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1 Overview

This document serves as the framework programme for implementing Samoa's National Adaptation Programme of Action activities. The framework institutes the management of the adaptation programme of actions to ensure an increased and strengthened adaptive capacity of the communities, civil society and government to adapt to the impacts of climate change, climate variability including extreme events.

Objectives and policies directed by ten project-based profiles and their respective implementation strategies will set to help communities, civil society and government to formulate and strengthen their immediate and urgent needs to impacts of climate change, climate variability including extreme events.

2 Vision

The Samoan people and her environment will achieve a high adaptive capacity to deal with adverse impacts of climate change; safeguard and protect life and livelihood and reduce costs for a sustainable future.

3 Goal

To increase and strengthen Samoa's adaptive capacity by communicating a list of urgent needs for activities to address adverse impacts of climate change, climate variability including extreme events. Activities proposed are focused on the immediate term to avoid further loss of life if left unattended, as well as protect critical livelihoods, key infrastructure, other activities that will help Samoa implement its priority development goals and objectives.

4 Objectives

1. To implement immediate and urgent project based activities to adapt to climate change, climate variability including extreme events.
2. To synergize efforts to protect life and livelihoods of the people, infrastructure and environment
3. To mainstream adaptation into national and sectoral policies, development goals and objectives
4. To increase awareness in communities, civil society and government

5 Framework for Adaptation Programme

The development of Samoa's framework for an adaptation programme is based on vulnerability assessment results of community and national consultation studies. The context of the framework is based on national sectors identified with high vulnerabilities with more weighting on community vulnerabilities.

5.1 Vulnerabilities of Sectors

Thirteen national sectors¹ were identified as critical to achieving a high adaptive capacity for Samoa and 69% have been identified as highly vulnerable to the hostile impacts of climate change, climate variability including extreme events. The nine sectors considered highly vulnerable include the Water sector, Agriculture & Food Security sector; Forestry sector; Health sector; Urban Settlements; Coastal Environments; Communities; Trade & Industry sector; and Works Transport & Infrastructure sector. All thirteen sector's urgent and immediate needs are considered with priority weighting given to the nine sectors identified as highly vulnerable. The Fisheries sector has an unknown net effect from the impacts of climate change, however, it will still be considered in a 'no-regrets' approach.

5.2 Vulnerabilities of Communities

Table 1 Vulnerabilities of Communities

Vulnerabilities Identified	Causes of Vulnerability								
	SLR	Storm surges/ Cyclones ²	Drought	Flooding	Climate Variability	Deforestation	Other human activities (e.g. location of settlements, Sand-mining)	Forest Fires	TCs ³
Loss of land due to erosion from the sea	✓	✓					✓		
Flooding inundation of land and sedimentation				✓		✓	✓		✓
Lack of quantity and quality water supply	✓	✓	✓	✓		✓	✓	✓	✓
Increase health hazards			✓	✓	heat stress, heat waves				
Destruction of crops			prolong periods		heat stress				✓
Loss of Biodiversity (Terrestrial/Marine)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Damage to	✓	✓		✓					✓

¹ Thirteen national sectors include: agriculture & food security; forestry; water, health, communities, biological diversity; fisheries, trade & industry; works transport & infrastructure; tourism, urban planning and development; coastal environments and energy

² Storm surges / Cyclones: refers to the cyclone associated hazards specific to coastal environments

³ TCs: Tropical Cyclones refers to all associated cyclonic hazards (storm surges, strong winds, torrential rains)

community assets									
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Emphasis on the vulnerability as viewed by the communities is show in the table above. These are highly considered in the basis of the framework to formulate adaptation activities side by side with the vulnerabilities identified for the sectors as mentioned above.

6 Identification of Key Adaptation Needs

Synthesis and consultation of existing sectoral and community information respectively on vulnerability and adaptation enabled clear identification of adaptation activities to address specific vulnerabilities of each sector including communities as listed in the table below (refer to Annex I & II). Existing adaptation activities (past and current coping strategies) and identified potential adaptation activities have been analysed and the last column shows 'potential adaptation activities' considered for urgent and immediate needs for each sector including community based on their specific vulnerabilities already identified (refer to Annex I).

