resilient, safe and prosperous Samoa,” as well as Key Strategic Objective 4 of the *Pathway for the Development of Samoa (PDS)*⁴⁶ to “maintain a safe environment for Samoa and promote sustainable economic use of natural resources.”

5.1 Specific Objectives

⁴³ FCCC/CP/2010/7/Add.1: <https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>

⁴⁴ FCCC/CP/2011/9/Add.1: <https://unfccc.int/sites/default/files/resource/docs/2011/cop17/eng/09a01.pdf>

⁴⁵ National Climate Change Policy (NCCP) 2020-2030. <https://faolex.fao.org/docs/pdf/sam202477.pdf>

⁴⁶ Pathway for the Development of Samoa (PDS) FY2021/22-FY2025/26. <https://mwcsd.gov.ws/wp-content/uploads/2024/09/Pathway-for-the-Development-of-Samoa.pdf>

This CRVA aims to:

- Characterize present-day climate risk by mapping exposure, sensitivity and adaptive capacity across sectors and social groups.
- Quantify future risk for 2030, 2050 and 2100 under low, medium, and high emission pathways.
- Identify example geographic and sector “hot spots” where risk exceeds acceptable thresholds.
- Inform action prioritization by providing quantitative inputs for the multi-criteria analysis (MCA) as per regional NAP guidelines.⁴⁷
- Complement the current draft Third National Communication (TNC) Vulnerability and Assessment.

The geographic coverage of the CRVA includes the entire country, with a focus on the four inhabited islands of Upolu, Savai'i, Manono, and Apolima. Hazards examined include tropical cyclones, extreme rainfall and flooding, drought / ENSO, sea-level rise (SLR) and coastal erosion, heat stress, marine heatwaves, and ocean acidification. The methodological framework applied is the IPCC AR6⁴⁸ ($Risk = Hazard \times Exposure \times Vulnerability$) with a mixed qualitative-quantitative assessment applied. The CRVA is envisioned to be updated on a five-year cycle, aligned with the NAP review timetable and new climate data releases, ensuring Samoa maintains an updated, decision-ready understanding of its evolving climate risk landscape.

5.2 Institutional Mandate and Primary Users

Envisioned key stakeholders are identified by role, institution, and responsibilities as shown below.

Table 9: Key Stakeholders and Roles

Role	Institution(s)	Key Responsibilities
Lead agency	Ministry of Natural Resources and Environment (MNRE), Climate Change Division	Governance of CRVA, data host, NAP integration
Technical leads	Samoa Meteorology Division, Samoa Bureau of Statistics (SBS)	Climate projections, socio-economic datasets
Primary stakeholders	Ministry of Agriculture and Fisheries (MAF), Ministry of Health (MoH), Ministry of Works, Transport, and Infrastructure (MWTI), Ministry of Finance (MoF), Samoa Tourism Authority (STA)	Sector planning, budgeting, adaptation finance proposals
Secondary stakeholders	Disaster Management Office (DMO), village councils, private sector, civil society, development partners	DRM alignment, localization of actions, project design

5.3 Sectoral Coverage

Risk profiles covering six high priority sectors aligned to GGGI's prioritization recommendations⁴⁹ and additional cross-cutting lenses are included below.

⁴⁷ Pacific National Adaptation Plan (NAP) Guidelines. <https://library.sprep.org/content/pacific-guideline-adaptation-planning-process-and-content-national-adaptation-plans-naps>

⁴⁸ The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) approach to determinants of climate risk was used. It is noted AR5 is referenced key regional tools (e.g., Pacific NAP Guidelines), however there is a lack of significant methodological gaps in approach between the two. <https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/determinants-of-risk-exposure-and-vulnerability/>

⁴⁹ GGGI Sector Prioritization Recommendations for Samoa's National Adaptation Planning (NAP) Process.

Table 10: Sectoral coverage and rationale

Sectors	Rationale
Agriculture and Fisheries	Central to livelihoods, highlighted in draft <i>TNC V&A Assessment</i> ⁵⁰ and <i>SAFCCP</i> . ⁵¹
Water and Sanitation	Direct link to health and agricultural resilience.
Health	Climate-sensitive diseases, highlighted in <i>CASH</i> . ⁵²
Coastal and Marine (incl. Tourism)	Approximately 61% of the population live within 1 km of coast ⁵³ and 47% of infrastructure lie within 500m of the coast. ⁵⁴
Critical Infrastructure and Energy	Aligns with national infrastructure strategic plans (<i>NISP</i> ⁵⁵ and <i>SIAM</i> ⁵⁶) and renewable energy targets. ⁵⁷
Biodiversity and Ecosystems	Foundation for Nature-based Solutions (NbS) and cultural values.
Cross-cutting lenses	Gender and social inclusion and Ecosystem-based Adaptation (EbA)

5.4 CRVA Framework

The IPCC defines climate risk in its AR6 as the potential for adverse impacts on natural and human systems. These impacts result from the interaction of climate-related hazards with the vulnerability and exposures of these systems. The figures below demonstrate the framing taken in both AR5 vs. AR6 per the IPCC.⁵⁸

Each part of this definition (hazard, exposure, and vulnerability) is essential to understanding climate risk:

- **Hazard:** refers to the occurrence of a physical event or trend associated with climate variability or climate change. Hazards include events such as cyclones, heatwaves, floods, and droughts, as well as long-term trends such as rising temperatures and sea levels.
- **Exposure:** refers to the presence of people, livelihoods, species, environmental functions, services, infrastructure, or economic, social, or cultural assets in places that could be adversely affected by climate hazards. It identifies what is at risk in a particular area.
- **Vulnerability:** describes the tendency or predisposition to be adversely affected. It includes the factors that determine the extent to which a system or community can anticipate, cope, with, resist, and recover from the impact of a hazard. Vulnerability often depends on the characteristics of a community, system, or asset, including its sensitivity to the hazard and its capacity to adapt.

Figure 5: Risk in IPCC assessments through time (per IPCC WG2 AR6) – AR5 Risk Graphic

⁵⁰ Draft Third National Communication (TNC) Vulnerability and Adaptation Assessment.

⁵¹ Samoa Agriculture and Fisheries Climate Change Policy (SAFCCP) 2023-2028.

⁵² Climate Adaptation Strategy for Health (CASH) 2014. <https://www.health.gov.ws/wp-content/uploads/2022/07/2Climate-Adaption-Strategy-for-Health-.pdf>

⁵³ Andrew et al (2019). Coastal Proximity of population in 22 Pacific Island Countries and Territories. PLoS ONE. <https://doi.org/10.1371/journal.pone.0223249>

⁵⁴ 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Samoa, Technical Report and Summary Slides. <https://www.rccap.org/library/item/617b929acb9dd>

⁵⁵ Samoa National Infrastructure Strategic Plan (NISP) 2011. <https://www.theprif.org/sites/theprif.org/files/2020-08/Samoa%20National%20Infrastructure%20Strategic%20Plan.pdf>

⁵⁶ Samoa Infrastructure Asset Management Strategy (SIAM) 2022. https://www.mwti.gov.ws/wp-content/uploads/2023/06/2.0-SIAM-Strategy_Final_06072022_Compress.pdf

⁵⁷ Second Nationally Determined Contribution (NDC), <https://unfccc.int/sites/default/files/NDC/2022-06/Samoa%20Second%20NDC%20for%20UNFCCC%20Submission.pdf>, Low-Emissions Development Strategy (LEDS) 2022-2032.

⁵⁸ IPCC Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of the Working Group 2 to the AR6 of the IPCC. <https://www.ipcc.ch/report/ar6/wg2/figures/chapter-1/figure-1-005a>

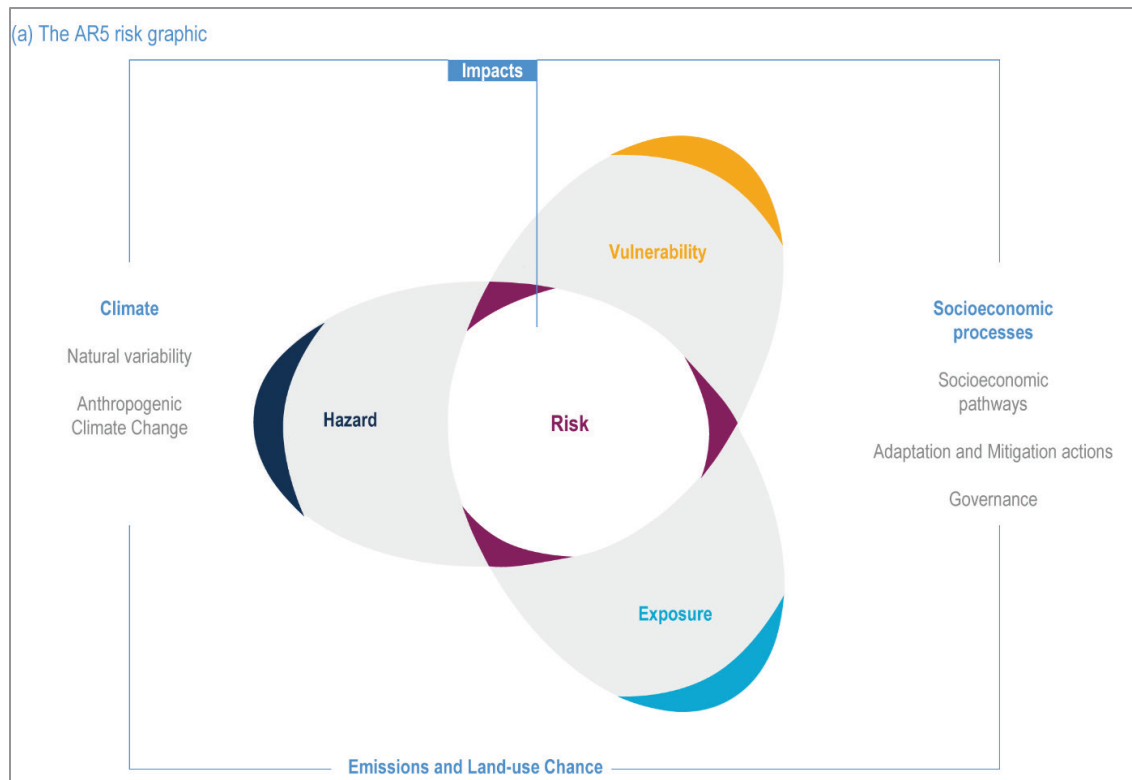
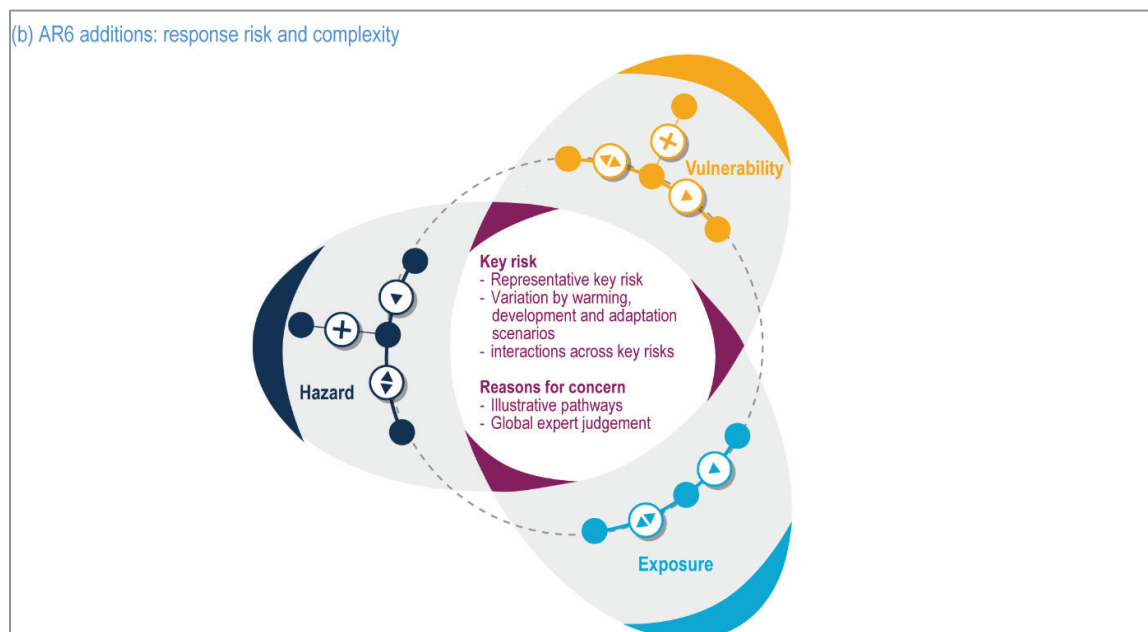


Figure 6: Risk in IPCC assessments through time (per IPCC WG2 AR6) – AR6 Additions to Risk Graphic



5.5 Scenario Frameworks

All inputs used are taken from existing datasets and projections already issued by the Samoa Meteorology Division and other national agencies, CSIRO/SPREP 'NextGen' projections and other international databases, as well as adopted public policies and treaty submissions.

5.5.1 Climate pathways

The climate pathways assessed include SSP1-2.6 (low), SSP2-4.5 (medium), and SSP5-8.5 (high) to be consistent with Samoa's 'NextGen'⁵⁹ CMIP⁶⁰ ensemble.

Table 11: IPCC Pathway with data and usage

Label	IPCC Pathway ⁶¹	Existing Data	Usage
Low	SSP1-2.6 (RCP 2.6)	'NextGen' 36-model CMIP5 ensemble	Lower-bound hazard layers for 2030 and 2050 risk tables
Medium	SSP2-4.5 (RCP 4.5)	'NextGen' ensemble, CMIP6 analogues (World Bank CCKP) ⁶²	Default pathway for loss calculations
High	SSP5-8.5 (RCP 8.5)	'NextGen' ensemble	Stress test of extreme outcomes (e.g., cyclone wind design)

Figure 7: Standardized scenarios for 2040-2059 relative to 1986-2005 for low and high emissions pathways and two climate change scenarios defined by physical change storyline (per 'NextGen')⁶³

⁵⁹ 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Samoa, Technical Report and Summary Slides.

⁶⁰ Coupled Model Intercomparison Project (CMIP) is a project of the World Climate Research Programme (WCRP) that provides climate projections to understand past, present and future climate changes. <https://wcrp-cmip.org/>

⁶¹ The IPCC uses both Representative Concentration Pathways (RCPs) that focus on GHG concentration pathways and resulting radiative forcing as well as Shared Socioeconomic Pathways (SSPs) that focus on potential future social, economic, and technological developments that influence these pathways.

⁶² World Bank's Climate Change Knowledge Portal (CCKP). <https://climateknowledgeportal.worldbank.org/country/samoa>

⁶³ 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Samoa, Technical Report and Summary Slides.

	Scenario 1* SPCZ moves south Weaker equatorial warming	Scenario 2* SPCZ moves north Stronger equatorial warming
Low emissions (RCP2.6)	Warmer & drier • Annual temperature: +0.7°C • Annual rainfall: -5% • More heatwaves • Less humidity • More solar radiation • Heavier rainfall events • Greater tropical cyclone impacts • Sea level rise: 17-29 cm	Much warmer & wetter • Annual temperature: +1.0°C • Annual rainfall: +15% • More heatwaves • More humidity • Less solar radiation • Much heavier rainfall events • Greater tropical cyclone impacts • Sea level rise: 17-29 cm
High emissions (RCP8.5)	Much warmer & drier • Annual temperature: +1.2°C • Annual rainfall: -15% • More heatwaves • Less humidity • More solar radiation • Heavier rainfall events • Greater tropical cyclone impacts • Sea level rise: 19-36 cm	Hotter & much wetter • Annual temperature: +1.8°C • Annual rainfall: +15% • Many more heatwaves • More humidity • Less solar radiation • Much heavier rainfall events • Greater tropical cyclone impacts • Sea level rise: 19-36 cm

5.5.2 Time horizons and reference period

The time and reference period for the assessment (baseline, near-term, mid-century, and end-century) and public policy alignment / rationale are provided below.

Table 12: Time horizons, reference period, and policy alignment

Period	Years (Centre)	Policy alignment / rationale
Baseline	1991-2020	WMO latest 30-year “climate normal” ⁶⁴ and Samoa Meteorology Division climate summaries within <i>BUR</i> .
Near-term	2025-2035 (2030)	<i>PDS</i> , <i>LDCF</i> , ⁶⁵ and <i>NDC</i> ⁶⁶ (target years)
Mid-century	2040-2060 (2050)	Typical public infrastructure design life, amortization horizon, and donor loan tenor
End-century	2080-2100	Long-lived assets (e.g., ports, reclamation) and inter-generational risk lens

⁶⁴ The World Meteorological Organization (WMO) defines “climatological standard normals” as the most recent 30-year period ending in a year ending with zero, updated every decade. <https://community.wmo.int/en/activity-areas/climate-services/climate-products-and-initiatives/wmo-climatological-normals>

⁶⁵ *Low-Emissions Development Strategy (LEDS) 2022-2032*.

⁶⁶ *Second Nationally Determined Contribution (NDC)*.

5.5.3 Socio-economic development storylines

The following table provides an overview of three different socio-economic storylines (S-1, S-2, S-3) aligned to SSP/RCP scenarios and assessed by different variables. These include population and urban share by 2050, real GDP growth, the share of renewable energy in the on-grid electricity mix, and governance capacity.

Table 13: Socio-economic development storylines and key sources

Variable	S-1 (Low – SSP1-2.6) (Resilient / Green)	S-2 (Medium – SSP2-4.5) (Current Path)	S-3 (High – SSP5-8.5) (Stressed / Fragile)	Key sources
Population by 2050	Rises to 215k in 2040, then gentle decline via net migration	Rises to 230k, stabilizes thereafter	Rises to 240k	PHC, ⁶⁷ WPP ⁶⁸
Real GDP growth (2021 baseline of WST 1.9b)	3% pa (green growth)	2.2% pa (BAU)	1% pa (disaster shocks)	PDS
Urban share by 2050 (2021 baseline of 19%)	25% (assumes compact-city growth policies)	22% (BAU trend)	21% (out migration slows urbanization)	PHC, NDC
RE mix by 2031	70% (EV share 25% road fleet)	55% (gradual EV uptake)	40% (diesel lock-in)	LEDS
Governance capacity	Robust	Incremental	Over-stretched	NCCGS

5.6 Observed and recent past vulnerabilities and impacts

This section is intended to ground sector-level prioritization in what Samoa has already experienced, using data that is publicly accessible. Where quantitative series are unavailable, qualitative evidence is retained so that the CRVA remains transparent about data gaps.

5.6.1 Observed climate trends

Table 14: Observed climate trends, direction, magnitude, and key sources

Climate signal	Direction and magnitude	Key Sources
Air temperature	+0.13°C per decade at Apia since 1979, 17 more “hot days” (> 32 °C) per decade, 0.6°C warming (1980-2018)	Samoa Meteorology Service, ⁶⁹ WBG ⁷⁰

⁶⁷ Population and Housing Census (PHC) 2021. <https://www.sbs.gov.ws/census/>

⁶⁸ United Nations World Population Prospects 2024. <https://population.un.org/wpp/>

⁶⁹ Summary: Climate Change in Samoa 2022, Historical and Recent Variability, Extremes and Change. https://www.pacificmet.net/sites/default/files/inline-files/documents/Climate_Change_in_the_Pacific_Regional_Report_2022-compressed.pdf

⁷⁰ World Bank Climate Risk Country Profile: Samoa.