Table 2. Identified Adaptation Activities of sectors including community

Sector	Existing Adaptation Activities	Potential Adaptation Activities
<i>Agriculture & Food Security</i>	<ul style="list-style-type: none"> Regulations and policies to improve food production Research and development of new plant varieties Introduction of animal species suited to local climate Maintenance of nurseries providing cultivars and other planting materials Promoting partnerships with external institutions for expertise and knowledge sharing 	<ul style="list-style-type: none"> Fire prevention Marketing and trading Exclusion, alternative crop, research Early warning systems Traditional Planting scheduling
<i>Forestry</i>	<ul style="list-style-type: none"> Establishment of Forest Attack Unit Drought warnings and advisories media announcements Establishment of "forest risk meter" Revegetation of damaged areas with different species of trees (e.g. <i>Albizza revive</i>, resilient to cyclones and high winds) Information gathering and research Quotas for logging to promote reforestation Promotion of "Tree Planting Day" 	<ul style="list-style-type: none"> Reforestation Early warning system Conservation areas Sustainable forest management
<i>Water</i>	<ul style="list-style-type: none"> Rationing programs (e.g. water delivery by truck) Demand management & leak detection programs Nearby borehole supply extended to cover affected area Look for new source Active involvement in environment programs and projects Extended treatment and disinfectant Public notice to consumers of affected areas not to consume the contaminated water Encourage communities to protect and 	<ul style="list-style-type: none"> Water purification programs Alternative water supply and storage programs Watershed Management plans Emergency management plans

	<p>conserve natural springs</p> <ul style="list-style-type: none"> • Immediate repairs of damaged structures • Support reforestation programmes in communities • Water purification programs • Water tank programs • Drilling bores further inland • Reduce pumping hours • Relocate water infrastructure 	
<i>Community</i>	<ul style="list-style-type: none"> • Reclamation • Revegetation along the coast • Temporary coastal protection • Relocation of families • Enforce government laws for sustainable management • Ban sand mining in some communities • Enforcement of community by-laws, e.g. regulations where fine is imposed if a person uses banned fishing methods • Do nothing, response by recovering • Revegetation along water springs • Building stone walls around the pool top protect from storm surges • Women and youth groups responsible for maintaining water source area by cleaning and keeping it on a safe hygiene level. • Water tanks to store rain water • Supports and monitor marine reserves in communities • Community reforestation programs • Capacity building programs • Establish conservation areas and reserves • Education and awareness • Reactive response • Financial support from churches to rebuild community assets • Government restoration and recover programs • Overseas remittance dependence to rebuild homes & properties 	<ul style="list-style-type: none"> • Disaster planning framework • Coastal infrastructure protection (seawall) • Assistance for relocation of communities inland • Water tanks support program • Health programs in communities • Trainings and workshops on agroforestry • Management program for mangroves and marine resources • Reforestation program & establishment of nursery for forest and coastal trees • Need to improve drainage systems • Restoration of coastal springs in communities • Manage sand mining in village • Establish marine protected areas • Establish village laws for conservation of marine areas • Improved building codes resilient to cyclones • Mandatory village inspections • Capacity building for village social groups, and assistance to improve existing coping capacity • Community awareness programs to raise awareness on climate change and projected climate change.
<i>Health</i>	<ul style="list-style-type: none"> • Regulations and policies • Water monitoring • Awareness programs advising public to boil water and clean environment free from mosquito habitat • Promote safe sanitations • Immunization programs • Promotion of healthy lifestyle programs 	<ul style="list-style-type: none"> • Health programs • Awareness activities and training • Early warning system and emergency measures
<i>Biological Diversity</i>	<ul style="list-style-type: none"> • National Biodiversity Strategy & Action Plan • National Biodiversity Policy • National Invasive species Strategy • Watershed management strategy • National Biosafety framework 	<ul style="list-style-type: none"> • Marine and terrestrial conservation areas • Legislation to ban hunting and use of illegal practice

	<ul style="list-style-type: none"> • Coastal Infrastructure Management Strategy • Biodiversity management systems • Biodiversity enabling programs • Biodiversity information system and database • Related projects implemented 	
<i>Fisheries</i>	<ul style="list-style-type: none"> • Community-based marine resources management program • Marine protected areas • Management strategies • Research and monitoring programs • Restocking depleted species 	<ul style="list-style-type: none"> • Monitoring and management • Establishment of marine reserves
<i>Trade & Industry</i>	<ul style="list-style-type: none"> • No direct coping strategy for climate change • Pacific Island Countries Trade Agreement (PICTA) • Technical Assistance under Integrated Framework for Technical Assistance for LDC's • Macroeconomic reforms • Promotion of produce in Samoa • FAO programme to support food security 	<ul style="list-style-type: none"> • Investment on annual crops and home gardens vegetables • Training for farmers on trade facilitation and standards • Contingency plan
<i>Works, Transport & Infrastructure</i>	<ul style="list-style-type: none"> • Road Asset Management Systems • Coastal infrastructure Management Plans • Proposed works to upgrade infrastructure • Codes of Environmental Practice • Building code and manual 	<ul style="list-style-type: none"> • Relocation of roads further inland • Compliance with Code of Environmental Practices on impact studies and design • Construction of sea walls with standards and specification where appropriate • Training for private sectors on standards and COEP's
<i>Tourisms</i>	<ul style="list-style-type: none"> • Awareness and training activities for operators on issues such as cyclones and prone areas 	<ul style="list-style-type: none"> • Training for operator and tourism management • Sustainable Tourism – developing a Tourism Environmental Policy (TEP)
<i>Urban Planning & Development</i>	<ul style="list-style-type: none"> • PUMA Act (2004) • Establishment of Planning and Urban Management Agency (PUMA) • Environmental Impact Assessments 	<ul style="list-style-type: none"> • Zoning disaster planning • Urban management plan
<i>Coastal Zone</i>	<ul style="list-style-type: none"> • Coastal infrastructure management Strategy • Coastal Implementation Plans • Consultations with Communities • Awareness 	<ul style="list-style-type: none"> • Coastal Management Plans • Integrated Coastal Zone Management • Coastal Infrastructure Protection measures
<i>Energy</i>	<ul style="list-style-type: none"> • Power development plan, Identifying barriers for RET • Renewable Energy projects, Renewable Energy Policies 	

7 Country-driven Criteria for Prioritization Process

Criteria agreed to by the NAPA team reflects the objectives of this document taking into consideration the country's development strategies (e.g. SDS); sustainable development objectives, conservation efforts, and in beneficiary of the livelihood of the communities.

Project-based criteria for selection of priority adaptation activities from the identified adaptation listed above (Table 2) are as follows:

1. Capacity Building Activities
2. Awareness Activities
3. Research & Training Activities
4. Institutional Arrangements

The list above questions if the adaptation activity identified in each sector falls under any of the criterias (1 to 4); and unless the activity is urgent or immediate under that criteria, it is omitted by agreeing through a 'consensus approach' by all major stakeholders. It is further based on whether or not the adaptation activity is realistic and is not exaggerating other similar and existing projects, plans or goals under these four criterias hence avoiding duplication of project-based activities already in existence.

A second set of locally and community-based criteria were used to screen the first set of prioritized adaptation activities and are as follows:

1. Livelihood & wellbeing. Safeguarding and protecting the livelihood and wellbeing of the communities.
2. Equity. This criteria questions not only gender equality, but of equal distribution of income related activities and projects within the communities; equal opportunities for all sectors, organizations and businesses; empowerment amongst the community, reducing risks and hazards associated with climate change and reducing 'hardships' in communities. Furthermore equity identifies preservation of natural and cultural heritages from the activities identified.
3. Integrated Approach. Integration of project-based activities amongst government ministries, organizations and communities to foster a collaborative effort to achieve sustainability in implementing adaptation activities to strengthen the adaptive capacities of the community, civil society and government.
4. Increase resilience to climate change, climate variability and extreme events.
5. Cost-effectiveness and feasibility. Activities are selected for being cost-effective and realistic to produce, feasible and is sustainable in the long run hence reducing long-term costs without jeopardizing the economic benefits of the country.