Very-wet-day rainfall (99th percentile)	+1.65% per decade (1971-2020)	Samoa Meteorology Service
Extreme rainfall return period	1-in-20 years daily rain today becomes 1-in-9 years (RCP 2.6) to 1-in-6 years (RCP 8.5) by 2090	WBG
SLR	Relative SLR (Apia tide-gauge) of 9.8mm pa since 1993. Absolute ocean rise (altimetry, EEZ mean) of 3.5-4mm pa since 1993. A 2009 tectonic event may further accelerate relative rates to as high as 8016mm pa in parts of Apia.	Samoa Meteorology Service, WBG
Sea-surface temperature	+0.31°C per decade since 1982	Samoa Meteorology Service

Figure 8: Average monthly mean, max, min temperature and rainfall (1991-2020) (per World Bank CCKP)⁷¹

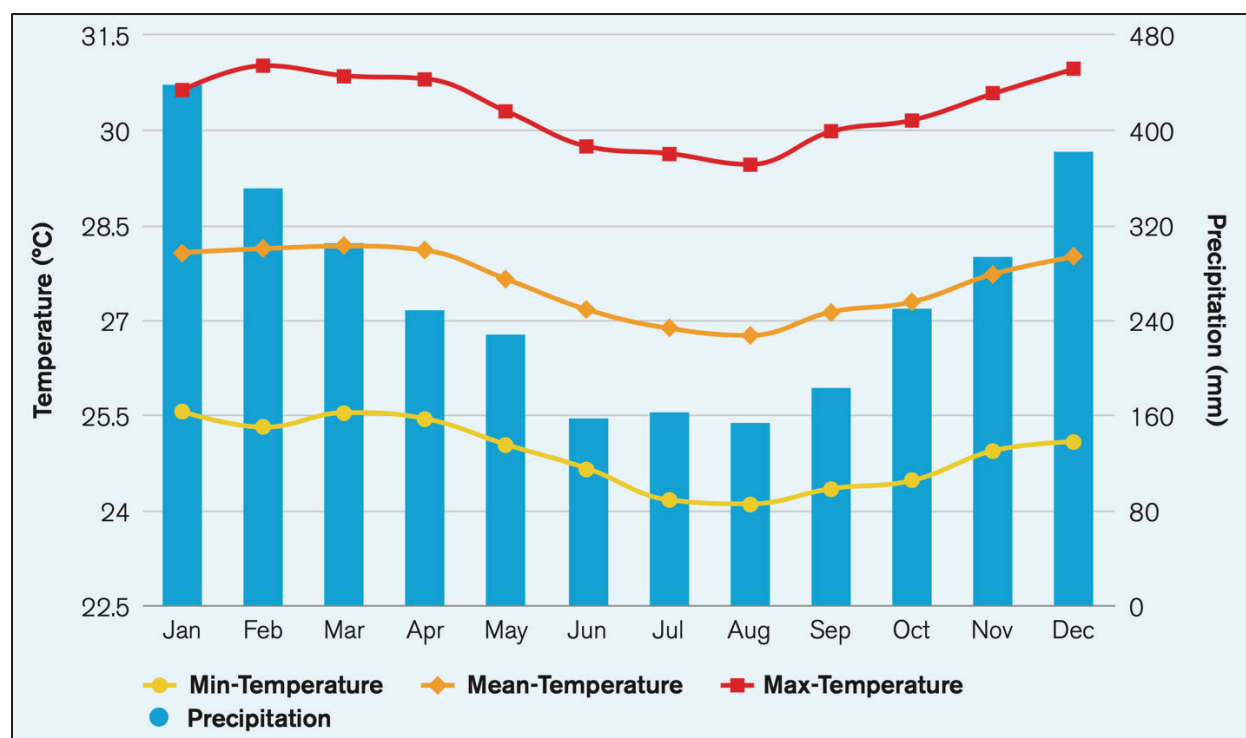


Figure 9: Projected change in maximum of daily max temperature under RCP 8.5, and projected change in Heat Index 35 under RCP 8.5 (per World Bank CCKP)⁷²

⁷¹ Summary: Climate Change in Samoa 2022, Historical and Recent Variability, Extremes and Change.

⁷² Summary: Climate Change in Samoa 2022, Historical and Recent Variability, Extremes and Change.

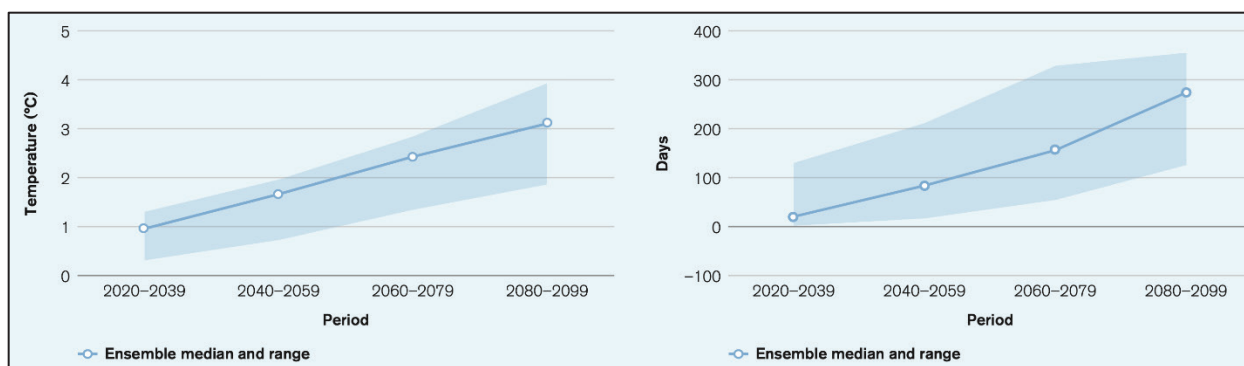
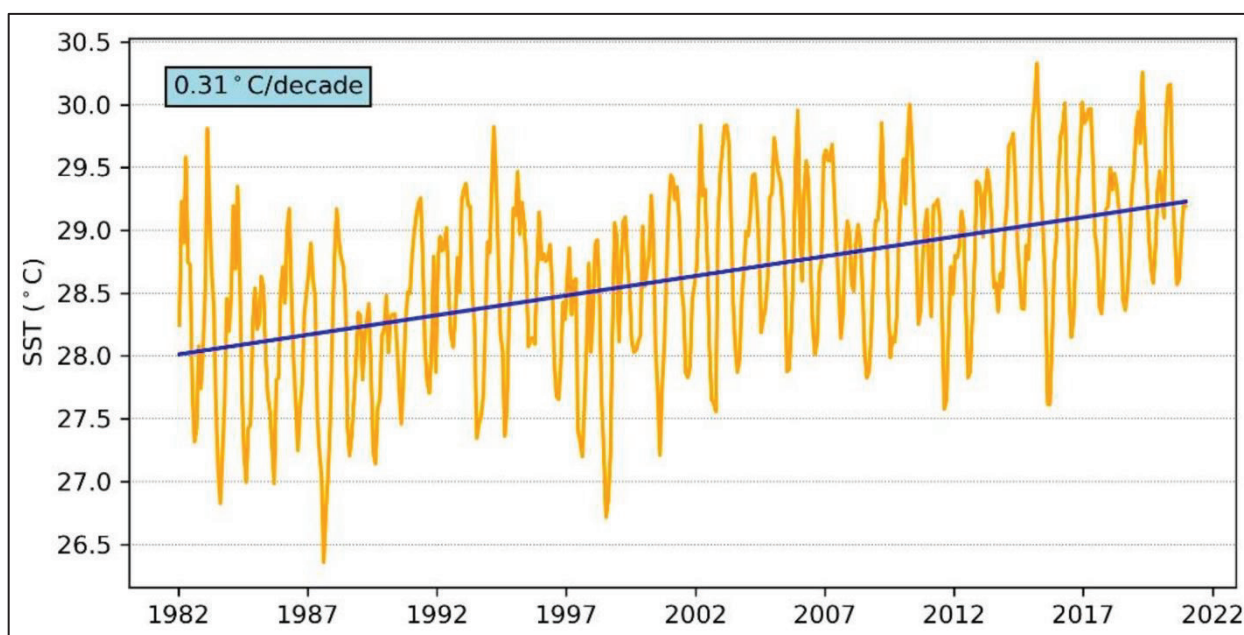


Figure 10: Average Sea Surface Temperature across EEZ (orange) with linear regression trend (blue) (per World Bank CCKP)⁷³



5.6.2 Examples of major hazard events since 1990

Examples of major climate events within the last 35 years are provided below, along with socio-economic consequences and key sources.

Table 14: Examples of major hazards since 1990 with socio-economic consequences and key sources

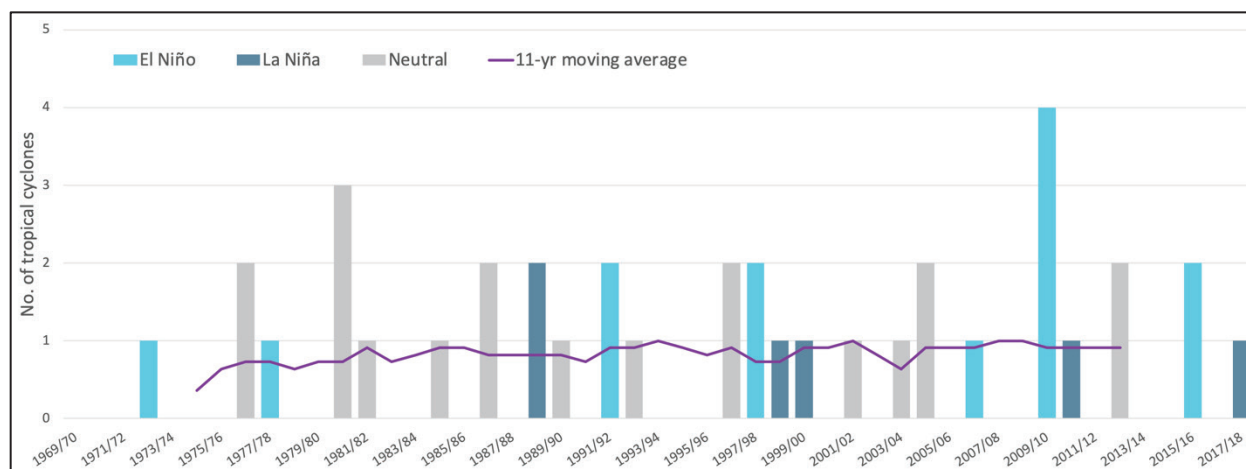
Year	Event	Socio-economic consequences	Key Sources
1990-91	TC Ofa (Cat 4), TC Val (Cat 4)	Combined losses of between USD 300m-500m (1995 figures)	WBG
2001	Flash-floods and river flooding	Inundation of lowlands around Lepea and Moata'a, transport disruptions, road and school closures	Adaptation mapping report ⁷⁴

⁷³ Ibid.

⁷⁴ Mapping of Adaptation Priorities for NAP-Samoa.

2009	Samoan-Tonga tsunami	>180 deaths, extensive coastal infrastructure loss	Draft TNA V&A Assessment
2012	TC Evan (Cat 4)	Cumulative damage of USD 204m (29% of GDP), 5 deaths, 7,500 displaced, major power and water outages	PDNA ⁷⁵
2015	Prolonged El Niño drought	6-month water shortages; reduced agricultural output	Adaptation mapping report
2018	TC Gita (Cat 4)	Poverty uptick, crop and housing damage	NDC, WBG
2019	Measles epidemic (climate-linked mobility disruptions)	Tourism collapse, public-health strain	NDC
2020-22	La Niña compound flooding, COVID-19	Accelerated shoreline erosion, GDP contraction (- 8% in 2020)	BUR ⁷⁶

Figure 11: Number of TCs passing through Samoa's EEZ per season (per World Bank CCKP)⁷⁷



5.6.3 Current exposure snapshot

A high-level snapshot of current exposure for coastal communities, coastal infrastructure, macroeconomic sensitivity, economic structure, and poverty and livelihoods consideration is provided below.

- Coastal communities: 61% of the 205,557 residents⁷⁸ live within 1 km of the coast.
- Coastal Infrastructure: 47% of mapped infrastructure is within 500m of the coast, representing 48% of replacement value.⁷⁹
- Macroeconomic sensitivity: a 100-year cyclone striking Apia could impose losses equivalent to 60% of GDP.⁸⁰

⁷⁵ Post-Disaster Needs Assessment (PDNA) – Cyclone Evan 2012.

https://www.gfdrr.org/sites/default/files/publication/SAMOA_PDNA_Cyclone_Evan_2012_0.pdf

⁷⁶ First Biennial Update Report (BUR). https://unfccc.int/sites/default/files/resource/SAMOA%20BUR%20Report_FINAL.pdf

⁷⁷ Summary: Climate Change in Samoa 2022, Historical and Recent Variability, Extremes and Change.

⁷⁸ Population and Housing Census (PHC) 2021.

⁷⁹ 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Samoa, Technical Report and Summary Slides.

⁸⁰ World Bank Climate Risk Country Profile: Samoa. https://climateknowledgeportal.worldbank.org/sites/default/files/country-profiles/15821-WB_Samoa%20Country%20Profile-WEB.pdf

- Economic structure: Service sector accounts for 74% of nominal GDP in 2019, while agriculture and fisheries contributed 10%. Despite their smaller GDP share, these primary industries are among the most climate sensitive.
- Poverty and livelihoods: 23% of Samoans lived below the basic-needs poverty line in 2018, with spikes after TC Evan, TC Gita and COVID-19.⁸¹

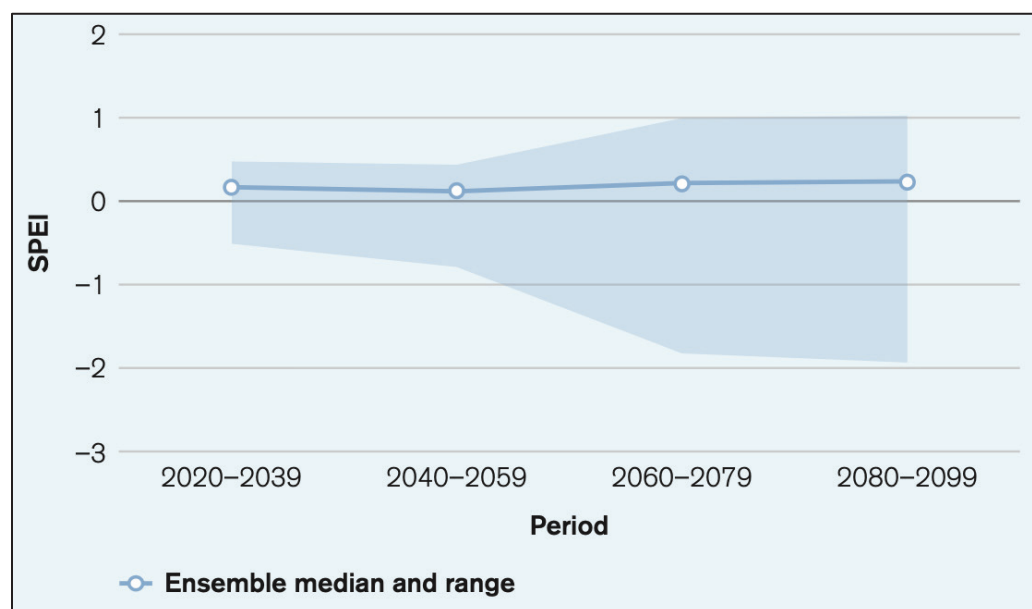
5.6.4 Observed socio-economic losses

A high-level overview of socio-economic losses by hazard indicator is provided with illustrative examples and key sources.

Table 15: Observed socio-economic losses by hazard indicator, illustrative examples, and key sources

Hazard Indicator	Illustrative example	Key Sources
Cumulative cyclone damage (1990-2012)	TC Ofa, TC Val, and TC Evan resulted in cumulative damages of USD 611m	WBG
Agriculture drought loss	2015 El Nino, field surveys reported 30% yield decline in taro and bananas	<i>Adaptation mapping report</i>
Average Annual Loss (cyclones)	1.2% GDP in current climate	PCRAFI ⁸²
Critical-infrastructure downtime	Post-TC Evan, hydro generation (4.7 MW) went offline between 2012 to 2017; diesel generation increased	BUR

Figure 12: Projected change in Annual Mean Drought Index (per World Bank CCKP)⁸³



⁸¹ Second Nationally Determined Contribution (NDC).

⁸² Pacific Catastrophe Risk Assessment and Financing Initiative (PCRAFI) Country Note: Samoa 2015. <https://www.gfdrr.org/sites/default/files/publication/country-note-2015-pcrafi-samoa.pdf>

⁸³ Summary: Climate Change in Samoa 2022, Historical and Recent Variability, Extremes and Change.

5.6.5 Effectiveness progress and residual risk

An overview of effectiveness progress and residual risk of various adaptation measures, their demonstrated benefit, residual / emerging risk, and key sources are provided for below.

Table 16: Effectiveness and residual risk of adaptation measures, demonstrated benefit, and key sources

Measure	Demonstrated benefit	Residual / emerging risk	Key Source
CIM Plans ⁸⁴ (Ridge-to-Reef)	Approximately 51 districts and 320 villages covered, assessment notes soft-engineering works (e.g., dune planting, drainage setbacks) already reducing local erosion and flood damage	Coverage uneven; plans need updating to account for faster SLR (8-16mm pa with subsidence), maintenance and village capacity flagged as gaps	<i>Adaptation mapping report</i>
Hydro rehabilitation and battery storage upgrades	Refurbishment of Alaoa, Fale-ole-Fee, and Samasoni plants restored 4.7 MW lost after TC Evan, grid-scale batteries at Fiaga and Faleolo improve stability with >40% of RE share	Extreme rainfall and landslip risk to upstream catchments persist, diesel back-up costs remain high in drought years	<i>BUR</i>
Tourism EbA projects	Six TDAs ⁸⁵ gained EbA protections (beach dune and coral reef rehabilitation) between 2013-2018	COVID-19 revenue shock revealed limited financial buffers and need for SME support (e.g., business continuity planning, insurance uptake)	<i>BUR</i>
PPCR ⁸⁶ coastal infrastructure upgrades (2013-2019)	Delivered higher-crest seawalls, raised access roads and drainage retrofits in 8 high-risk villages (e.g., Vaisigano Catchment Project reduced flood depth in Apia CBD)	Design freeboard must now account for relative SLR (8-16mm pa), scaling to remaining village requires capex and O&M financing	<i>WBG, BUR</i>

5.6.6 Key takeaways⁸⁷

An overview of key takeaways related to observed and recent past vulnerabilities and impacts is provided below. These include acute extreme events driving most climate related losses and damage, coastal concentration magnifying climate risk, an acceleration of relative SLR, and available data confirming macro-level climate risks.

- Acute extreme events driven by shocks dominate: three category 4 cyclones in past 22 years resulted in economic losses of >USD 600m.

⁸⁴ Community Integrated Management (CIM) Plans. <https://samoa-data.sprep.org/dataset/community-integrated-management-plans>

⁸⁵ Tourism Development Areas (TDAs).

⁸⁶ Pilot Program for Climate Resilience (PPCR) project, "Enhancing the Climate Resilience of Coastal Resources and Communities." <https://www.cif.org/projects/enhancing-climate-resilience-coastal-resources-and-communities>

⁸⁷ World Bank Climate Risk Country Profile: Samoa.

- Coastal concentration magnifies risk: Approximately 61% of population live within 1 km of coast⁸⁸ and 47% of infrastructure lie within 500m of the coast⁸⁹ are threatened by storm surge and SLR.
- Relative SLR is accelerating tectonic subsidence post-2009 lifts effective rise up to 16mm pa, shortening design lives of coastal defenses.
- Data confirms macro-critical risks: 1-in-100-year tropical cyclones could wipe out approximately 60% of annual GDP, with “average” years resulting in losses of USD 10m.

5.6.7 Projected future vulnerabilities, risks, and potential losses

This section translates the scenario frameworks (Section 2) into a forward-looking risk picture for Samoa to 2030, 2050 and 2100, focusing on the climate hazards most critical for sector prioritization. Where possible, ranges are drawn directly from projections within World Bank, *NextGen*,⁹ NDC, BUR, and draft TNC *Vulnerability and Adaptation Assessment Report* findings.

5.6.8 Key climate-hazard trajectories under three pathways

An overview of key climate hazards, their trajectory along three different pathways (near-term, mid-century, and end-century), and key sources are provided below.

Table 17: Key climate hazard trajectory under three pathways and key sources

Hazard	2030 (near-term)	2050 (mid-century)	2100 (end-century)	Key Sources
Mean air temperature (vs 1986-2005)	• + 0.7°C (RCP 2.6) • + 0.9°C (RCP 4.5) • + 1.0°C (RCP 8.5)	• + 1.0°C (RCP 2.6) • + 1.3°C (RCP 4.5) • + 1.7°C (RCP 8.5)	• + 1.4°C (RCP 2.6) • + 2.2°C (RCP 4.5) • + 3.1°C (RCP 8.5)	'NextGen'
Annual rainfall change	• + 2% (RCP 2.6) • + 2% (RCP 4.5) • + 3% (RCP 8.5)	• + 3% (RCP 2.6) • + 5% (RCP 4.5) • + 6% (RCP 8.5)	• + 4% (RCP 2.6) • + 8% (RCP 4.5) • + 12% (RCP 8.5)	'NextGen'
5-day extreme rainfall change (25-yr RP)	n/a	• 1-in-9 years (RCP 2.6) • + 12% intensity (RCP 4.5) • 1-in-7 years (RCP 8.5)	• 1-in-6 years (RCP 2.6) • + 25% intensity (RCP 4.5) • 1-in-6 years (RCP 8.5)	WBG, NextGen'
Tropical cyclone peak-wind change	Slight increase (All RCPs)	• + 2-6% (RCP 2.6) • + 2-11% (RCP 4.5) • + 3-14% (RCP 8.5)	• + 6-8% (RCP 2.6) • + 8-15% (RCP 4.5) • + 15-20% (RCP 8.5)	'NextGen'

⁸⁸ Andrew et al (2019). Coastal Proximity of population in 22 Pacific Island Countries and Territories. PLoS oNE.

<https://doi.org/10.1371/journal.pone.0223249>

⁸⁹ 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Samoa, Technical Report and Summary Slides.

Relative SLR (Apia tide-gauge)	+ 9-10 mm pa (current trend, ocean rise and subsidence)	+ 15-29cm (RCP 2.6) + 19-36cm (RCP 4.5) + 23-45cm (RCP 8.5)	+ 40-63cm (RCP 2.6) + 63 -75cm (RCP 4.5) ≥ 100cm (RCP 8.5)	'NextGen', Samoa Meteorolog y Service
Marine heatwave days per decade	45-50 (baseline)	70 (RCP 2.6) 90 (RCP 4.5) 110 (RCP 8.5)	120 (RCP 2.6) 180 (RCP 4.5) 240 (RCP 8.5)	WBG

Figure 13: Sea level rise relative to 1986-2005 (per 'NextGen')⁹⁰

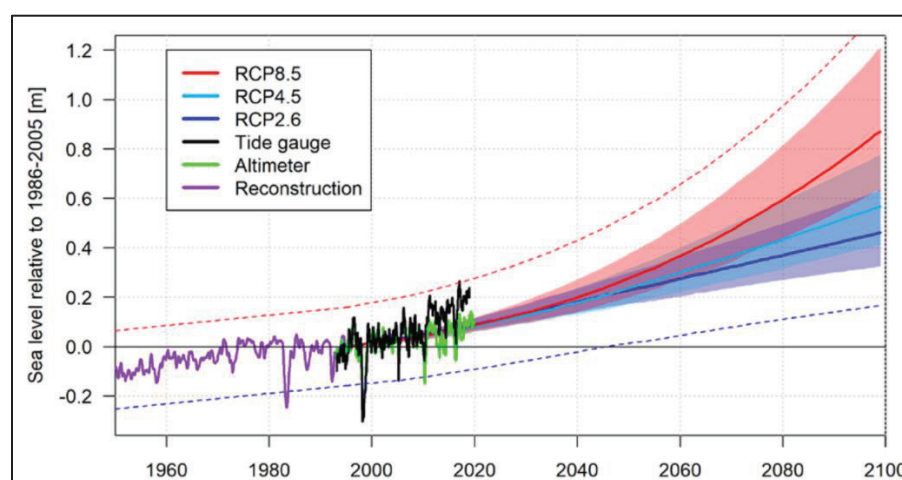
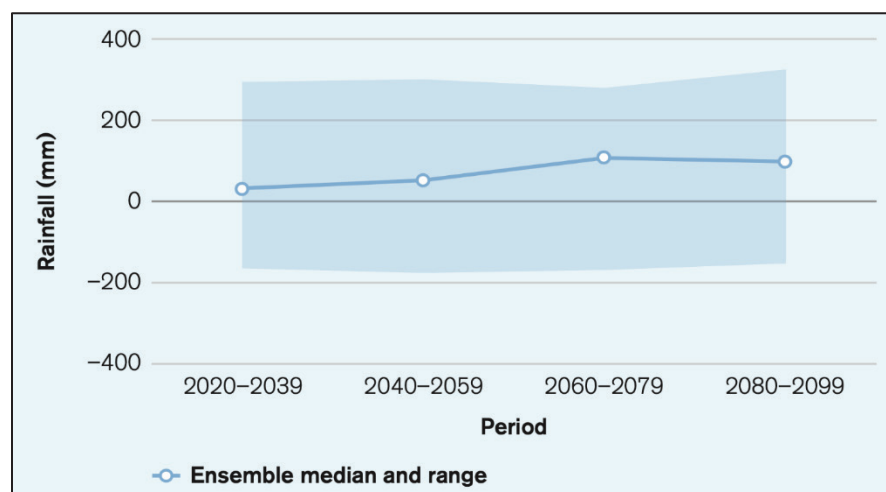


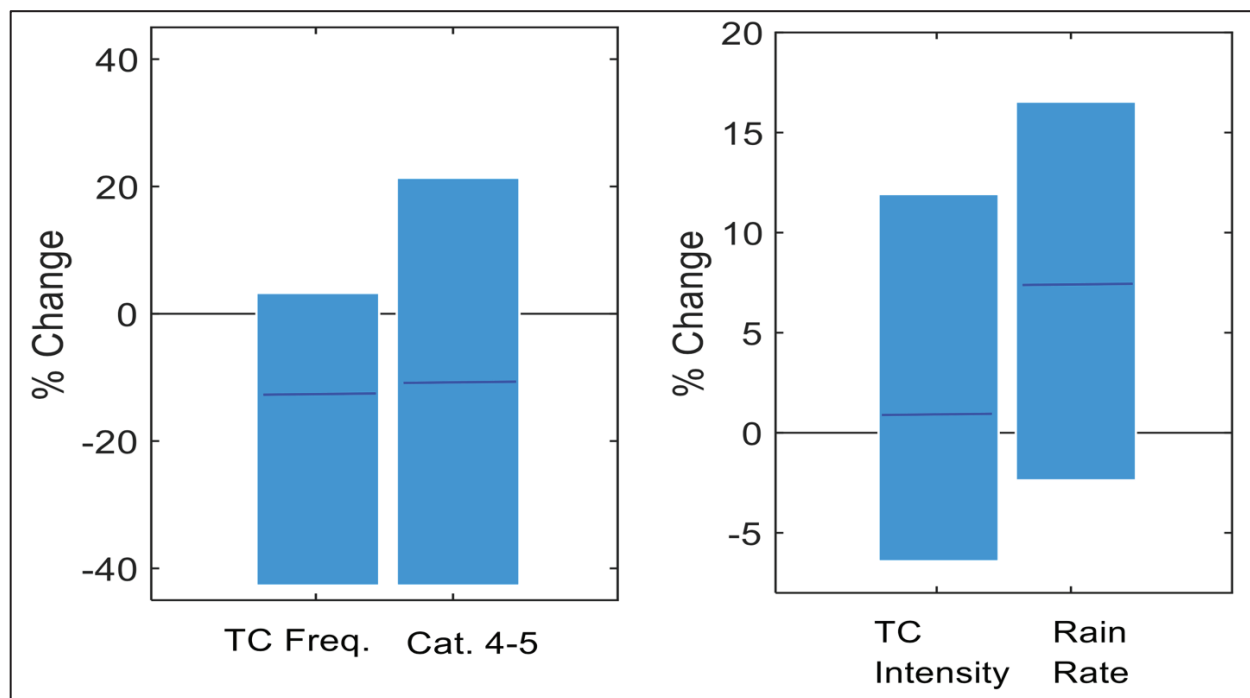
Figure 14: Projected change in annual maximum 5-day rainfall (25-year return level) (per World Bank CCKP)⁹¹



⁹⁰ 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Samoa, Technical Report and Summary Slides.

⁹¹ Summary: Climate Change in Samoa 2022, Historical and Recent Variability, Extremes and Change.

Figure 15: Projected changes in TC frequency, severe TC (Cat 4-5) frequency, intensity (windspeed), and rainfall rate for 2°C global warming (per 'NextGen')⁹²



5.6.9 Exposure carried forward

A high-level summary of climate risk exposures carried forward from earlier baseline exposure snapshots are provided below.

- Population at risk: $205,557^{93} \times 61\%$ within 1 km coast = approximately 125,000 residents potentially exposed to storm surge and coastal erosion.
- Public-asset proxy: 47% of public infrastructure lies within 500m of shoreline, representing approximately 48% of replacement value.
- Socioeconomic lens: services represent 74% of GDP, agriculture and fisheries represent 10% of GDP.

5.6.10 Sector-level risk outlook (RCP 4.5)

A high-level sector-level risk outlook by sector and main hazard drivers are assessed along three pathway scenarios (near-term, mid-century, end-century) with key sources are provided below.

Table 18: Sector-level risk outlook by hazard driver, three pathways, and key sources

Sector	Main hazard drivers	2030 (near-term)	2050 (mid-century)	2100 (end-century)	Key Sources
Agriculture and food	Heat stress, El Niño drought, cyclone rainfall	El Nino droughts trigger 10-20%	Yield variability widens, up to	Unmanaged salt intrusion could force	Adaptation mapping report

⁹² 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Samoa, Technical Report and Summary Slides.

⁹³ Population and Housing Census 2021.

		taro and banana losses	30% losses in strong El Nino	retreat from low-lying taro belts	
Fisheries and reefs	SST and ocean acidification	Sporadic bleaching, 5-10% reef-fish decline	15-30% live coral loss, inshore catch falls similar share	Near-annual bleaching leads to reef-fish productivity declining > 40%	WBG
Water and power	Drought, extreme rain, sediment	Hydro output vulnerable to flood debris	Dry-season inflow declines, more reservoir turbidity, diesel costs rise	Hydro capacity at chronic risk, desalination costs escalate	BUR
Coastal and transport infrastructure	SLR, storm surge, TC intensity	Annual wave-over-over-over-over-over-topping 1-in-5 years	Need 0.4m design freeboard, overtopping every 2-3 years	+1m SLR makes some seawalls obsolete, planned retreat likely	'NextGen'
Tourism and services	Beach erosion, cyclone shoreline retreat (SLR), marine heatwave driven coral bleaching	Seasonal beach reprofiling common, visitors decline after severe cyclones	+19-36cm SLR puts 60% of beach fales in annual flood zone, danger heat days climate to 135 pa, bleaching frequency doubles	≥ 1m SLR results in many low plots untenable, near-annual bleaching threatens reef-tour product	'NextGen', WBG
Health	Heat index, vector range	Heat index > 35°C on 80 days pa	135 days pa, dengue range upslope	Danger heat days > 200 pa (RCP 8.5)	WBG

5.6.11 Macroeconomic loss envelope

A high-level overview of macro-economic loss metrics by current climate and projected to 2050 are provided below, along with key sources.

Table 19: Macro-economic loss metrics by two pathways and key sources

Loss metric	Current climate	2050 (RCP 4.5)	Key Sources
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AAL ⁹⁴ (cyclones)	1.2% GDP	1.5% GDP (assuming +25% increase in TCs)	PCRAFI, NextGen'
PML ⁹⁵ (100-year cyclone)	60% GDP	65% GDP (assuming storm surge curves with + 0.3m SLR)	WBG
Slow-onset SLR damage	n/a	≥ USD 200m for elevating main coastal roads and wharves (assuming engineering norms USD 5m per km)	Extrapolated from PPCR cap-ex unit costs

Only loss figures that appear in published PCRAFI (2011) and World Bank *Climate Risk Profile* (2021) documents are reported. No official 2030 or 2100 national loss estimates exist were found at this time.

5.6.12 Hot spot geography

A high-level summary of climate hazard “hot spots” by geographic location along three pathways with key sources are provided for below.

Table 20: Hazard hot spots by geography along three pathways with key sources

Geographic area	Hazards	2030	2050 (RCP 4.5)	2100 (RCP 8.5)	Key Sources
Apia CBD and Vaisigano catchment	River flood × storm surge convergence	1-in-15 years (TC Evan-depth floods)	1-in-10 years, 0.3m SLR pushing storm tide into CBD drains	1-in-5 years, many CBD lots below mean high tide	BUR, PPCR
Mulifanua, Faleolo tourism strip	Beach erosion, cyclone waves, dune loss	Seasonal shorelines retreat visible at TDAs	Erosion rate doubles, 0.4m freeboard needed for resorts	Chronic tidal flooding, 35% of beach fale plots threatened	BUR, Draft TNA V&A Assessment
South-east Upolu and South Savai 'i ag-belt	ENSO drought, salt intrusion	2015 El Nino drought cut taro yields 30%	25% of shallow wells brackish, 1-in-3 year for crop losses	Saline soils expand inland, switch to agro-forestry required	Adaptation mapping report, NextGen'

5.6.13 Key assumptions, current data gaps, and near-term priorities

An overview of key assumptions, approaches utilized, and limitations faced in generating earlier figures, as well as recommended data sources to fill gaps are provided below.

Table 21: Key assumptions, data gaps, and recommended data sources to inform data analysis

Category	Approach used (explicit assumption)	Limitations faced (due to lack of data)	Future data sources
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⁹⁴ Average Annual Loss.

⁹⁵ Probable Maximum Loss.

Exposure baseline	- Population figures from 2021 Census (205,557) with 61% in the ≤ 1km of coast - Fixed infrastructure proxy of 47% of public assets ≤ 500m of shoreline	No parcel-level GIS for private housing and SMEs, cannot track 2030 or 2050 in-fill or relocation	LiDAR building footprints
Hazard deltas	- Use of 2021 'NextGen' CMIP-5 medians for RCP 2.6 (2030), RCP 4.5 (2050), and RCP 8.5 (2100) where data exists - Supplemented extreme rainfall return-period shifts and marine-heatwave frequency from 2021 World Bank <i>Climate Risk Profile</i>	No gridded storm-tide or compound flood layers beyond Apia pilot.	SPC GEM's new regional storm-surge atlas
Loss metrics	- For AAL and 100-year PML, baseline values come from 2011 PCRAFI <i>Country Note</i>, 2050 estimates under RCP 4.5 come from 2021 World Bank <i>Climate Risk Profile</i> - There is no AAL or PML figures for 2030 or 2100	- No official national figures for 2030 or 2100 - No hazard-specific loss curves (e.g., depth-damage, fragility) - Cannot disaggregate AAL by sector or island	RiskScape to generate fresh AAL and PML for 2030–2100 using GIS data
Sector impacts	Agriculture drought loss, reef bleaching loss, etc. were kept qualitative or as % range from field reports (e.g., 30% taro loss from 2015 El Nino drought)	- No crop model or reef ecosystem cash valuation - Cannot convert % loss to WST or USD across time measures	APSIM ⁹⁶ Pacific crop modules use Ridge-to-Reef economic valuation tool for reefs and mangroves.
Adaptive capacity lens	Use of <i>Adaptation mapping report</i> and <i>BUR</i> project list to discuss capacity strengths and gaps	- No village-scale capacity index - No sex disaggregated vulnerability scores	CACI ⁹⁷ using SBS census indicators and NCCGS KPIs

5.7 Sector-level vulnerability snapshot (RCP 4.5)

A high-level summary of sector-level climate hazard “hot spots” by geographic location assessed by sensitivity factors, adaptive capacity constraints, and baseline loss / stress signal is provided below. Additionally, consideration for a mid-century (2050) scenario and key sources is also included. Sectors

⁹⁶ Agricultural Production Systems sIMulator (APSIM). <https://www.apsim.info/>

⁹⁷ Composite Adaptive-Capacity Index (CACI).

include agriculture and fisheries, water and sanitation, health, transport, energy and infrastructure, tourism and coastal / marine, and biodiversity and ecosystem.

Table 221: Sector-level hazard hot spots by geography with key sources (agriculture and fisheries)

Exposure / hot spots (2020 baseline)	Key sensitivity factors	Adaptive capacity constraints	Baseline loss / stress signal	2050 (RCP 4.5)	Key Sources
- Low-lying taro belts (south Upolu, Vaisigano delta) - Near shore reef fishing grounds	- Root crops intolerant of salt and water logging - Reef fish harvest tied to live coral cover	- Irrigation < 5% cropped area 1 extension officer for > 500 farms - Limited credit or insurance instruments	2015 El Niño resulted in 30% taro and banana yield losses	- Drought frequency increases 15-30% coral loss leads to in-shore catch declining 15-25% - Annual crop damage of USD 10-15m (scaled from TC Evan losses)	<i>Adaptation mapping report, NextGen'</i>

Table 23: Sector-level hazard hot spots by geography with key sources (water and sanitation)

Exposure / hot spots (2020 baseline)	Key sensitivity factors	Adaptive capacity constraints	Baseline loss / stress signal	2050 (RCP 4.5)	Key Sources
- Apia and NW Upolu river catchments - Savai'i coastal boreholes	- Highly seasonal flows - Shallow aquifers are prone to SLR salinization - Pit latrine overflow in floods	- Treated water storage < 30 days - Catchment land on customary tenure	2015 El Niño drought led to water rationing for 56% of households	- Dry season base declines 10-15% 25% of boreholes at risk of salt intrusion - extra desal / treatment costs of 1% GDP	'NextGen'

Table 24: Sector-level hazard hot spots by geography with key sources (health)

Exposure / hot spots (2020 baseline)	Key sensitivity factors	Adaptive capacity constraints	Baseline loss / stress signal	2050 (RCP 4.5)	Key Sources
- Coastal villages - Peri-urban Apia informal housing	Mosquito range expands with warmer nights and standing water	- CASH surveillance unit understaffed < 10% clinics have solar back-up for vaccines	- Post- TC Evan dengue surge 2019 measles outbreak	- Danger heat days climb from 80 to 135 days pa - dengue season lengthens to ≥ 2 months	WBG

	Heat-index > 35°C days rising fast				
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Table 25: Sector-level hazard hot spots by geography with key sources (transport, energy and infrastructure)

Exposure / hot spots (2020 baseline)	Key sensitivity factors	Adaptive capacity constraints	Baseline loss / stress signal	2050 (RCP 4.5)	Key Sources
- West Coast Road - Matautu international port - Mulifanua and Salelologa ferry terminals	- Single ring road; detour > 60km if segment fails - Diesel gensets on surge-prone coast	- Drainage sized for 1980s design rain - Limited grid redundancy and storage	4.7 MW hydro offline from 2012-17 after TC Evan - diesel imports soared	- Need + 0.4m design freeboard - AAL for roads and wharves increases from USD 22m to 35m	WBG, 'NextGen'

Table 26: Sector-level hazard hot spots by geography with key sources (tourism / coastal and marine)

Exposure / hot spots (2020 baseline)	Key sensitivity factors	Adaptive capacity constraints	Baseline loss / stress signal	2050 (RCP 4.5)	Key Sources
- Beach fale belts (Upolu south, Savai'i east) - Marine parks / dive sites	Visitor revenue hinges on intact beaches and live reefs.	< 15% coastal tourism properties insured - Low SME cash buffers	- GEF-LDCF dune / coral project shows smaller restoration bills - Visitor nights decreased by 26% post-TC Gita	60% budget-accommodation plots chronically flood-exposed with + 0.3m SLR - GDP declines 2-3% in severe cyclone year	UNDP ⁹⁸ , PPCR, 'NextGen'

Table 27: Sector-level hazard hot spots by geography with key sources (biodiversity and ecosystems)

Exposure / hot spots (2020 baseline)	Key sensitivity factors	Adaptive capacity constraints	Baseline loss / stress signal	2050 (RCP 4.5)	Key Sources
- Mangroves (Vaiusu Bay, SE Savai'i) - Fringing reefs < 5m depth	- Coral bleaches > 30.5°C SST - Mangroves squeezed between	- Fragmented legal mandates - Episodic restoration funding	2019 coral bleaching resulted in < 20% live coral at 3 monitoring	Severe bleaching becomes near annual	WBG, PPCR

⁹⁸ UNDP implemented GEF-LDCF "Enhancing the Resilience of Tourism-reliant Communities to Climate Change Risks."
<https://www.thegef.org/projects-operations/projects/4585>

	rising sea and hard infrastructure	• Invasive species pressure	sites (per MESCAL ⁹⁹)	• Coral reef shoreline buffer value losses of ≥ USD 15m pa	
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5.7.1 What “resilience” means and how to measure it

The nation’s vision for resilience is embodied by the NCCP’s calling for “a resilient, safe and prosperous Samoa” and the PDS’s theme of “empowering communities, building resilience, and inspiring growth.” Both frameworks emphasize that resilience is achieved when society can *withstand, adapt to and recover from* climate-driven shocks without undermining long-term development. They explicitly link climate resilience to the disaster risk management cycle (prevention, preparedness, response, recovery) and to intergenerational human rights principles. In practical terms, this framing merges the IPCC risk framework¹⁰⁰ with local development goals.

Resilience is the capacity of households, communities, sectors and ecosystems to anticipate shocks, absorb their immediate impacts, adapt to ongoing change and, when thresholds are crossed, transform systems entirely. Anticipation is delivered through climate service products (e.g., ‘NextGen’ projections). Absorption comes from hard and soft defenses that keep loss and damage below critical levels. Adaptation involves incremental adjustments (e.g., salt tolerant crops or elevated roads), while transformation may require relocating assets or entire settlements when relative SLR makes protection uneconomic.

Translating this high-level national vision into operational terms would benefit from a set of indicators that government agencies (e.g., ministries, departments, regulators) can track with primary data they collect. Three indicators are proposed that align with the “anticipate-absorb-adapt-transform” spectrum used in the IPCC’s AR6 and rely on data sets already maintained by various government agencies.

- **Absorptive capacity:** gauged by the share of coastal road length that meets new design freeboard recommendations informed by ‘NextGen’ SLR projections. The recently completed PPCR West Coast Road upgrade project¹⁰¹ strengthened nearly 24km of Samoa’s West Coast Road coastal roads to climate resilient standards, however most remaining coastal sections have yet to be upgraded.
- **Adaptive capacity:** represented by the area of mangroves restored and placed under legal protection. The recent SoE¹⁰² report notes estimate of between 3.7 and 7.52km² stands intact, with ambition¹⁰³ to bring that figure to 15km² by 2030.
- **Transformative capacity:** monitored through a voluntary relocation of households from land > 2m above mean high tide. Relocation has yet to formally be adopted as a loss and damage or transformative measure, however the NDMP envisions incentive packages for at-risk families.

⁹⁹ Mangrove Ecosystems for Climate Change Adaptation and Livelihoods (MESCAL) project.

<https://library.sprep.org/content/mangrove-ecosystems-climate-change-adaptation-and-livelihood-mescal-samoa-project>

¹⁰⁰ IPCC determinants of risk: exposure and vulnerability. <https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/determinants-of-risk-exposure-and-vulnerability/>

¹⁰¹ Pilot Program for Climate Resilience (PPCR) project, “Enhancing Climate Resilience for West Coast Road Project.”