Table 3: Selected Priority Adaptation Activities per Sector

Sector	Selected Priority Adaptation Activities
<i>Agriculture</i>	<ul style="list-style-type: none"> • Forest Fire Prevention Program • Alternative Farming Systems
<i>Forestry</i>	<ul style="list-style-type: none"> • Reforestation / Rehabilitation (sustainable forest management) • Conservation Areas
<i>Water</i>	<ul style="list-style-type: none"> • Develop water purification programs for communities • Develop watershed management programme for (other) communities • Alternative water storage programs
<i>Fisheries</i>	<ul style="list-style-type: none"> • Establish Marine Reserves
<i>Health</i>	<ul style="list-style-type: none"> • Establish Health Programs

	<ul style="list-style-type: none"> • Early Warning System and Emergency Measures
<i>Urban Settlements</i>	<ul style="list-style-type: none"> • Zoning Disaster Planning & Urban Management Plan
<i>Coastal Environment</i>	<ul style="list-style-type: none"> • Implement Coastal Zone Management
<i>Biodiversity</i>	<ul style="list-style-type: none"> • Marine & Terrestrial Conservation Areas (e.g. MPAs) • Regulate and enforce monitoring systems for marine & terrestrial areas
<i>Tourism</i>	<ul style="list-style-type: none"> • Sustainable tourism (develop a TEP – tourism environmental policy)
<i>Communities</i>	<ul style="list-style-type: none"> • Coastal infrastructure protection (seawall) • Assistance for relocation of communities inland • Restoration of coastal springs in communities • Strengthening building codes resilient to cyclones
<i>Trade & Industry</i>	<ul style="list-style-type: none"> • Investment on annual crops and home vegetable farming
<i>Works Transport & Infrastructure</i>	<ul style="list-style-type: none"> • Relocation of roads further inland • Construction of seawalls (subject to existing plans and code)

8 Ranked List of Activities and Projects

Rank No.:	Prioritized List of Activities	Project Profile Name
1	<ul style="list-style-type: none"> • Develop water purification programs for communities • Develop watershed management programme for (other) communities • Alternative water storage programs • Restoration of coastal springs in communities 	Water Resource Security Adaptation Profile (WRSA Profile)
2	<ul style="list-style-type: none"> • Forest Fire Prevention Program 	Forestry Fire Prevention Adaptation Profile (FFPA Profile)
3	<ul style="list-style-type: none"> • Reforestation & Rehabilitation (sustainable forest management) 	Sustainable Forestry Management Adaptation Profile (SFMA Profile)
4	<ul style="list-style-type: none"> • Establish Climate-Adaptive Health Programs 	Climate-Adaptive Health Adaptation Profile (C-AHA Profile)

5	<ul style="list-style-type: none"> • Investment on annual crops and home vegetable farming • Alternative Farming Systems 	Agriculture & Food Security Adaptation Profile (AFSA Profile)
6	<ul style="list-style-type: none"> • Implement Coastal Zone Management • Coastal infrastructure protection (seawall) • construction of seawalls (subject to existing plans and code) • Assistance for relocation of roads further inland • Assistance for relocation of communities inland 	Works, Transport & Infrastructure Adaptation Profile (WTIA Profile)
7	Early Warning System and Emergency Measures	National Early-Warning System Profile (NEWS Profile)
8	<ul style="list-style-type: none"> • Zoning Disaster Planning of Urban Management Plan • Strengthening building codes resilient to cyclones 	Disaster Planning & Urban Management Adaptation Profile (DPUMA Profile)
9	<ul style="list-style-type: none"> • Conservation Areas • Establish Marine Reserves • Marine & Terrestrial Conservation Areas (e.g. MPAs) 	Marine & Terrestrial Conservation Adaptation Profile (MTCA Profile)
10	<ul style="list-style-type: none"> • Sustainable Tourism – to develop Tourism Environmental Policy 	Sustainable Tourism Adaptation Profile (STA Profile)

Refer to Annex III for details of each Project Profile.