¹⁰² State of the Environment (SoE) Report 2023. <https://www.mnre.gov.ws/wp-content/uploads/2024/09/Final-Samoa-SOE-2023-v39-digital-1.pdf>

¹⁰³ As per the Samoa Land Master Plans.

5.7.2 Cross-cutting enablers

Delivering the sector-specific actions in earlier sections will require a set of system-wide capabilities that cut across ministries, sectors and timeframes. The enablers below have been distilled directly from gaps, needs and opportunities already identified. Supporting these enablers would strengthen implementation by providing governance mandates, skilled people, finance and information that sectors rely upon. Additionally, they would support safeguarding equity by mainstreaming NCCGS principles and ensuring that benefits of climate adaptation investments reach vulnerable groups.

The recommendations below are a summary of actions identified to strengthen cross-cutting enablers:

- Governance, coordination, and mainstreaming: Formalizing a CRVA/NAP technical working group led by CCGEF with Samoa Meteorology Division, SBS, and line ministries. Use of 'NextGen' and local data sets to inform updated CIM Plans at the community-level. Ensure NCCGS principles of equity are applied to adaptation interventions.
- Human resources and institutional capacity: Support for technical and capacity support areas identified in NDC (e.g., energy efficiency, REDD+ / AFOLU, data management). Establishment of multidisciplinary climate change institute to drive adaptation research to inform policy and other relevant developments as recommended in the BUR. Continuous training for village-level disaster and climate committees paired with hands-on workshops for technical sector analysts will help embed climate risk literacy across levels of government and society.
- Finance and risk transfer instruments: Scaling up of PCRAFI 2.0 to include drought and flood triggers by 2030, Capitalization of the STRAP blended-finance facility, and exploration of a regional catastrophe bond tranche by 2040. Integration of parametric payouts into NDMP recovery SOPs to enable Treasury to receive funds within 10 days. Blending of multilateral climate fund (e.g., Green Climate Fund) grants with concessional loans to support expansion of the pool of rapid recovery finance available.
- Gender equality and social inclusion: Upgrading of sector plans that ensure they are aligned to the NCCGS (e.g., gender-disaggregated data and monitoring indicators, application of gender analysis into all adaptation proposals). Support for women's leadership through micro-credentials and community programs identified in the BUR.

5.8 Limitations and Challenges

While the CRVA approach provides a valuable framework for identifying and assessing climate risk for agencies across Samoa, there are several limitations and challenges. The following list¹⁰⁴ provides a high-level overview of some of these limitations and potential ways to overcome them:

Climate / hazard data availability and quality

- Limitation: the availability of comprehensive and reliable climate and disaster risk data, especially at the local level, can take time and effort. Data gaps and/or misuse of data can hinder assessment outcomes.
- Options to address: Collaborating with relevant in-country agencies, key regional bodies (e.g., Australian Bureau of Meteorology (BOM), Commonwealth Scientific Industrial Research Organization (CSIRO), SPREP, SPC), donor agencies, climate projects, and individual climate science experts can help ensure that the data being utilized is fit-for-purpose.

¹⁰⁴ Adapted from Papua New Guinea Transport Sector Support Program Phase 3 (TSSP3), *Climate Change Risk and Vulnerability Assessment Framework for Resilient Infrastructure*.

Uncertainty in climate change projections

- Limitation: Climate change projections are inherently uncertain (e.g., rainfall projections), which can make it challenging to apply to a project or quantify project-specific risk.
- Option to address: Engage individual climate scientists and experts to better understand the uncertainties and limitations of climate projections. Use ensemble modelling techniques that draw on multiple climate models and emission scenarios to capture a range of potential future outcomes. Adopt a risk-based approach to selecting future emission scenarios and ensemble modelling methods, noting that the approach will depend on the project (e.g., sector, geography, temporal scope, etc.). Communicate uncertainties clearly and transparently to decision makers and stakeholders.

Limited capacity and expertise

- Limitation: Use of the CRVA requires expertise in climate science, risk assessment, and sector planning, which may be limited in some locations and for some projects.
- Option to address: Invest in capacity building initiatives to enhance the knowledge and skills of practitioners involved in the CRVA. Foster partnerships and collaborations with relevant organizations and institutions that have the relevant expertise.

Integration into the decision-making process

- Limitation: Integration of CRVA findings into decision-making processes and project planning can be challenging, as risk considerations may not always receive adequate attention or priority.
- Option to address: Adopt a multi-stakeholder approach involving decision makers, project developers, and relevant sector experts throughout the CRVA process. Establish clear communication channels to ensure that risk assessment outcomes inform project design, cost estimation, and implementation plans. Incorporate risk management frameworks into development guidelines and regulations.

Cost and time constraints

- Limitation: Conducting a comprehensive CRVA may be time-consuming and resource-intensive, posing a challenge within the constraints of project budgets and timelines.
- Option to address: Prioritize CRVA activities based on the project's scale, significance, potential risks, and project risk appetite. Focus on the most critical hazards and vulnerabilities. Use of CRVA to balance comprehensiveness and efficiency. Seek external support from specialists when necessary.

Social and cultural factors

- Limitation: Incorporating social and cultural factors, including community practices, local knowledge, and traditional practices into the CRVA process can be challenging but essential for holistic risk management. This includes ensuring that the unique perspectives and knowledge of vulnerable groups (e.g., women, youth, and people with disabilities) are considered.
- Option to address: Foster community engagement and participation, including the participation of vulnerable groups throughout the CRVA process. Involve local stakeholders and traditional knowledge holders. Facilitate inclusive consultations, workshops, and focus group discussions to understand community-specific risks and vulnerabilities (project dependent). This should include separate consultations with women and discussions with organizations for persons with disabilities. Where appropriate, adapt the CRVA process to incorporate cultural and social values and indigenous knowledge systems. Draw on expertise of gender, disability, and social development specialists to inform the CRVA process.

6 Methodology

As part of the NAP development process, a comprehensive stock take of potential adaptation initiatives was undertaken, drawing on a longlist of 829 project concepts from 17 sectoral and national policy frameworks.

Each concept was screened using a three-tier Multi-Criteria Analysis (MCA) to assess its suitability for climate adaptation, focusing on technical merit through keyword alignment.

The approach included refinement of an initial longlist of approximately 800 project concepts drawn from 12 sector policies. A further 22 project concepts from five additional public policies were also included for consideration. The full project longlist now draws on 829 distinct project ideas consolidated from 17 public policy frameworks with implementation periods between 2019 and 2030. Each project concept was assessed for suitability for adaptation actions with application of a three-tier Multi-Criteria Analysis (MCA) to inform prioritization. Focus was placed exclusively on technical merit (keyword alignment) as estimates of financing needs per action will take place during development of an investment and implementation plan.

All 829 ideas were screened against the NAP sectors to consider the relevance of each sector to climate adaptation, including:

- **Six key sectors** (agriculture and fisheries, energy, environment, health, tourism, and water and sanitation) are recommended to be included in the NAP as sectors.
- **Three sectors** (education, finance, and transport and infrastructure) are recommended to be partly included (integrated / mainstreamed) in the NAP.
- **Five sectors** (community, information and communication technology, law and justice, public administration, and trade, commerce, and manufacturing) are therefore recommended not to be included as standalone sectors in the NAP.

6.1 Applicable risk-reduction and resilience approaches

As noted in previous sections, Samoa's average cyclone and flood losses already hover around 1.2% of GDP per annum and are likely to climb above 1.5% by 2050 without additional interventions. This section will use the earlier identified high-level climate risks informed by the *draft TNC V&A Assessment* to develop a practical list of actions, organized along a four-level continuum adopted in the *NDMP¹⁰⁵* and reaffirmed in the *PDS*.

- Avoid / Prevent – steer new assets and settlements away from hazard zones
- Reduce vulnerability – harden or climate proof what is already exposed.
- Transfer / Share – spread residual losses through risk transfer instruments (e.g., insurance) or contingency finance
- Prepare / Respond – strengthen early-warning, emergency services and recovery logistics

Equally important is the equity lens mandated by the *NCCGS*, ensuring every recommended action demonstrates that vulnerable groups (e.g., women, youth, persons with disabilities) will explicitly benefit and that sex-disaggregated indicators are embedded within all monitoring frameworks. Presented below are high-level overviews by level of the continuum and sector focus.

Table 28: Avoid / Prevent (environment, water and sanitation, and agriculture and fisheries)

Strategic Purpose	Priority measures (2024-2030)	Scaling pathway (to 2050)	Outcome Targets (by 2030)	Key Sources
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¹⁰⁵ National Disaster Management Plan (NDMP) 2017-2020. <https://samoa-data.sprep.org/system/files/Samoa-national-disaster-management-plan-2017-2020-final-web.pdf>

Ensure new assets and communities are out of harm's way, stop new exposure	- Update district CIM Plans with 30cm SLR contour and recommend coastal setbacks for all critical infrastructure - Use 'NextGen' storm surge and LiDAR data to inform EIA / permitting processes - Declare no sand mining zones in front of mangrove fringes and reef flats to preserve natural buffers - Incentivize inland densification around existing upland water and power corridors	- Review / update of statutory <i>Planning and Urban Management Act</i>¹⁰⁶ for consideration of making SLR buffer legally binding - Introduction of voluntary buy-back / land-swap scheme for < 2m elevation parcels (e.g., pilot in Vaisigano delta) - Creation of continuous green belt of mangroves and beach vegetation along 75km of coastline	≥ 90% of new public buildings located > 20m inland of 2050 HWM line - No new approvals for construction inside mapped mangrove reserves	CIM Plans
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Table 29: Reduce Vulnerability (agriculture and fisheries, energy / infrastructure, environment, tourism)

Strategic Purpose	Priority measures (2024-2030)	Scaling pathway (to 2050)	Outcome Targets (by 2030)	Key Sources
Lower sensitivity of people, infrastructure, and ecosystems already at risk	- Distribute salt-tolerant taro and irrigation drip kits to 2,500 farms, expand tunnel-house programme to 40ha, deployment of 12 community FADs¹⁰⁷ - Enlarge drainage and raise deck soffits 40cm on 4 priority bridges, resurface 12km of West Coast Road with permeable shoulders, retrofit	- Convert 30% of lowest-lying taro land to salt-tolerant agroforestry belts by 2040 - Realign a further 15km of high-risk coastal road inland and extend breakwater with artificial reef structures - Restoration of total mangrove estate to 350ha and legally protect under the <i>Forestry Act</i>¹⁰⁸	- Crop-failure years ≤ 2 per decade - Coastal road AAL ≤ 1.5% GDP - Live coral in TDAs ≥ 25%	<i>Adaptation mapping report, TDAMP</i> ¹⁰⁹

¹⁰⁶ Planning and Urban Management Act 2004. <https://www.ag.gov.ws/wp-content/uploads/2024/02/Planning-and-Urban-Management-Act-2004.pdf>

¹⁰⁷ Fisher aggregating devices (FADs).

¹⁰⁸ Forestry Management Act 2011. <https://samoatradeportal.org/media/Forestry%20Management%20Act%202011.pdf>

¹⁰⁹ Tourism Development Area Management Plan. <https://www.samoatourism.org/section/101/tourism-development-area-management-plan>

	Matautu port bollards Replant 200ha of mangroves, installation of 300 artificial reefs and coral fragments in six TDAs			
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Table 30: Transfer / Share (energy, water and sanitation, tourism, and agriculture and fisheries)

Strategic Purpose	Priority measures (2024-2030)	Scaling pathway (to 2050)	Outcome Targets (by 2030)	Key Sources
Spread financial impact of low-frequency / high-impact events so recovery is rapid and fiscally sustainable	- Subscribe to PCRAFI 2.0 parametric cyclone cover (trigger at Cat 3 for USD 10m payout) - Launch of STRAP¹¹⁰ facility, blended loan and micro-insurance for 150 SMEs - Pilot index-based crop insurance (e.g., taro, cocoa) bundled with credit from SNPF¹¹¹	- Add drought and flood triggers to PCRAFI coverage by 2030 - Capitalize STRAP facility to WST 50m and integrate with catastrophe DDO¹¹² by 2035. - Explore a regional catastrophe bond tranche by 2040.	≥ USD 30m rapid payout capacity within 14 days of Cat 3 TC 40% of beach fale operators insured	BUR, STSP ¹¹³

Table 31: Prepare / Respond (health, and water and sanitation)

Strategic Purpose	Priority measures (2024-2030)	Scaling pathway (to 2050)	Outcome Targets (by 2030)	Key Sources
Improve lead-time for warnings, ensure continuity of critical services, and shorten humanitarian	- Design / launch of multi-hazard warning dashboard (e.g., TC tracking, rain radar, river gauges, storm surge forecasts) - Pre-position WASH and shelter kits for 15,000 people	- Integrate parametric PCRAFI payouts into NDMP recovery SOPs to enable first tranche of funds to reach Treasury within 10 days - Keep siren network and	- Evacuation-lead-time ≥ 36 hours for 90% of cyclones - Potable water gap ≤ 48 hours after cyclone landfall - Zero vaccine losses from power outages (e.g., cold storage)	CASH, NDMP

¹¹⁰ Samoa Tourism Resilience Asset Protection (STRAP) Facility.

¹¹¹ Samoa National Provident Fund (SNPF). <https://www.npf.ws/>

¹¹² Deferred Drawdown Option (DDO).

¹¹³ Samoa Tourism Sector Plan (STSP) 2022-2027. https://www.samoatourism.org/Content/SiteResources/PAGE/77/Samoa_Tourism_Sector_Plan%202022-2027_Final.pdf

tail of disasters	Equip 100% of rural clinics with solar PV back-up, update of hospital disaster plans	satellite phones in full working order, rotate pre-position supplies annually		
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6.2 Sector-specific adaptation menus

The agriculture and fisheries sector can support priority actions with technologies already validated in project-level trials. For example, drip-irrigation starter kits, tunnel houses, and salt and drought tolerant root crops (e.g., taro)¹¹⁴ are three scalable actions. Following adoption, farmers will be empowered to convert the most flood and salt prone agriculture belts to mixed agroforestry and to deploy community FADs that shift fishing away from bleaching stressed reefs.

For the water and sanitation sector, it is noted during the 2015 El Niño that the Samoa Water Authority (SWA) resorted to prolonged water-rationing across Upolu over a six-month period that severely constrained supply and cause large-scale drought.¹¹⁵ Accelerating saline intrusion (estimated at 8–16 mm pa of relative SLR) is already compromising some coastal wells. Water sector plans accordingly include exploration of small-scale desalination and aquifer storage and recovery (ASR) as adaptation measures.

The transport, energy, and infrastructure sectors have already benefited from recent PPCR¹¹⁶ investments in climate resilient road infrastructure which upgraded 23.75km of Samoa’s main coastal artery, installed larger culverts, sealed shoulders, new drainage, and two raised bridge approaches. Overall, the World Bank judged the project as “moderately satisfactory”¹¹⁷ and notes the upgraded road now provides all-weather access for roughly 50% of the national population who rely on that corridor for access to markets, schools and healthcare facilities. Building on these recent actions, the next tranche of support could target the remaining 12km of high-risk coastal road and three low-lying bridges informed by ‘NextGen’ median projections of 19-36cm relative SLR by 2050 (RCP 4.5).

The health sector will need to adapt as the number of annual danger-heat days increases from around 80 to 135 by 2050 (RCP 4.5). Benefit could come from linking regional WHO support for dengue early warning and responses systems¹¹⁸ with Samoa Meteorology Division’s rainfall forecasts to inform public health measures. Additionally, providing every rural clinic with solar PV systems could help keep vaccine cold chains intact when extreme weather (e.g., tropical cyclones) disrupt power.

¹¹⁴ Pacific Horticultural and Agricultural Market Access (PHARMA) Plus Program, Root Crops Markets Study (Fiji, Samoa, Tonga, Vanuatu). <https://phama.cpgdevspace.com/wp-content/uploads/2024/07/Root-Crop-Market-Study-FINAL-v1.0-15-Nov-21.pdf>

¹¹⁵ World Bank Climate Risk Country Profile: Samoa.

¹¹⁶ Pilot Program for Climate Resilience (PPCR) project, “Enhancing Climate Resilience for West Coast Road Project.” <https://www.cif.org/projects/enhancing-climate-resilience-west-coast-road-project>

¹¹⁷ World Bank Implementation Completion and Results Report TF-13579 (Report No. ICR00005112). <https://documents1.worldbank.org/curated/en/122611624539758002/pdf/Samoa-Enhancing-the-Climate-Resilience-of-the-West-Coast-Road-Project.pdf>

¹¹⁸ <https://www.who.int/westernpacific/newsroom/feature-stories/item/who-takes-action-against-increasing-dengue-outbreaks-in-the-western-pacific-region?>

The tourism and coastal ecosystems sectors could benefit from scaling NbS investments demonstrated by recent GEF-LDCF investments in dune and coral restoration,¹¹⁹ including foredune vegetation and artificial reefs. Additionally, operationalization and financing support for the STRAP blended facility could support 150 small operators with concessional loans and micro-insurance to raise beach fales on posts or relocate as relative sea level climbs informed by 'NextGen' projections.

Table 32: Summary of GGGI Sector Prioritization Recommendations

Level of Inclusion	Sector Designation	Sector
Included (6)	Priority	• Agriculture and fisheries • Energy • Environment • Health • Tourism • Water and sanitation
Partly included (3)	Sub-sector priority	• Education • Finance • Transport and infrastructure
Not included (5)	Cross-cutting / low priority	• Community • ICT • Law and justice • Public administration • Trade, commerce, and manufacturing
New additions (not within GGGI framework)	Cross-cutting	<i>Sector Policy:</i> • Climate Change • Ocean <i>National Policy:</i> • Samoa 2040 • PDS • NDC 2.0

6.3 Multi-Criteria Analysis

Application of a criteria-based MCA with optional weighting was applied to each project concept as suggested by regional guidance on NAP development¹²⁰. An overview of the three-tier criteria and scoring used is shown in the table below.

Table 33: Summary of MCA Criteria

MCA Lens	Assessment / Rationale	Scoring of 1 (low) to 5 (high)	References	Weight
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¹¹⁹ UNDP implemented GEF-LDCF "Enhancing the Resilience of Tourism-reliant Communities to Climate Change Risks."

¹²⁰ [Pacific National Adaptation Plan \(NAP\) Guidelines, Guidelines for the Adaptation Planning Process and Content of NAPs in the Pacific](#) (2022).

A. Climate risk reduction	Does the action directly address priority hazards identified in risk mapping (e.g., cyclone, coastal flooding, drought, etc.)?	Sector baseline (1-5) from mapping report plus keyword boost if high-risk hazard named (e.g., <i>cyclone, flood, drought, erosion, etc.</i>)	Draft TNC ¹²¹ , adaptation mapping report ¹²²	x2
B. Feasibility and capacity	Can existing agencies, skills and enabling policy to deliver the action quickly?	Keyword search for action verbs: • build/upgrade/rehabilitate = 5 • construct/build = 3 • pilot/feasibility = 2 • +/-1 based on BUR & NDC IP	1 st BUR ¹²³ , NDC Investment Plan ¹²⁴	x2
C. Gender and social inclusion (GEDSI)	Does it explicitly benefit or empower women, youth, people with disabilities, or other vulnerable groups?	Keyword search for GEDSI language: • explicit empowerment = 5 • women, youth, disability =4 • infrastructure only titles = 1	NCCGS ¹²⁵	x1

6.3.1 Development of MCA Criteria A

The table below presents a summary of the steps taken to calculate MCA criteria A (climate-risk reduction potential) with the technical approach and rationale provided. This first-pass prioritization is intended to be grounded in national evidence (e.g., keywords come from hazard tables and narratives in recent adaptation relevant reports), show transparency to allow reproduction by stakeholders, and enable stakeholders to quickly adjust scoring within the accompanying Excel workbook. Limitations included that project concepts listed lacked significant detail beyond one or two sentences and combined an uneven mix of outcomes and outputs of varying scope.

Table 34: Summary of Development of MCA Criteria A

Step	Approach	Rationale
1. Start with sector risk levels	The <i>draft TNA Vulnerability and Adaptation Assessment</i> report and <i>Mapping of Adaptation Priorities</i> report assigns every sector a qualitative exposure rating (e.g., “high” for Water & Sanitation, Transport, Agriculture & Fisheries; “medium” for Energy; “low” for Finance). Each project inherited that sector’s baseline: 5 = high, 3 = medium, 1 = low.	Gives every project a risk-context score even if its title is vague.

¹²¹ Draft Third National Communication Report of Samoa, Vulnerability and Adaptation Assessment (2025).

¹²² [Mapping of Adaptation Priorities for NAP-Samoa](#) (2025). Within GGGI Google Drive Folder (Samoa NAP 2025, 00 Document Library, 02 Samoa NAP Mapping Report).

¹²³ [Samoa's First Biennial Update Report](#) (2023).

¹²⁴ [Samoa's NDC Implementation Roadmap and Investment Plan](#) (2021).

¹²⁵ Samoa's National Climate Change and Gender Strategy for Climate Actions (2023). Within GGGI Google Drive Folder (Samoa NAP 2025, 00 Document Library, 02 Samoa NAP Mapping Report).

2. Keyword check for direct hazard linkage	Project titles were parsed for hazard keywords and synonyms drawn from the <i>Mapping of Adaptation Priorities</i> tables (see reference list below). If a keyword matched a hazard labelled “high” for that sector, the A-score was lifted to 4 or 5.	Flags are the subset of actions that explicitly address the top climate threats.
3. Down-weight mainstream only sectors	Projects in sectors of the <i>GGGI Sector Prioritization Recommendations</i> Report says should not appear as stand-alone NAP chapters (e.g., Community, ICT, Trade, etc.) had the raw A-score cut by 1 (never below 1).	Keeps focus on sectors already endorsed for NAP investment chapters.
4. Manual spot check of extremes	Following analysis, any project that landed with A = 1 or A = 5 was double-checked to catch obvious mistakes. Fewer than 40 rows required adjustment.	Removes outliers the keyword pass might miss.

Examples of keywords of hazards used from the *Mapping of Adaptation Priorities for NAP-Samoa report* are shown in the table below.

Table 35: Summary of hazard groups and sample key words used for MCA Criteria A

Hazard group	Sample keywords used
Cyclone wind & surge	cyclone, typhoon, storm surge, wind-proof, roof-retrofit
Coastal erosion & SLR	seawall, revetment, mangrove, reef rehab, shoreline
River/flash flood	culvert, bridge raising, drainage, riverbank, levee
Drought & water scarcity	rainwater, drought, borehole, water tank, intake relocation
Heat & health	heatwave, thermal, vector, dengue, clinic cooling, malaria
Agricultural stress	drought-resistant, agroforestry, salt-tolerant, irrigation

6.3.2 Development of MCA Criteria B

The table below presents a summary of the steps taken to calculate MCA criteria B (feasibility and institutional capacity) with the technical approach and rationale provided. The approach is designed to be grounded in national evidence (e.g., constraints identified in national public policy and assessments), show transparency to allow reproduction by stakeholders, and enable stakeholders to quickly adjust scoring within the accompanying Excel workbook. Limitations included that project concepts listed lacked significant detail beyond one or two sentences and combined an uneven mix of outcomes and outputs of varying scope.

Table 36: Summary of Development of MCA Criteria B

Step	Approach	Rationale
1. Action type baseline	Every project concept was scanned for verbs that signal how hard the project is to deliver. “Upgrade, rehabilitate, retrofit, training, capacity-building” = 5, “expand, pilot, implement” = 4, “construct, build, new system” = 3, “feasibility study, legislation, research” = 2, and “prototype, new technology” = 1	Support feasibility scoring that rewards project concepts that can be implemented with existing skills, budgets and capabilities.
2. Sector-capacity boost	If the sector has a proven track-record or dedicated unit (e.g., MNRE for coastal works, EPC for energy upgrades), the B-score was boosted by +1 (capped at 5). Evidence: institutional roles and staffing tables in the BUR and NDC Investment Plan.	Rewards agencies that already deliver similar projects, reflecting institutional strength.
3. Barrier penalty	If the BUR or NDC Investment Plan lists a capacity/finance barrier for that exact action or sector (e.g., “human-resource gap” or “new regulation required”) the score was reduced by 1 (never below 1).	Aligns with the Pacific NAP Guidance to flag institutional or regulatory hurdles early.
4. Manual spot check of extremes	All project concepts that landed with B = 1 or B = 5 were spot-checked to adjust to obvious mistakes, including where a keyword had inflated the score for new large projects.	Removes outliers without slowing the rapid-screen process.

Table 37: Summary of level of difficulty to deliver sample key words used for MCA Criteria B

Easy Delivery (5 to 4)	Moderate (3)	Challenging (2 to 1)
• Upgrade • Repair • Rehabilitation • Retrofit • extend life • training • capacity-build • guideline rollout	• construct • build • install • develop • extension • integrate	• pilot • prototype • feasibility • research • legislate • new framework

6.3.3 Development of MCA Criteria C

The table below presents a summary of the steps taken to calculate MCA criteria C (gender equality and social inclusion) with the technical approach and rationale provided. The approach is designed to

differentiate those projects with an explicit and intentional aim towards empowering the most climate-vulnerable groups (e.g., women, youth, people with disabilities) and enable stakeholders to quickly adjust scoring within the accompanying Excel workbook. Limitations included that project concepts listed lacked significant detail beyond one or two sentences, inclusion of an uneven mix of outcomes and outputs of varying scope, and a lack of cross-reference with poverty or remoteness maps to account for geographic vulnerability. Key words searched included: women, girls, gender, female, youth, children, elderly, disability, inclusive, vulnerable, livelihood, community-led, indigenous, participation, accessible, empowerment, and quota.

Table 38: Summary of Development of MCA Criteria C

Step	Approach	Rationale
1. Identify GEDSI-focus verbs and nouns	Search for GEDSI-related keywords from the <i>Climate Change and Gender Strategy</i> (e.g., women, girls, youth, disability, vulnerable, livelihoods, inclusive, community-led, indigenous). Any project title containing ≥ 1 of these triggers started at C = 4.	Anchors the screening in nationally endorsed inclusion priorities.
2. Boost for explicit empowerment or quota	If the project concept specified a concrete empowerment mechanism (e.g., “women’s leadership”, “50 % youth quota”, “disability-accessible”), C was raised to 5 (max).	Rewards projects that go beyond lip-service to measurable inclusion.
3. Baseline for generic community projects	Projects with words like <i>community</i> , <i>village</i> , <i>public</i> but no specific group mention defaulted to C = 2 (some implicit inclusion).	Acknowledges generic benefits but notes lack of targeted GEDSI design.
4. Penalty for purely technical or private sector projects	If a project concept had no people-oriented keywords and focused only on infrastructure (e.g., bridge, reservoir, data platform) C was set to 1.	Remove points if inclusion is invisible.
5. Manual spot check of extremes	Rows with C = 1 or C = 5 were double-checked to adjust mistakes (e.g., a “women’s cooperative market” buried in an ICT plan initially read as tech-only)	Removes outliers the keyword pass might miss

6.4 Weighting and Composite Score

After each project title was screened for hazard terms (for A), for action verbs signaling priorities versus long-term actions (for B), and for GEDSI language (for C), total scores were calculated using a weighted formula as shown in the figure below. Both climate risk reduction potential (A) and feasibility and capacity (B) were given double weight as these were judged as the two critical components, with GEDSI (C) intended to be captured but not overwhelming the core risk-feasibility trade-off. However, this can be adjusted based on validation from national stakeholders and sector experts.

Figure 16: MCA Weighted Formula

$$\text{Total Score}^* = (A \times 2) + (B \times 2) + C$$

**range of 5 (min) to 25 (max)*

6.5 Tier (Portfolio) Assignment

Based on the overall MCA score, each project was assigned to a weighted “tier” to support prioritization of climate adaptation actions as shown in the table below. Please note that approximately 50% (418) of projects did not include an estimated budget, leaving assessments results without critical inputs related to resourcing required and level of conditionality.

Table 39: Summary of MCA Tiers

MCA Tier	Score	Project Portfolio
Tier 1	Total is equal to or greater than 19	Priority action portfolio <i>Highest technical merit / alignment, projects recommended for priority implementation</i>
Tier 2	Total is between 13 and 18	Strategic development portfolio <i>Strong technical merit / alignment, but requires more design / detail before implementation</i>
Tier 3	Total is between 5 and 12	Emerging opportunity portfolio <i>Moderate technical merit / alignment, but still early-stage in scope and feasibility</i>

6.6 Initial Prioritization Results

The high-level results of an initial prioritization based on the MCA scoring and weighted tier criteria of all 829 project concepts grouped by sector policy framework are shown in the table below. Additionally, the high-level results are also provided per level of inclusion recommended by GGGI in a separate table. The sectors with the highest number of Tier 1 projects are WASH (77), environment (62), agriculture and fisheries (10), and tourism (10).

Table 40: Summary of Initial Prioritization Results by Sector Policy Framework

Sector Policy Framework (Lead Government Implementing Partner)	Pre-scoring	Tier 1	Tier 2	Tier 3
Agriculture and Fisheries (MAF)	25	10	15	0

Community Development (MWCSO)	16	3	13	0
Education (MESC)	0	0	0	0
Energy (EPC / MoF)	12	1	10	1
Environment (MNRE)	172	62	110	0
Finance (MoF / CBS)	63	0	30	33
Health (MOH)	7	7	0	0
ICT (MCIT / Office of the Regulator)	72	0	8	64
Tourism (STA)	80	10	68	2
Trade, Commerce and Manufacturing (MCIL)	27	0	20	7
Transport and Infrastructure (MWTI / LTA)	148	46	102	0
Water, Sanitation and Hygiene (MNRE / SWA)	185	77	108	0
Samoa 2040 (MoF)	1	0	0	1
Pathway for the Development of Samoa (MoF)	2	0	2	0
Climate Change (MNRE)	14	0	7	7
Ocean (MNRE)	2	0	1	1

NDC (MNRE) 2.0	3	0	0	3
Total	829	216	494	119
% of Total	100%	26.1%	59.6%	14.4%

Table 41: Summary of Initial Prioritization Results per MCA Scores

Level of Inclusion	Sector Designation	Tier 1	Tier 2	Tier 3	Sub-Total
Included (6)	Priority	167	311	3	481
Partly included (3)	Sub-sector priority	46	132	33	211
Not included (5)	Cross-cutting / low priority	3	41	71	115
New additions (5) (not within GGGI framework)	Cross-cutting	-	10	12	22
		216 (26%)	494 (60%)	119 (14%)	829 (100%)

7 Prioritized Actions

The priority adaptation actions presented below reflect both the desktop-based approach to prioritization outlined earlier as well as stakeholder consultations. This includes feedback and inputs captured during a national validation workshop held on 10 July 2025, a collaborative effort led by the MNRE with the support of GGGI.

The aim of the workshop was to provide an overview of the NAP process and gather stakeholder input by validating the prioritization of actions for various key sectors. This was to ensure that the adaptation goals, priorities, and planned actions reflected the needs, experiences, and insights of all sectors and communities. Approximately 30 representatives from government, development partners, civil society, and the private sector participated in ranking the ten highest scoring MCA concepts for each of Samoa's six priority adaptation sectors (e.g., agriculture and fisheries, energy, environment, health, tourism, and WASH) as shown in Figures 1 to 6 below. The online voting¹²⁶ produced a consensus ranking for every sector, ensuring that the final selection reflects both the evidence from the CRVA and MCA process, as well as the voices of the stakeholders who will implement and benefit from these actions.

The table below represents a summary overview of the top two project concepts identified by priority sector identified by stakeholders during the national validation workshop.

Table 42: Summary of Priority Actions by Sector¹²⁷

Priority Sector	Top-ranked action	Second-ranked action
Agriculture and fisheries	Train and empower rural farmers and fishers to adapt to climate risks.	Promote nature-positive agriculture and sustainable fisheries practices to support food security.
Energy	Build national capacity for managing renewable energy and power systems.	Explore financial incentives to promote household and commercial uptake of renewable energy.
Environment	Deliver awareness campaigns on climate change, water, land, and village development.	Update policies and legal tools to strengthen marine biodiversity and coastal ecosystem protection.
Health	Enhance surveillance and response for climate-sensitive communicable and tropical diseases.	Build public health emergency systems to manage disasters and climate-related health risks.

¹²⁶ The interactive exercise was conducted using Mentimeter, assessing 60 overall project concepts (10 from six sectors).

¹²⁷ Informed by sector feedback post-validation workshop.

Tourism	Support climate adaptation and mitigation actions for tourism sites and operators.	Ensure tourism operators have updated disaster response plans for climate and health emergencies.
WASH	Strengthen water quality monitoring to ensure climate-resilient water safety.	Subsidize sanitation upgrades for vulnerable households in critical water zones.

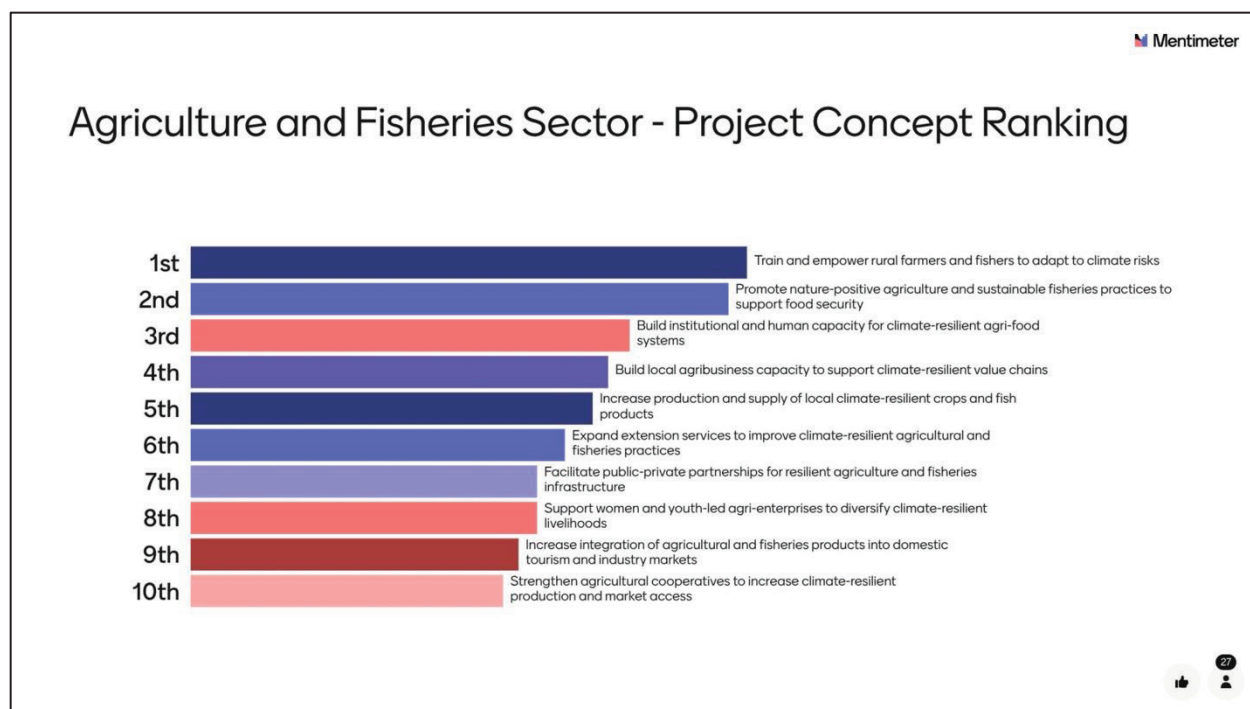
7.1 Agriculture and Fisheries Sector

Samoa's agriculture and fisheries sector underpin food security, rural incomes and cultural identity, yet the CRVA shows they are also among the sectors most exposed to cyclones, drought, flooding and marine heatwaves. During the NAP validation workshop, two project concepts clearly emerged as consensus priorities:

1. *Train and empower rural farmers and fishers to adapt to climate risks:* upgrading extension services and peer-to-peer learning so households can make informed decisions on drought-smart cropping, resilient fishing techniques, pest management and post-harvest handling.
2. *Promote nature-positive agriculture and sustainable fisheries practices to support food security:* scaling up agro-ecology, agroforestry and ecosystem-based fisheries management that restore soils and coastal habitats while raising yields.

Both priorities are explicitly listed in the workshop presentation's short-list of project concepts, where they rank above all other options for the sector. These project concepts align with the *Agriculture and Fisheries Sector Plan 2022/23-2026/27* and the national *Pathway for the Development of Samoa*. By placing human capacity-building and ecosystem-based production at the forefront, stakeholders expressed that knowledge transfer and regenerative practice are effective and equitable levers for strengthening rural livelihoods against the adverse impacts of changing climate. These two flagship actions will therefore anchor the agriculture and fisheries component of the NAP prioritized actions, to be guided by future detailed design, costing, and resource mobilization in the future.

Figure 17: Agriculture and Fisheries Sector - Project Concept Ranking



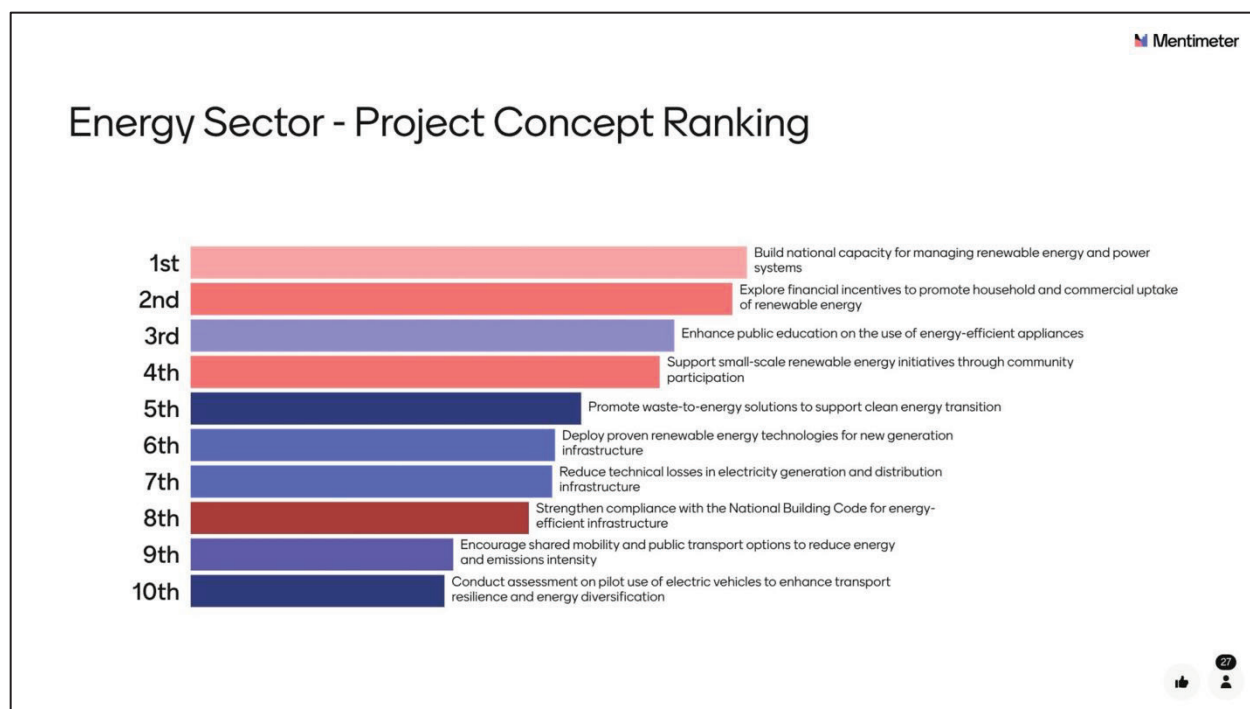
7.2 Energy Sector

Samoa's energy system remains heavily reliant on imported petroleum fuels, leaving the country vulnerable to volatile global prices, supply chain disruptions and cyclone-induced damage to generation and distribution assets. The CRVA further highlights the sector's exposure to flooding of low-lying power-station sites, storm-related transmission losses and drought-driven shortfalls in run-of-river hydro output. During the NAP validation workshop, two project ideas stood out as clear consensus priorities:

1. *Build national capacity for managing renewable energy and power systems:* developing specialized training and mentoring for EPC engineers, private sector installers and regulators to operate, maintain and optimize an increasingly diverse mix of grid-connected solar, wind, hydro and battery storage assets.
2. *Explore financial incentives to accelerate household and commercial uptake of renewable energy:* designing concessional loan windows, smart subsidies or tax credits that lower the up-front cost of rooftop solar PV, solar water heaters and other clean technologies, while safeguarding low-income customers.

These priorities ranked highest amongst the presented energy short-list of project concepts and reinforce the objectives of the *Energy Sector Plan 2023-2028* and the *Pathway for the Development of Samoa*. By pairing institutional capacity building with market-based incentives, stakeholders indicated that technical knowledge and targeted financing are effective and equitable levers for accelerating Samoa's clean-energy transition and strengthening energy security in the face of climate shocks. These two flagship actions will therefore anchor the energy component of the NAP prioritized actions, to be guided by future detailed design, costing, and resource mobilization efforts in the future.

Figure 18: Energy Sector - Project Concept Ranking



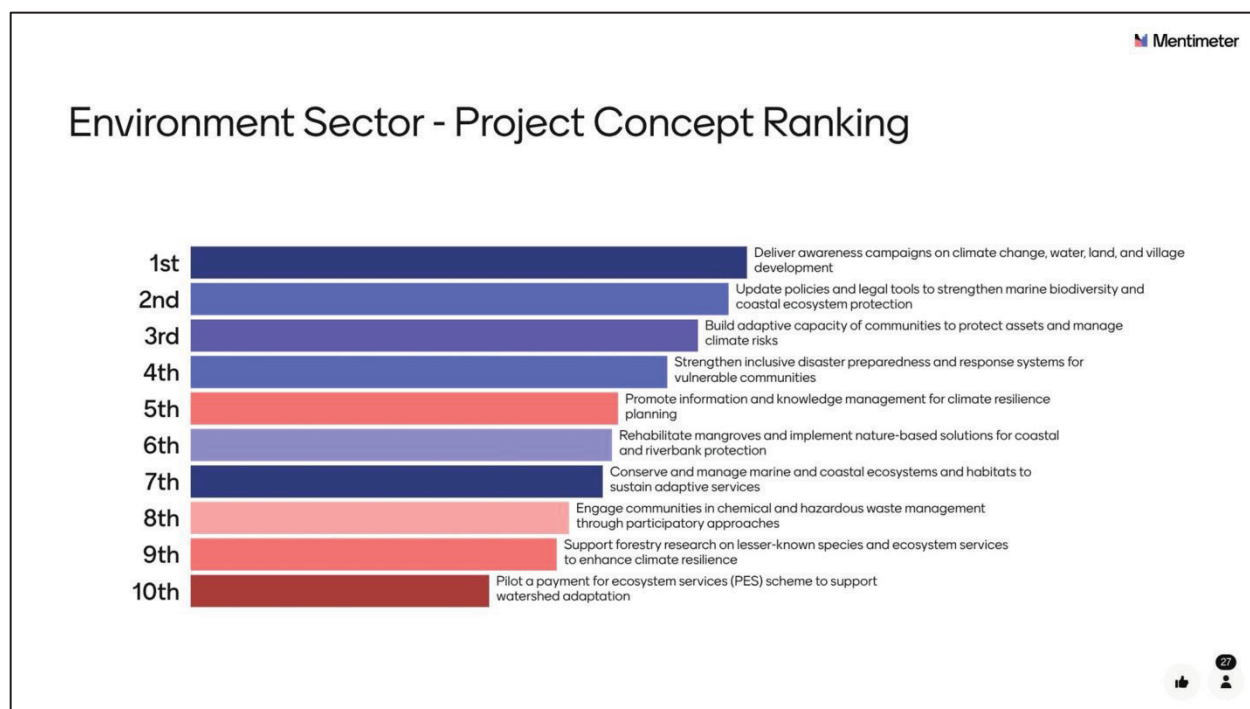
7.3 Environment Sector

Samoa's environment sector safeguards key natural assets (e.g., catchments, reefs, mangroves, biodiversity) that buffer communities from cyclones, storm surge and riverine flooding. The CRVA findings confirm that these ecosystems are increasingly stressed by sea-level rise, coral bleaching, invasive species, and land-based pollution, putting both livelihoods and the tourism economy at risk. During the NAP validation workshop, two project ideas emerged as clear consensus priorities:

1. *Deliver awareness campaigns on climate change, water, land and village development*: nationwide, multi-platform outreach (e.g., radio, schools, social media, village meetings) to build public understanding of climate hazards, ecosystem stewardship and disaster preparedness responsibilities.
2. *Update policies and legal tools to strengthen marine biodiversity and coastal ecosystem protection*: modernizing legislation and regulations (e.g., coastal setback rules, mangrove protection, sand mining controls) to support operationalization of the *Ocean Strategy* and the *National Biodiversity Strategy and Action Plan*.

These priorities ranked highest amongst the presented environment short-list list and align with the *Environment Sector Plan 2023-2027* and *Climate Change Policy 2020-2030*. By coupling people-centered awareness with institutional reform, stakeholders expressed that an informed public and a robust legal framework are equitable and cost-effective actions for protecting Samoa's natural capital against accelerating climate risks. These two flagship initiatives will therefore anchor the environment component of the NAP's prioritized actions, to be guided by future detailed design, costing, and resource mobilization efforts in the future.

Figure 19: Environment Sector - Project Concept Ranking



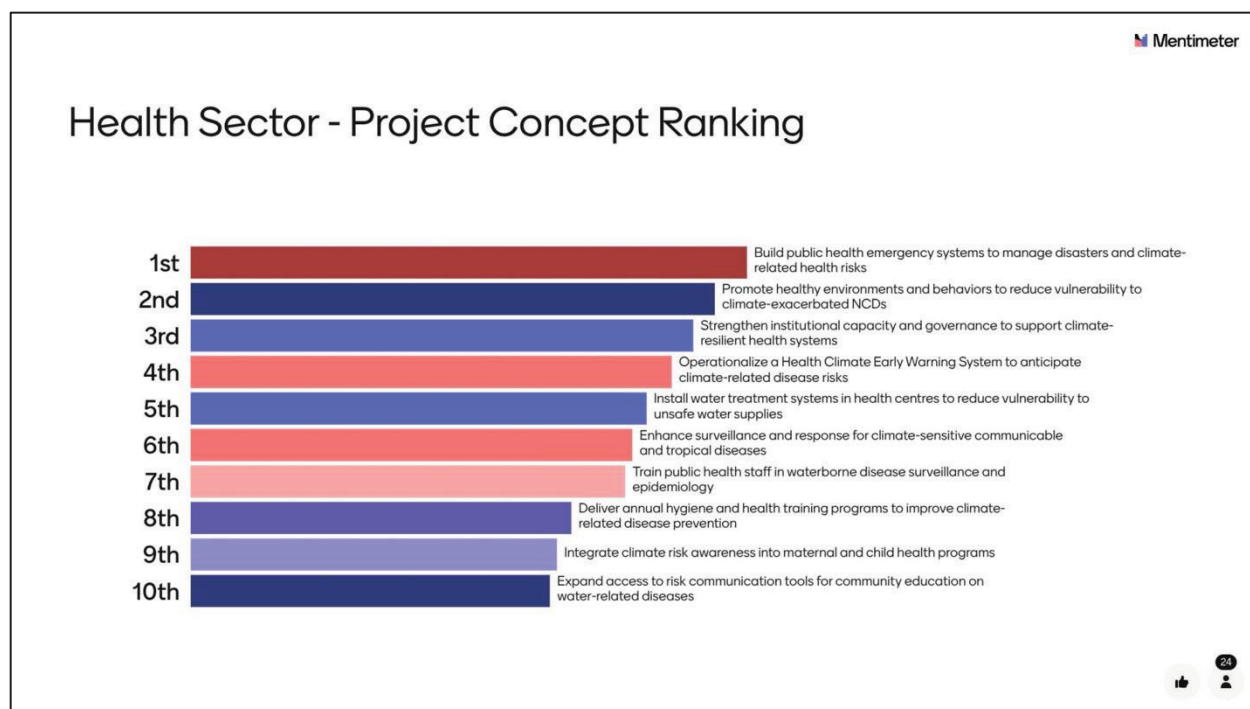
7.4 Health Sector

Samoa's health system already contends with rising outbreaks of water and vector-borne diseases, disaster-related injuries, and one of the region's heaviest burdens of NCDs. Climate projections point to more intense cyclones, flooding, and heat, all of which threaten to overwhelm public health services and worsen food and water security. Of the four sectors that provided additional feedback post-validation workshop, only the health sector resulted in changes to the rankings presented within Section 3. Following review of the validation workshop results, the Ministry of Health confirmed two top priorities:

1. *Enhance surveillance and response for climate-sensitive communicable and tropical diseases:* Build out event-based and indicator-based surveillance, integrate climate-informed early warning with laboratory confirmation, strengthen cross-border and vector-control operations, and enable rapid field investigation and community response for priority syndromes (e.g., arboviral and water-borne diseases).
2. *Build public health emergency systems to manage disasters and climate-related health risks (ranked 1st in the validation workshop results):* strengthen surveillance, emergency operations, and surge capacity so clinics and hospitals can respond rapidly to cyclones, floods and heatwaves.

These priorities ranked highest amongst the presented health short-list and reinforce the *Climate Adaptation Strategy for Health (CASH)* and *Health Sector Plan 2020-2030*. These actions position the health sector to address both acute shocks and the infectious-disease risks that are sensitive to climate variability and change. Both two flagship initiatives will therefore anchor the health component of the NAP's prioritized actions, to be guided by future detailed design, costing, and resource mobilization efforts in the future.

Figure 20: Health Sector - Project Concept Ranking



7.5 Tourism Sector

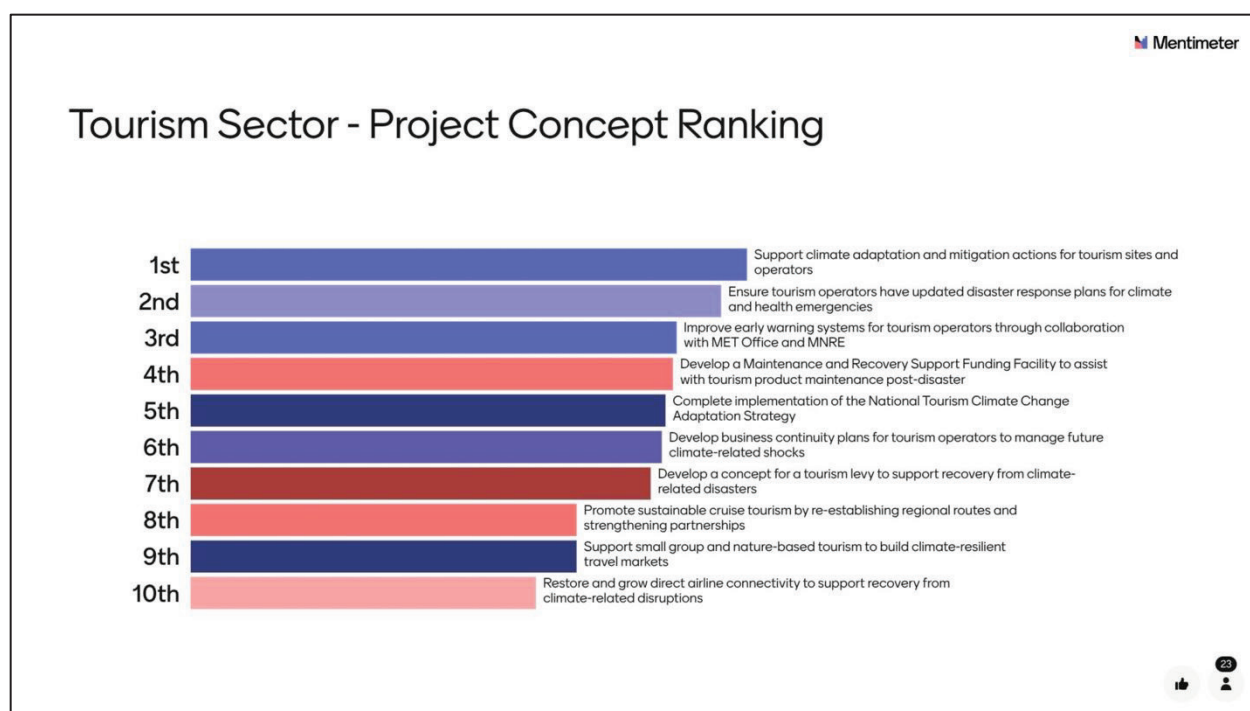
Tourism contributes approximately 25% of Samoa's GDP and 15% of the workforce¹²⁸, yet most accommodation and attractions are located on low-lying coasts that are highly exposed to cyclones, storm surge, coastal erosion and sea-level rise. Recent shocks (e.g., Cyclone Evan, COVID-19) have shown how quickly visitor numbers and local incomes can collapse when climate exacerbated disasters strike. During the NAP validation workshop, two project ideas emerged as clear consensus priorities:

1. *Support climate adaptation and mitigation actions for tourism sites and operators:* technical assistance and co-financing for resorts, beach fale, and tour operators to climate proof buildings, install renewable energy, protect beaches and reefs, and adopt low-carbon operations.
2. *Ensure tourism operators have updated disaster response plans for climate and health emergencies:* mandatory, regularly tested plans that cover evacuation, business continuity and rapid recovery for cyclones, floods, pandemics, and other hazards.

These priorities ranked highest amongst the presented tourism short-list and advance the objectives of the *Tourism Sector Plan 2022-2027* to mainstream risk management across the sector and strengthen operator preparedness. By pairing on-the-ground resilience investments with operator preparedness, stakeholders expressed that protecting assets and ensuring business continuity are likely to keep Samoa competitive and communities employed as climate risks grow. These two flagship initiatives will therefore anchor the tourism component of the NAP's prioritized actions, to be guided by future detailed design, costing, and resource mobilization efforts in the future.

Figure 21: Tourism Sector - Project Concept Ranking

¹²⁸ Samoa Tourism Sector Plan 2022-2027.



7.6 Water, Sanitation and Hygiene (WASH) Sector

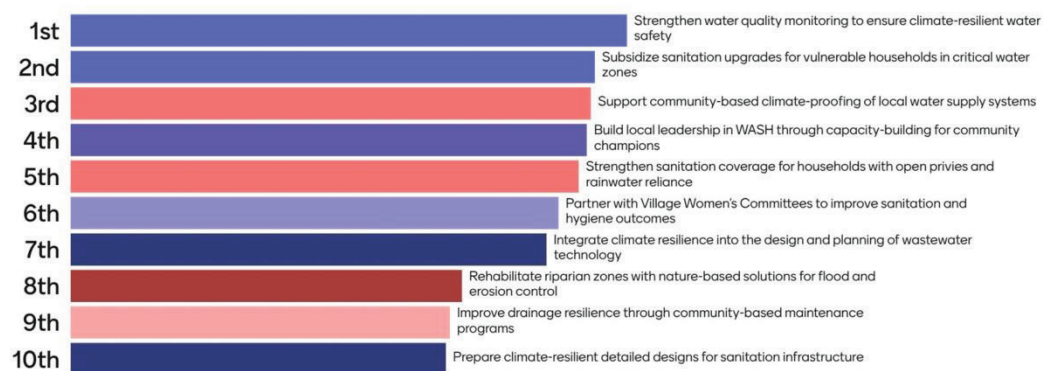
Samoa's WASH systems sit at the very heart of public health and sustainable development, yet the CRVA highlights that they are already strained by climate-driven shocks. More intense rainfall, prolonged droughts and coastal flooding are disrupting surface and groundwater supplies, degrading catchments, and triggering contamination of drinking water sources when poorly constructed septic tanks overflow during storms. These risks disproportionately impact low income and rural households that lack resilient infrastructure. During the NAP validation workshop, two project ideas emerged as clear consensus priorities:

1. *Strengthen water-quality monitoring to ensure climate-resilient water safety:* upgrading telemetry, laboratory capacity, and real-time data sharing so that MNRE, Samoa Water Authority (SWA), and village water schemes can detect contamination early and manage drought or flood-related risks more effectively.
2. *Subsidize sanitation upgrades for vulnerable households in critical water zones:* providing targeted financial and technical assistance to replace open privies or failing septic systems with climate-resilient designs, thereby reducing groundwater pollution and disease outbreaks.

These priorities echo national policy commitments within the *Pathway for the Development of Samoa* and the *Water, Sanitation, and Hygiene Sector Plan 2020-2025*. By pairing robust water quality surveillance with pro-poor sanitation support, stakeholders expressed that safeguarding human health is the most urgent and equitable lever for climate resilience in the WASH sector. These two flagship initiatives will therefore anchor the WASH component of the NAP's prioritized actions, to be guided by future detailed design, costing, and resource mobilization efforts in the future.

Figure 22: WASH Sector - Project Concept Ranking

WASH Sector - Project Concept Ranking



8 Strategic Approaches and Synergies

This section will attempt to identify strategic approaches and synergies to support implementation, noting that an investment and implementation plan is to be developed. This plan will undertake detailed costings of priority actions and will inform an implementation schedule and results framework that promotes inclusive and equitable adaptation interventions with a focus on the most climate vulnerable peoples and places.

Samoa already has strong adaptation public policy frameworks, including the *National Climate Change Policy 2020-2030*, the *Pathway for the Development of Samoa 2021-2026*, and the network of *Community Integrated Management Plans*. National stakeholders and key informants therefore agreed that the NAP should act as a bridge, embedding each priority action inside the national and local systems that already steer public investment, adaptation interventions, and community-level development.

Additionally, implementation of the twelve priority actions (two for each priority sector) should be embedded within the four cross-cutting, system-level enablers identified (e.g., governance, coordination and mainstreaming, human resources and institutional capacity, finance and risk transfer instruments, and GEDSI). These enablers provide strategic lenses that government agencies, SOEs, civil society, private sector, and development partners can embody when supporting the design of the investment and implementation plan that follows this NAP.

Table 43: Summary of strategic approach by cross-cutting enabler

Cross-cutting enabler	Strategic focus	Potential leads and tools	Alignment to priority actions	Questions for implementation
Governance, coordination and mainstreaming	- Embed each priority action in sector plan reviews, CIM Plans, and the Public Investment Program. - Oversee progress through a Cabinet endorsed steering committee / governance mechanism.	- Leads: MNRE and MoF - Tools: policy alignment matrix, annual NAP stock-take, common reporting template.	- All twelve priority actions - Each requires clear ownership in existing plans so budget lines and implementation mandates are unambiguous.	- Which agencies will evaluate implementation progress? - How will progress be reported to government and partners?
Human resources and institutional capacity	- Close skills gaps through training mechanisms / facilities that provide standard designs, safeguard checklists, GEDSI guidelines, and joint training / upskilling. - Undertake cross-agency exercises to build a culture of collaboration.	- Leads: MNRE and PSC, supported by external TA. - Tools: E-learning modules (e.g., GCF / PCCC UNITAR) and recurring simulations.	- Agri-1, Energy-1, Health-1/2, Tourism-2, WASH-1, and Env-1. - All depends on new or enhanced technical skills, SOPs, or training / outreach.	- What is the recurrent budget for the training / upskilling? - How are participants (e.g., community groups, private sector) engaged?
Finance and risk transfer instruments	Bundle actions into multi-year finance windows (e.g., community resilience, climate-smart	Leads: MoF (Aid Coordination) and the Development	Community resilience window: Agri-1/2, Health-1/2, WASH-1/2	Which AEs will lead / fund development of CNs and FPs?

	infrastructure, ecosystem stewardship). • Explore risk transfer (insurance) and PPP models. • Mainstream climate tagging in the PFM system.	Bank of Samoa. • Tools: finance window prospectuses, parametric and/or catastrophic policy coverage; climate change trust fund concept.	• Climate-smart infrastructure window: Energy-1/2, Health-1, Tourism-1/2, WASH-1 • Ecosystem stewardship / NbS window: Env-1/2, Agri-2, Tourism-1	• Could a national Climate Change Trust Fund pool donor and domestic resources?
GEDSI	• Application of the <i>National Climate Change and Gender Strategy</i> to every priority action, including collection of sex, age, and disability disaggregated data. • Co-design of interventions with vulnerable groups. • Set benefit sharing targets and indicators.	• Leads: MWCSO and MNRE • Tools: GEDSI screening as part of training / upskilling, participatory design workshops, inclusive M&E indicators.	• Agri-1, Health-1/2, Tourism-2, WASH-2, Env-1 • All have explicit equity goals, but all actions should be GEDSI-audited.	• How will community-level data feed into national systems and data collection? • What minimum share of climate finance reaches vulnerable groups (e.g., women-led initiatives)?

8.1 Strategic Clusters

The twelve priority actions can be grouped into four multi-sector clusters, enabling the sharing of data systems, physical assets, financing vehicles and community platforms. The strategic cluster framing presents priority actions as programmatic approaches rather than isolated project. By grouping investments, sharing platforms, and bundling human resources around these clusters, the forthcoming investment and implementation plan can support actions that are mutually reinforcing and provide greater resilience dividends.

1. Nature-based coastal and watershed protection (Env-2, Tourism-1, Agri-2): links upstream regenerative farming with reef safe tourism investments and tighter coastal protection regulations, allowing a single mangrove buffer to shield households, sustain fisheries, and keep beachfront resorts open after storms.
2. Safe water, safe people (WASH-1, Health-2, Tourism-2): integrates water quality monitoring with enhanced surveillance and response for climate-sensitive communicable and tropical disease, turning one data dashboard into simultaneous public health, community safety and business continuity gains.
3. Decentralized clean energy and essential services (Energy-2, Agri-1, WASH-1): promotes farmer upskilling to accelerate rooftop solar incentives that also power rural water pumping, helping lower diesel imports while improving irrigation and drinking water reliability.
4. Community-based awareness and preparedness (Env-1, Health-1, Tourism-2): aligns national risk communication, school and community preparedness, public health emergency systems, and tourism business continuity planning.

8.1.1 Nature-based coastal and watershed protection

This first cluster focuses on strengthening national coastal and marine regulations (*Env-2*) to tighten setback requirements, curb mangrove clearing, and extend reef-protection laws. Those new rules would give tourism operators more confidence to retrofit beach facilities with reef-safe moorings, elevated walkways and permeable landscaping (*Tourism-1*), while upstream farmers adopt agro-forestry buffers and regenerative practices that slash sediment and nutrient runoff (*Agri-2*). Suggested geographic focus includes a corridor that spans north-west Upolu (due to high visitor density, eroding shorelines and sediment-laden rivers converge there) and Savai'i resort villages. Ideally there would be a shared usage of coastal GIS data, LiDAR shoreline data, and a single reef-and-mangrove monitoring network supported with drone surveys. Potential financing could come from blue/green bonds or debt-for-nature swaps.

8.1.2 Safe water, safe people

This second cluster promotes installing remote sensors on village water supplies and Apia's grid (*WASH-1*), support for real-time water quality data to inform surveillance for climate-sensitive communicable and tropical diseases. (*Health-2*). For example, when turbidity or E. coli spikes, or when rainfall/river-level thresholds are exceeded, automated alerts would reach government agencies, health facilities, and tourism operators. These alerts would support rapid risk communication, vector control, and implementation of gender inclusive emergency plans (*Tourism-2*). Geographic focus would be on the flood prone Vaisigano and Fuluasou basins, where contaminated runoff and population density raise outbreak risks. A single monitoring platform could serve health authorities, SWA, and STA. while a new tourism safety certification database tracks compliance. Potential financing could be layered with parametric insurance instruments.

8.1.3 Decentralized clean energy and essential services

This third cluster suggests a national incentive scheme to reduce up-front costs for rooftop solar and battery kits (*Energy-2*). Agriculture extension officers will receive training and upskilling (*Agri-1*) to be empowered to support renewable energy investments in rural areas, helping farmers size systems, access credit and maintain assets. Similar supplier contracts will power solar-pump retrofits in rural water schemes (*WASH-1*), helping to reduce diesel imports and improving service reliability for off-grid villages in Upolu's and Savai'i's highlands. Shared assets could include solar sizing toolkits, a roster of accredited installers and a blended loan window at the Development Bank of Samoa that both farmers and community water committees can access. Potential financing could come from concessional loans from MDBs (e.g., World Bank, Asian Development Bank).

8.1.4 Community-based awareness and preparedness

This fourth cluster promotes a nationwide multimedia risk-communication and preparedness programme (*Env-1*) that integrates MNRE climate messaging with MoH public-health emergency systems (*Health-1*) and aligns tourism business continuity planning (*Tourism-2*). Support is given to use of clear hazard messages with simple trigger levels, assignment of roles and procedures in advance, and delivery of consistent messaging across radio, SMS and social media. Tourism operators are encouraged to update their disaster plans and integrate the same unified messaging into guest briefings and staff exercises. Schools and villages conduct annual preparedness activities using inclusive guidance in Samoan and English. Geographic focus would be on three coastal districts (one urban, two rural) and include a shared brand (e.g., branding, logo, social media hashtags). Activities would be supplemented by a harmonized health-promotion curriculum and an inclusive disaster plan checklist used by schools, community councils, and tourism operators. Potential financing could come from corporate sponsorships and media partnerships (e.g., telecom credits, broadcast time, media houses, tourism and hospitality operators).

The table below outlines a summary of the proposed strategic clusters and highlights potential synergies gained by grouping activities. By identifying these strategic clusters, the forthcoming investment and implementation plan can design joint budgets, shared indicators, and integrated work plans.

Table 44: Summary of strategic clusters

Strategic cluster	Priority actions	Focus area	Pooled resources	Leads / key partners
Nature-based coastal and watershed protection	• Env-2 • Tourism-1 • Agri-2	Low-lying coastal corridor (NW Upolu to Apia urban area) and Savai'i tourism villages. Upstream catchments feeding sediment-laden rivers.	• National Coastal Zone Management GIS • LiDAR shoreline data • Reef and mangrove monitoring network	MNRE, STA, MAF
Safe water, safe people	• WASH-1 • Health-2 • Tourism-2	Vaisigano and Fuluasou flood basins, and the Apia urban water grid. Tourist belts using communal supplies.	• Real-time monitoring dashboard • MoH disease surveillance platform • Tourism Safety Certification database	SWA, MoH, STA, NDMO
Decentralize clean energy and essential services	• Energy-2 • Agri-1 • WASH-1	Off-grid inland villages (Upolu and Savai'i highlands) where diesel costs are highest.	• EPC toolkit for rooftop solar PV sizing • MAF extension e-learning platform • Standard solar pump retrofit design	EPC, MAF, SWA, private service providers, DBS
Community-based awareness and preparedness	• Env-1 • Health-1 • Tourism-2	National roll-out via schools, radio, and social media. emphasis on coastal and hazard-prone districts, including Apia urban (high-density), Safata (rural Upolu), and Gagaifomauga (rural Savai'i).	• National climate awareness campaign toolkit • Public health emergency communication package and templates • Inclusive disaster plan checklist	MWCSD, MoH, MNRE, CSOs and youth networks

9 Integration of NAP with Sectoral Plans

9.1 Integration of Climate Change Adaptation into Samoa's National Development Planning

Samoa's National Adaptation Plan (NAP) is anchored in and builds upon the country's overarching national development and climate change policy frameworks. The NAP is designed as a central mechanism for adaptation planning to ensure systematic integration of adaptation actions into national and sectoral planning processes and contributes to aligning development efforts to be climate change resilient and responsive to Samoa's climate vulnerabilities.

The NAP strongly links to the Pathway for the Development of Samoa (PDS) 2021/22–2025/26, which serves as Samoa's overarching medium-term development strategy. The PDS outlines eight Key Strategic Outcomes (KSOs), of which KSO 4: Secured Environment and Climate Change provide the principal entry point for mainstreaming climate adaptation into national and sectoral planning processes. Climate change adaptation in Samoa is a cross-cutting priority within the PDS, and the NAP provides a mechanism for operationalizing this objective related to KSO 4 through identifying priority climate risks and related actions, clarifying institutional responsibilities, and supporting resource mobilization aligned with PDS implementation.

Samoa's NAP is also grounded in the priorities of the Samoa National Climate Change Policy (NCCP) 2020-2030 which embodies the country's national vision on climate action. Aligned with NCCP, the NAP will support key objectives such as mainstreaming climate change into national planning, strengthening governance and institutional arrangements, facilitating increased access to climate finance, improving data collection and knowledge management systems and promoting cross-sectoral coordination, particularly through the 14 sector plans for Samoa. The implementation of Samoa's NAP will also contribute to the delivery of the objectives under the NCCP by establishing a structured process for integrating adaptation into sectoral strategies, budget frameworks, and adaptation investment pipelines. It also serves to enable the cohesive translation of the NCCP priorities into actionable and impact-oriented outcomes for the people of Samoa.

The NAP further supports the implementation of Samoa's Nationally Determined Contribution (2021) which identifies adaptation targets in sectors such as marine and AFOLU. These targets include increasing forest cover, expanding agroforestry programs and expanding mangrove ecosystems. Aligned with supporting the implementation for this, the NAP provides the institutional and programming framework through which Samoa's NDC targets can be achieved through mainstreaming, financing, and monitoring of adaptation actions.

Samoa's NAP is cross-cutting in nature and promotes coherent alignment with national development priorities through both vertical and horizontal integration mechanisms. Vertical integration is achieved through its grounding in local-level planning instruments through the Community Integrated Management Plans which form a core component of Samoa's NAP process. Similarly, through the 14 Sectoral Plans, horizontal integration for the NAP is achieved in ensuring that line ministries and related adaptation priorities are well integrated and reflected in Samoa's NAP. The sectoral plans form a foundational basis of sector specific planning which also includes key adaptation considerations in line with the PDS.

9.2 Alignment of Sector Plans with NAP Priorities

The 14 Sector Plans represent the operational pillars of Samoa's national development and are rooted in the PDS. Samoa's NAP prioritizes the integration of climate adaptation measures within national sector strategies to ensure coherence across development planning, resource allocation, and implementation frameworks. Sectoral integration is central to strengthening Samoa's whole-of-government approach and to accessing climate finance under multilateral and bilateral channels, which increasingly require sector-specific programming aligned with national adaptation priorities.

Agriculture and Fisheries Sector

The Agriculture and Fisheries Sector Plan 2022/23-2026/27 recognizes that these are among the most climate-sensitive sectors and therefore places key focus on the following outcomes. Strategic outcomes aimed at enhancing resilient and sustainable food, agriculture, fisheries, and aquaculture systems; improving food and nutritional security; fostering rural transformation; strengthening the enabling environment; and increasing private sector contributions. In the agriculture sector, Samoa's NAP aligns directly and builds these five strategic objectives by promoting climate smart agriculture, agroforestry, sustainable land management and nature-based solutions to reduce vulnerability to droughts, heavy rainfall, flooding, and soil degradation. Similarly, for the fisheries sector which is one of the primary income generating sectors of Samoa, the NAP supports marine ecosystem restoration, improving community led management practices, and enhancing resource mobilization and management of the fisheries sector. These actions also directly contribute to the achievement of Samoa's Second NDC targets.

Environment Sector

The National Environment Sector Plan (NESP) 2022/2023–2026/2027 sets the strategic direction for achieving a “clean and sustainable environment for a green and resilient Samoa,” informed by the 2023 State of the Environment (SOE) assessment and aligned with the PDS. The NAP reinforces the NESP's four Long-Term Outcomes (LTO), particularly in sustainable environmental management (LTO 1), increased sustainability and resilience of built environments (LTO 2), and enhancing climate resilience (LTO 3). The successful implementation of the NAP will be aligned closely to the progress of the NESP's 16 End of Sector Plan Outcomes which encompass the overall work program of the environment sector in Samoa. Priority adaption actions such as biodiversity conservation, sustainable land use practices, ecosystem-based adaptation, and climate smart practices will enhance the implementation of adaptation priorities in Samoa. Importantly, the NAP correlates to the NESP highlighting the importance of accessing and implementing climate finance and improving cross sectoral coordination through existing mechanisms such as the Samoa Environment Sector Coordination Division within MNRE.

Water and Sanitation Sector

The Water, Sanitation, and Hygiene (WASH) Sector Plan 2020/21–2024/25 focuses on ensuring equitable access to safe and sustainable water and sanitation services, grounded in principles of integrated water resource management and climate resilience. As a key sector of Samoa's NAP, the NAP ensures alignment with the sector plan by promoting climate resilient water infrastructure, improving flood management in urban centers, and addressing prolonged instances of slow onset events such as droughts. The sector plan emphasizes the vital need for focus on inclusion and equity through support for vulnerable local populations related to WASH activities. A more robust and collaborative mechanism is needed for appropriate implementation of the NAP in line with the WASH sector plan by supporting sanitation access and hygiene promotion in vulnerable communities, particularly in the context of extreme weather events and disaster recovery. These synergies contribute to broader resilience objectives under the PDS and enhance the sector's readiness to leverage climate finance for infrastructure upgrades and service delivery improvements.

Energy Sector

Samoa's Energy Sector Plan 2023/24-2027/28 aims to “accelerate sustainable energy transitions” but this will not be possible without increasing the adaptive capacity of public infrastructure Samoa which is susceptible to extreme weather events. The core strategic objectives of the sector plan are solidified in mitigation and include strategies to expand renewable energy, improve infrastructure reliability, strengthen petroleum management, and promote energy efficiency across households, transport, and infrastructure. The NAP promotes the development of climate-resilient energy infrastructure, particularly for rural and remote areas, and aligns national goals to reduce reliance on imported fossil fuels through investments in renewable energy. Recent nationwide

power outages caused by damaged power lines during extreme weather events underscore the urgent need for adaptation measures to strengthen the reliability of electricity services. The NAP complements the sector plan strategies by integrating climate risk into infrastructure design, encouraging decentralized energy solutions, and enhancing system redundancy to reduce service disruptions. Ultimately, the NAP strengthens the energy sector's contribution to mitigation co-benefits while building long-term adaptive capacity to secure Samoa's energy future against escalating climate risks.

Health Sector

The Health Sector Plan 2019/20–2029/30 prioritizes equitable access to quality health services, strengthened health systems, and resilience to emerging public health threats. The NAP aligns with these priorities by addressing the increasing health risks posed by climate change, including the rising incidence of vector-borne diseases, heat stress, food and water insecurity, and the health impacts of extreme weather events. Measures such as upgrading climate resilient health infrastructure, strengthening sector coordination with climate change policy frameworks, and integrating early warning systems increase the adaptive capacity of the health sector and improve its efficiency in protecting vulnerable populations. The implementation of the NAP, including an update of the CIM Plans would further support cross-sectoral coordination between the Ministry of Health, DRM agencies, community groups to enhance response to climate induced health emergencies in Samoa.

Tourism Sector

The Samoa Tourism Sector Plan (STSP) 2022/2023–2026/2027 aims to position Samoa as a more sustainable and resilient tourism destination post the COVID-19 pandemic. The tourism industry in Samoa is largely impacted by extreme weather events, sea level rise, coastal degradation, and impact on marine life. The NAP is aligned with the sector plan as it places emphasis on the importance of building climate resilient infrastructure and boosting Samoa's adaptation to climate change. Adaptation measures such as risk informed financing in tourism, improved standards for climate resilient buildings, restoration and protection of marine and coastal ecosystems will support the growing tourism industry in Samoa. The NAP also promotes the development of eco-tourism as a nature-based adaptation strategy that diversifies tourism offerings while conserving biodiversity and strengthening community participation. These actions contribute to the sector's strategic objectives, including improving infrastructure use and maintenance, enhancing product development, and strengthening emergency preparedness and response to natural disasters.

9.3 Advancing Policy Coherence for Adaptation and Resilience Priorities

Samoa's NAP presents a strategic opportunity to further strengthen the policy coherence between climate change adaptation and Samoa's commitments under global frameworks such as the Paris Agreement, 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction, and the Convention on Biological Diversity. The NAP also supports the implementation of adaptation actions which in turn contribute to the targets of Samoa's Second NDC in key sectors such as agriculture, forestry, and marine ecosystems, while also enhancing institutional readiness to access and manage climate finance.

To reinforce vertical and horizontal coherence, the NAP promotes alignment with existing national instruments, particularly the Community Integrated Management Plans, which are central to local-level adaptation planning. A systematic review and update of the CIM Plans is strongly recommended to ensure they reflect current climate risk profiles, ecosystem conditions, and community needs. Updating these plans will improve integration between national priorities and community-led action, enabling more responsive and inclusive adaptation across Samoa's districts. The NAP also complements the development and operationalization of Samoa's Loss and Damage Policy Framework, which addresses residual climate impacts beyond the scope of adaptation. Strengthening coordination between this framework and NAP implementation will support a more holistic

national response to climate risks and enhance Samoa's readiness to engage with emerging global funding instruments, including those for loss and damage.

By promoting coherence across multiple policy agendas, institutions, and planning scales, the NAP serves as a central coordination tool for advancing climate-resilient development in Samoa.

10 Resource Mobilization and NAP Financing Strategy

Resource mobilization for adaptation can be defined as the streamlined capacity of financial and non- financial resources channeled by the public, private and non- profit sector towards vulnerable communities that suffer from the direct and indirect repercussions of climate change in attempts of lowering the risks and irreversible damage caused by the changes in the climate. A comprehensive understanding of the financing needs still has to be undertaken to meet Samoa's ambitions. In addition, climate adaptation related expenditures are currently not tracked in Samoa's national budget, so there are no estimates of how much of the national budget goes towards funding climate adaptation related activities.

Samoa is highly dependent on external sources of finance and has been successful in accessing a range of bilateral and multilateral sources of finance. Only 0.1% of the country's public debt is borrowed domestically from the Unit Trust of Samoa, a public financial institution that acts as an investment vehicle for local and overseas Samoans. External public debt is divided roughly evenly across multilateral and bilateral creditors. The largest creditors are the EXIM Bank of the People's Republic of China (39.7%), the International Development Association (30.4%) and the Asian Development Bank (20.1%).¹²⁹

Figure 19: Public debt breakdown as of September 2022, Ministry of Finance

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

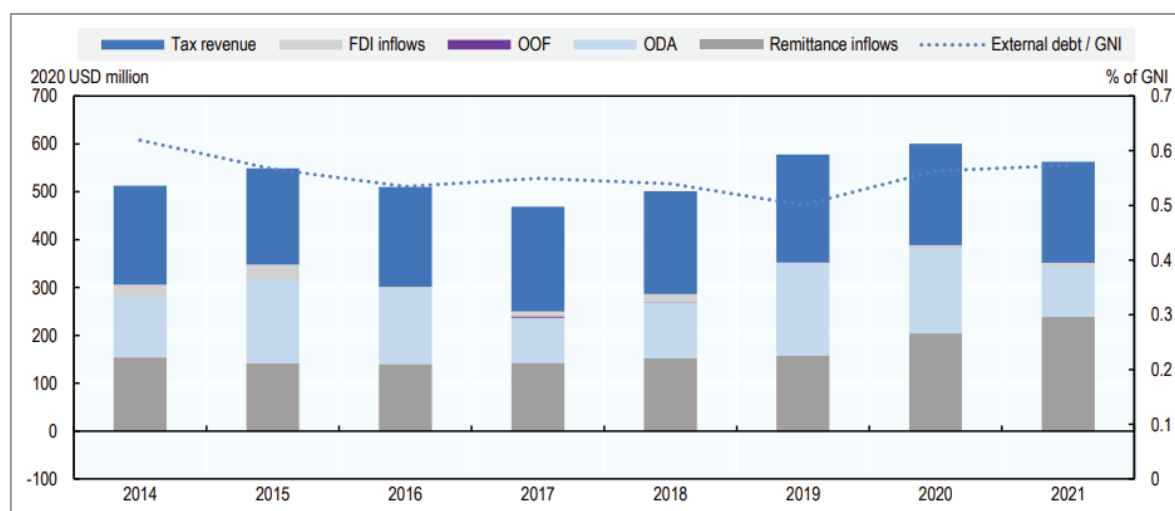
The financing landscape reflects the challenges of the economies of SIDS, such as lack of diversification and limited prospects for investments and international trade. Samoa relies heavily on remittances and official development assistance (ODI), which in 2021, accounted for 28% and 12% of its finance mix, respectively.¹³⁰ The country's public debt is a relatively moderate level in comparison to peer SIDS countries, but its high

¹²⁹ https://www.oecd.org/en/publications/towards-a-blue-recovery-in-samoa_bd8d4112-en.html

¹³⁰ https://www.oecd.org/en/publications/towards-a-blue-recovery-in-samoa_bd8d4112-en.html

exposure to natural disasters and external shocks leaves it at high risk of external and overall debt distress. While structural limitations constrain the government's ability to raise additional finance for the NAP, ODA and remittances could be better channeled into investments for adaptation activities. New tax instruments and financing mechanisms like green bonds and parametric insurance could also be introduced to finance adaptation activities.

Figure 20: Samoa's financing landscape is highly dependent on remittances and official development assistance



Additionally, the country is positioning itself to access the Green Climate Fund (GCF) as one of the key multilateral public funds dedicated to climate finance. Samoa has received support from GCF's readiness and preparatory programme in 2024, in particular to strengthen technical capacity of relevant stakeholders, generate evidence and data, put in place necessary policies and institutional arrangements that will facilitate the co-design, with communities, truly transformative climate solutions to effectively cope with soaring climate change challenges.¹³¹ Additional support from various development partners is also assisting Samoa in developing a pipeline of project concepts and capacity of the stakeholders to develop bankable project proposals, as well as raise awareness amongst private sector about climate- friendly investment opportunities in key sectors.

Furthermore, the Third National Communication (TNC) identifies Samoa's adaptation financing needs as follows for the period 2022- 2026:

Figure 21: Samoa's Adaptation Financing¹³²

¹³¹ <https://www.greenclimate.fund/document/co-designing-transformative-solutions-communities-samoa>

¹³² Source: Draft Samoa Third National Communication

	Total estimated costs over 2022-2026 (millions of USD)	Annualized (percent of GDP)
Identified Adaptation Projects	426	11.0
Transportation	231	6.0
Flood mitigation	79	2.0
Water and Sanitation	61	1.6
Environment	24	0.6
Agriculture and Fisheries	22	0.6
Early Warning Systems	10	0.3

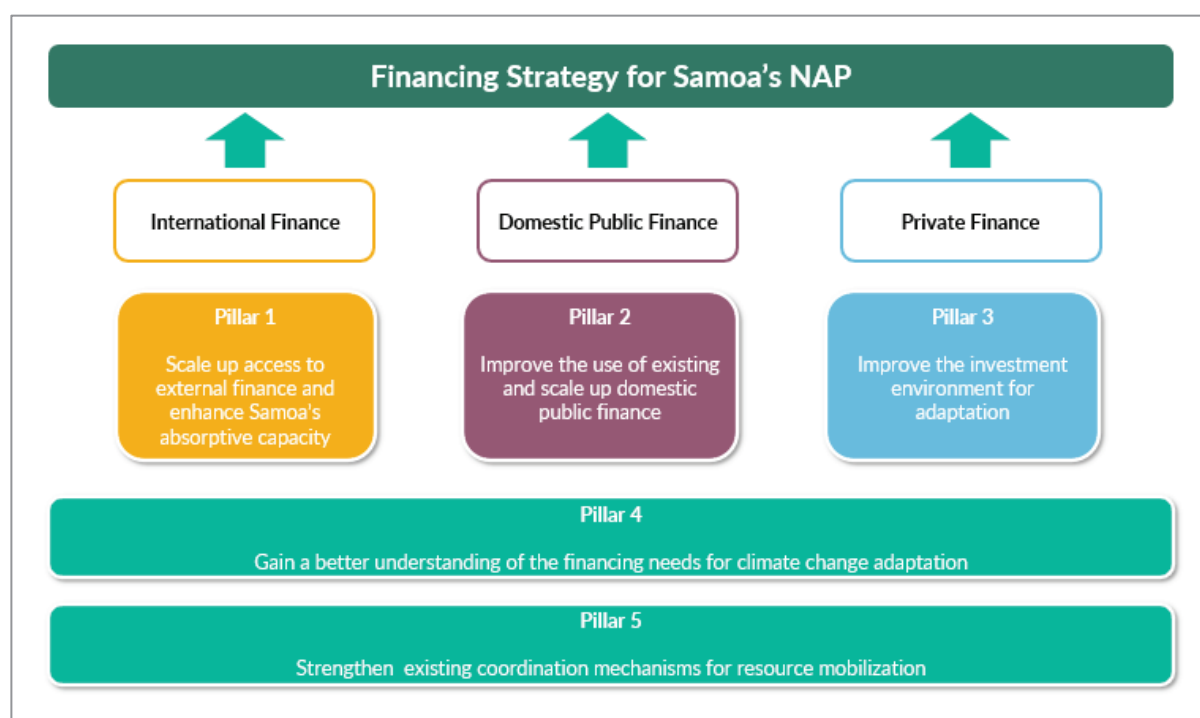
10.1 Opportunities to Adaptation Financing in Samoa

Attracting finance for adaptation must be considered within the wider development challenges Samoa faces. In particular, improving the investment risk profile of the country should be considered as a priority to improve the risk reward profile and attract private foreign direct investment into adaptation. To access adequate funding to finance the implementation of the NAP, Samoa will evaluate the financial needs for climate change adaptation and continue to develop and leverage existing financing options, including existing national sources of funding while fully exploiting emerging international financing opportunities from external sources (including bilateral and multilateral). Samoa will also respond to challenges created by its current investment risk profile to improve the risk reward balance whilst increasing the attractiveness of the country to the international finance markets and private investors.

10.2 Proposed NAP Financing Strategies

Based on a review of Samoa's existing access and untapped opportunities to finance adaptation, the financing strategy for the NAP is structured using five pillars in the figure below:

Figure 22: The Pillars for a NAP Financing Strategy



To improve its absorptive capacity, Samoa will develop the human and technical capacity of state and non-state actors to develop, manage and implement a pipeline of investment-grade adaptation projects. Development and submission of funding proposals require in-depth understanding of specific requirements and access modalities of individual donors and funds.

In order to effectively implement the NAP and identified adaptation measures, Samoa will:

1. Develop an Investment Plan by identifying priority adaptation measures, undertaking a costing exercise and carrying out an assessment of suitable funding options for further engagement with key stakeholders.
2. Identify possible modalities of access to the most feasible funding options identified by engaging with relevant multilateral implementing entities and climate funds as well as bilateral development partners to submit funding applications.
3. Organize annual meetings with relevant multilateral and bilateral climate funds with a view to generating interest in developing a specific project and programme proposal for implementation of priority adaptation measures identified through the NAP with the most viable funding options.
4. Raise awareness and build capacity the capacity of national stakeholders to access, effectively plan and efficiently utilize international climate finance. Awareness-raising could include providing information on climate finance sources on the MNRE website and other relevant platforms.
5. Develop projects and programmes working closely with the national or multilateral implementing entities for priority adaptation measures with a view of attracting finance for their implementation.

10.3 Institutional Coordination for External and Domestic Finance

Proper allocation of external financing to NAP priorities requires effective in-country donor coordination mechanisms. For Samoa, MFAT in collaboration with MOF is taking the necessary measures to benefit from initiatives and programmes launched by donors and international financing institutions. However, more concerted efforts and arrangements should be developed to enhance the coordination of all climate related financing support to Samoa.

Samoa, through its CCGEF Division is working on establishing a NCCC which will oversee the implementation, coordination, monitoring and evaluation of national climate change policies and strategies. In addition to this, in order to scale up existing domestic public finance in the longer term, Samoa will explore the designing and using new economic and fiscal instruments to raise funds and reform incentive systems to change behaviors. For example, some tax exemptions are granted to investments in renewable energy and energy efficiency projects. This approach could also be used for climate adaptation purposes. Furthermore, the long-term assurance of long-term stability of the tax regime encourages investments in climate change initiatives. Using green and sustainability bonds is another option in Samoa, which requires setting clear regulatory framework.¹³³ Currently there is no information available on how adaptation related expenditure is integrated into the national budgetary process. A better understanding of existing trends in adaptation-related expenditures is required to complement efforts in terms of mainstreaming climate change into development planning. To identify entry points for integrating climate change considerations into the budgeting process, Samoa will undertake a public expenditure review.

A review of public expenditure will provide a useful tool to scale up existing resource allocation, leverage additional funding and assist in conducting future trend analysis. This will also allow Samoa to better understand whether expenditure is complementary with the NAP and how it relates to the designated role and function of different institutions responsible for managing the response to climate change. It will assess linkages between the NAP, the institutional structures through which policy is channeled and the resource allocation process whereby public funding is made available for the implementation of relevant policies, projects and programmes.

¹³³ <https://repository.unescap.org/server/api/core/bitstreams/9313445f-fbe0-43f1-8604-62c2f4ac5185/content>

By doing this, it will assist in identifying the best ways to link the NAP to the national budget, so that actions are fully prioritized and costed as well as potential barriers and challenges, such as general weakness in the public financial management and weakly defined institutional roles and remits that affect governance and limit the implementation of identified priorities. This could help pave a way of tagging or tracking adaptation related expenditures in the national budget. The review will include the following:

1. Budget planning processes, including how the budget allocations are formulated and approved as well as an assessment of whether climate adaptation considerations are integrated in decision making.
2. Expenditure categories and trends, including estimates of how much of the existing budget is spent on adaptation and resilience- building measures and overall trends in the levels of budget allocated to line ministries and other key government institutions.
3. Financing of the budget, considering trends and levels of domestic resources and external funds against expenditure categories. This will bring opportunities to reallocate, shift and optimize internal revenues for adaptation and resilience building, such as changes in relevant policies and laws.
4. Systems for tracking climate finance received. This will strengthen alignment with national priorities.

10.4 Mobilization of Private Investments

Globally, private sector engagement in climate change adaptation has been limited compared to its involvement in financing mitigation efforts – and Samoa is no exception. Most of the private sector interest and engagement seems to be in renewable energy projects for electricity generation for sale to the national grid. During the stakeholder consultations in Samoa’s NAP process, a key barrier that emerged include lack of an enabling environment, market conditions and changing regulations which increases the risk for the private sector. The private sector is, however, gaining increased awareness of the benefits in engaging in climate change adaptation and has demonstrated interest.

MNRE, through embedded support and partnerships with various development actors, is increasing its own capacity to engage in an effective way and raise awareness amongst private sector about climate investment opportunities. These initiatives aim to assist the private sector in understanding the challenges towards enhanced private capital involvement in climate related projects and develop innovative solutions to overcome investment barriers and develop investment- grade projects that can attract financiers. There is also growing interest from Samoa’s banking sector to support climate change initiatives. To take advantage of this, the government is supporting de-risk such investments through rebates and subsidies towards the private sector.

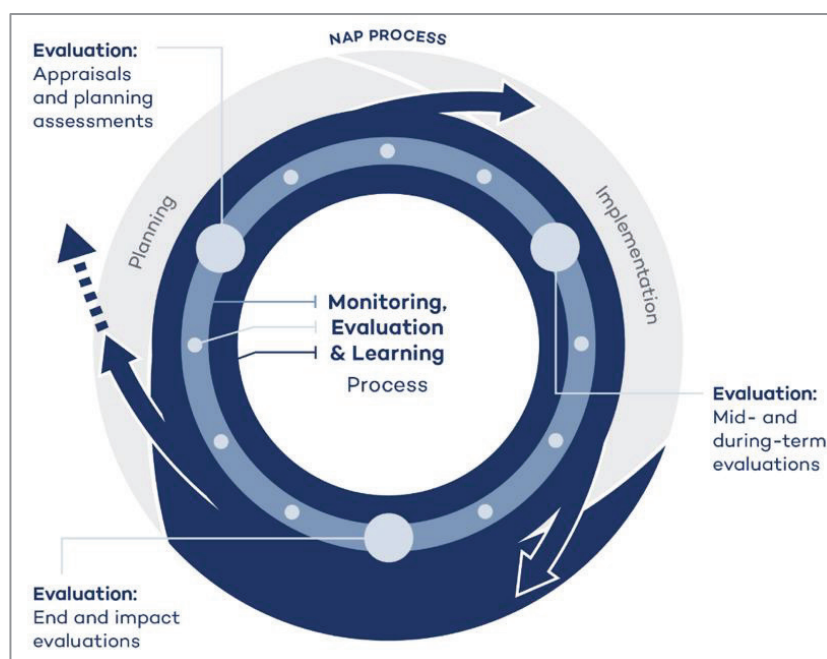
11 MEL Framework

To ensure the effective implementation of Samoa’s National Adaptation Plan, a comprehensive Monitoring, Evaluation, and Learning (MEL) system is essential. The overarching aim of MEL systems is to inform and improve policies and practices through data and evidence generated by the iterative processes of tracking, assessing, and learning throughout the NAP cycle.

As illustrated in Figure 21, an effective MEL system consists of three interconnected components that interact continuously with the NAP process. Monitoring tracks progress and ensures accountability through regular data collection. Evaluation, conducted periodically, assesses the relevance and effectiveness of adaptation efforts. Insights from both inform continuous learning, helping to refine planning, improve implementation, and respond to changing conditions.

Figure 30: MEL in NAP process¹³⁴

¹³⁴ <https://napglobalnetwork.org/2023/09/visualizing-mel-in-nap-processes/>



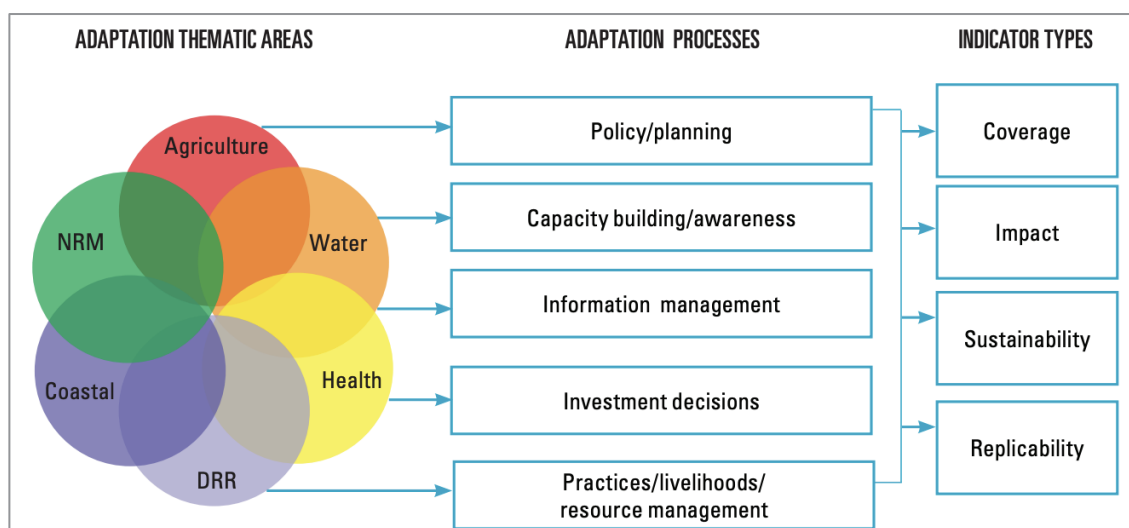
11.1 Adaptation MEL Framework

An effective MEL system should be robust, flexible, and contextually grounded to support adaptive management of climate actions. One guiding model is the UNDP Climate Change Adaptation M&E Framework. This framework is structured around six climate-sensitive thematic areas: Agriculture, Water, Health, Natural Resource Management (NRM), Coastal Zones, and Disaster Risk Reduction (DRR). These areas are linked to core adaptation processes such as policy and planning, capacity building and awareness, information management, investment decisions, and livelihoods/resource management. Each process is assessed using four main indicator types: coverage, impact, sustainability, and replicability.

Once the CIM Plan revision has been completed, Samoa's NAP MEL system will be revised from this framework, using its structure as a baseline while tailoring it to Samoa's unique climate vulnerabilities. As a small island developing state, Samoa is particularly exposed to sea-level rise, coastal erosion, and tropical cyclones, which threaten coastal communities, infrastructure, and ecosystems. By integrating its vulnerabilities into its MEL framework, Samoa can ensure that monitoring and evaluation are not only technically sound but also locally relevant and actionable, enhancing the effectiveness, equity, and transparency of its climate adaptation initiatives.

Figure 31: UNDP CCA M&E Framework¹³⁵

¹³⁵ https://www.adaptation-fund.org/wp-content/uploads/2017/08/DB_CCA-MandE-Indicators-Good-Practice-Study.pdf



11.2 Key Indicators for measuring strategy performance

Given the country's growing exposure to climate-related risks, such as sea-level rise, extreme weather events, and water insecurity, the MEL system must support timely and informed decision-making. It should enable responsive actions that strengthen climate resilience, ensure continuity and quality in service delivery, and promote the long-term sustainability of critical infrastructure.

The following table presents a set of sample indicators tailored to Samoa's context, designed to guide effective performance tracking and support adaptive management across key sectors.

Table 46: Examples of indicators for Adaptation Monitoring and Evaluation¹³⁶

Category	Examples of Indicators
Quantitative	- Number of publications, articles, or TV programs produced - Number of policymakers and practitioners engaging with program-generated information - Number of educational materials produced - Number of training programs conducted - Number of long-term capacity development activities initiated
Qualitative	- Quality and relevance of published materials (e.g., publications, media coverage) - Extent to which policymakers and practitioners utilize the information (measured via surveys, evaluations, and observed actions) - Extent of use and usefulness of educational materials - Impact of training programs on disaster preparedness - Perceived effectiveness of capacity-building efforts over time
Behavioral	- Percentage change in stakeholder behaviors utilizing adjusted processes, practices, or methods for managing climate change risks - Adoption rate of climate-smart agricultural practices - Observable changes in behavior among the targeted population - Percentage of target groups adopting adaptation technologies, broken down by technology and gender

¹³⁶ https://www.adaptation-fund.org/wp-content/uploads/2017/08/DB_CCA-MandE-Indicators-Good-Practice-Study.pdf

Logical Framework	• Measure the project's overall contribution to its intended long-term goal • Assess progress made toward the project's specific objectives • Verify whether the planned deliverables or services are being produced as expected • Monitor the execution of tasks and actions necessary to achieve outputs
Process-based	• Agriculture: Research into farming techniques that accommodate climate change • Biodiversity: Integration of adaptation into conservation management plans • Water: Development of flood management policies/plans

11.3 Best practices for NAP M&E Approaches

To move beyond general observations and identify practical lessons relevant to the Samoa NAP, a study reviewed ten aggregated M&E systems through an in-depth comparison of their context, process, and content. The systems examined were from France, Germany, Kenya, the Mekong River Commission (MRC), Morocco, Nepal, Norway, the Philippines, the Pilot Program for Climate Resilience (PPCR), and the United Kingdom (UK). These cases were selected based on their relatively advanced stages of development or implementation and the availability of documented information on their evolution.

Table 47: Comparative analysis for 10 M&E Systems¹³⁷

Country / Program	Purpose	Approach	Indicators Used	Reporting Frequency
France	Track implementation & impacts of NAP	Indicator-based, simple data from existing sectoral systems	Process, Outcome	Annual, mid-term, final
Germany	Monitor impacts and responses under DAS	Indicator-based, participatory design, >100 indicators	Climate, Response	Monitoring & review reports
Kenya	Measure, evaluation & report adaptation results under NCCAP	Results-based, national/county indicators, links to Vision 2030 reports	Outcome, Vulnerability	Annual + UNFCCC reports
MRC	Track status of climate change and adaptation in Lower Mekong Basin	Indicator-based, combined with basin-wide database development	Climate, Exposure, Adaptation	Every 3 years
Morocco	Monitor vulnerabilities & adaptation outcomes in regions	Integrated into existing regional system (SIRE), multi-stakeholder process	Climate, Vulnerability, Adaptation	Annual regional report
Nepal	Track achievements & lessons from Climate Change Program	Results-based, national + subnational twin-track system	Outcome (149 indicators at subnational level)	Periodic + lessons learned
Norway	Learn what works in adaptation through iterative assessment	Learning-by-doing, vulnerability assessments, consultations	Process, Impact	Every 5–8 years
Philippines	Monitor and evaluate NCCAP implementation	Results-chain logic, early stage, preliminary indicators	Process	Annual + triennial evaluation
PPCR	Track national progress & program performance under PPCR	Scorecards, self-assessments, qualitative and quantitative	Outcome (5 core indicators)	Annual + synthesis report
UK	Evaluate national preparedness and	Mixed methods: VA, indicators, cost-benefit, scenario & policy analysis	Risk factors, Adaptation action	Annual + biennial

¹³⁷ https://ac.adaptationcommunity.net/download/me/me-guides-manuals-reports/GIZ_2014-Comparative_analysis_of_national_adaptation_M&E.pdf

	effectiveness of adaptation policy			statutory report
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The comparative analysis of ten M&E systems offers valuable insights into how various countries and programs have designed and implemented MEL frameworks within their adaptation planning. Based on this analysis, a set of best practices has been proposed to guide the development of effective, inclusive, and adaptive MEL systems. These practices provide a practical foundation for strengthening MEL approaches in the Samoa NAP, as well as in other national adaptation contexts.

Table 48: Identified Best practices from comparative analysis

Best Practices	Description	Examples
Align MEL with National Adaptation Policies	Embed MEL systems within national adaptation strategies or legal mandates to ensure strategic alignment, legitimacy, and continuity	- Kenya: Adaptation M&E is integrated into the National Integrated Monitoring and Evaluation System, overseen by Ministry of Devolution and Planning - Morocco: Adaptation M&E is integrated into the Regional Environmental Information System (SIRE)
Choose appropriate methods and tools	Use a mix of indicators, dialogues, and qualitative narratives; don't rely on indicators alone	Germany and PPCR combine qualitative methods with indicator-based tracking
Foster science-policy linkages	Engage scientific expertise for selecting indicators, identifying data sources, and refining methodologies	Germany and PPCR involved scientists in developing national and program indicators
Promote flexibility and adaptive learning	Design the M&E system to be iterative and responsive, allowing adjustments based on new evidence, stakeholder feedback, and evolving climate and development contexts	Norway is a strong example: its adaptation M&E is intentionally non-prescriptive and built on a "learning-by-doing" philosophy. Instead of rigid indicators, it uses vulnerability assessments, participatory processes, and sectoral reporting to inform strategy

12 Conclusion

Samoa's National Adaptation Plan (NAP) represents a critical milestone in the nation's long-term response to mounting climate risks. Building on the National Climate Change Policy (NCCP), the Community Integrated Management Plans, and the body of evidence consolidated through the draft TNC Vulnerability & Adaptation Assessment, the NAP provides a unified, forward-looking framework to safeguard Samoa's people, economy, and ecosystems from accelerating climate impacts. It highlights that Samoa faces increasing exposure to sea-level rise, stronger tropical cyclones, coastal erosion, flooding, drought, and ecosystem degradation, risks that are already causing losses equivalent to approximately 1.2% of GDP annually and projected to rise to over 1.5% by 2050 without decisive intervention. The NAP directly responds to these threats by outlining a robust, sector-driven adaptation strategy that mainstreams climate resilience into national development.

The stock takes and methodology underpinning the NAP ensured comprehensive national alignment, screening 829 project concepts from 17 policy frameworks through a structured multi-criteria analysis. This process enabled the identification of high-value adaptation priorities for the six core NAP sectors, agriculture and fisheries, energy, environment, health, tourism, and water and sanitation, while also integrating adaptation considerations across education, finance, and infrastructure.

Looking ahead, the implementation of Samoa's NAP requires a coherent set of next steps to operationalize the policy vision. Immediate priorities include (i) finalizing the NAP Investment and Implementation Plan, (ii) establishing clear institutional coordination mechanisms across government agencies, (iii) updating of the CIM

Plans, and (iv) strengthening national monitoring, evaluation, and learning (MEL) systems to track progress, establish accountability, and enable adaptive management. Central to the next phase will be ensuring that adaptation is fully embedded in sector plans, district-level CIM Plans, and national budget processes, so that resilience is not treated as a stand-alone activity but as a core development principle.

Financing remains the pivotal enabler of successful NAP delivery. Samoa will require predictable, sustained, and well-coordinated financial flows from domestic resources, development partners, climate funds, and the private sector. The NAP therefore lays the foundation for a structured financing architecture, including blended finance instruments for SMEs, and mobilization of concessional climate finance for infrastructure resilience, ecosystem restoration, and early-warning systems. The forthcoming NAP Investment Plan will quantify costed adaptation pathways to 2030 and 2050, identify funding gaps, and outline opportunities to leverage bilateral, multilateral, and regional financing facilities, ensuring that Samoa is well positioned to access the scale of financing required under the UNFCCC and Paris Agreement frameworks.

Ultimately, the NAP is a forward-looking, whole-of-nation commitment to safeguard Samoa's development gains and sustain the well-being of current and future generations. It strengthens climate governance, aligns national planning with global adaptation goals, and provides a clear implementation trajectory from policy to action. With collective leadership, robust partnerships, and adequate financing, Samoa is well placed to transition from planning to delivery, building a climate-resilient society, economy, and environment that can thrive in an era of accelerating climate change.



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