

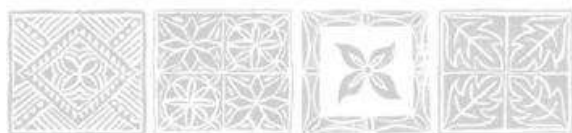
# Tourism Development Area 6

## South East Savaii

### Management Plan



**Draft v3**  
**August 2015**



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## EXECUTIVE SUMMARY

This Management Plan identifies and prioritises adaptive measures for tourism management planning for South East Savaii, building on the community's vision and integrating climate change adaptation and disaster risk management measures.

### ***Community Vision for Palauli***

*A sustainable and practical tourism development area which recognises, protects and promotes the environmental and cultural assets of the area to benefit tourists, based on a partnership approach between the community; the tourism operators; and the government, and accordingly enhances the quality of life of the Palauli community.*

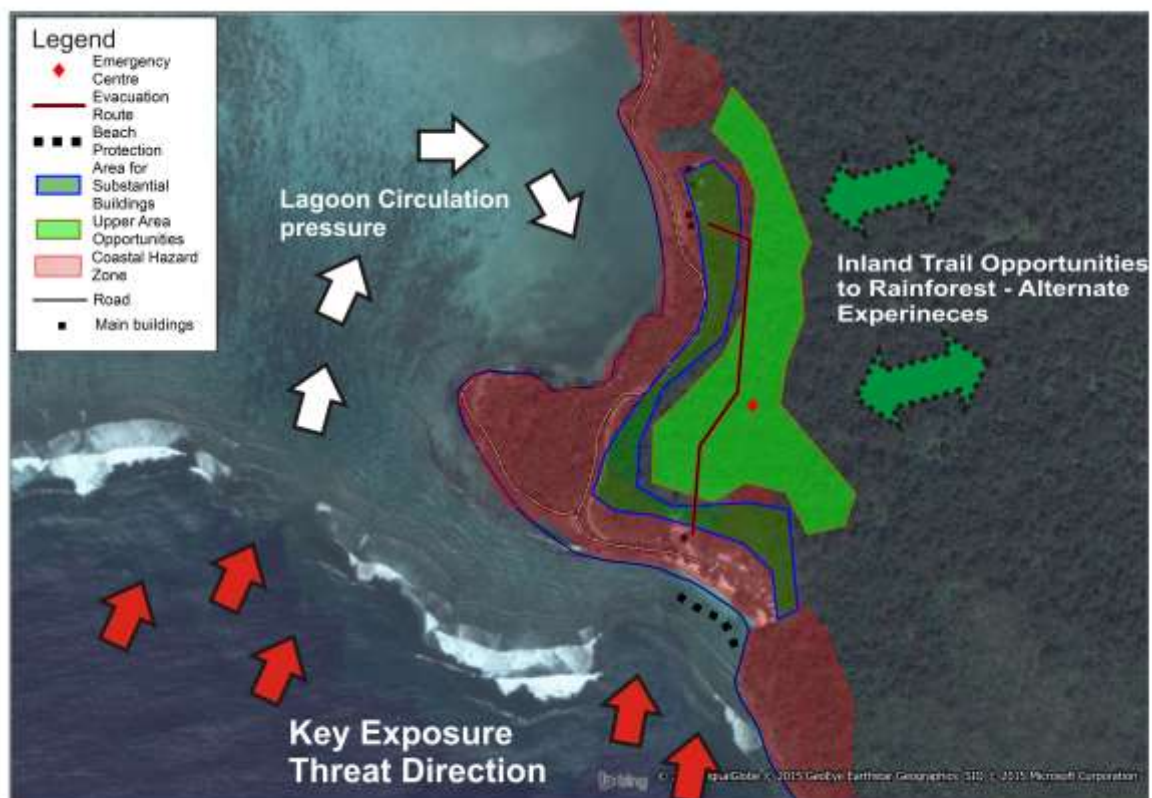
*We can achieve this through:*

- 1. Improved protection to the coastline to safeguard coastal environment and people*
- 2. Improved protection of the forest assets*
- 3. Improved promotion of the assets and strengths of Palauli to travellers including 'telling the areas story'*
- 4. Working together transparently as a community and tourism destination area*
- 5. Improved access to attractions for tourists*

Based on the previous investigations, the community visioning process, further investigations undertaken as part of this project and the timeframes and budget associated with this project a prioritised series of projects has been developed for TDA 6. The recommended adaptation measures have been presented according to the following intervention categories:

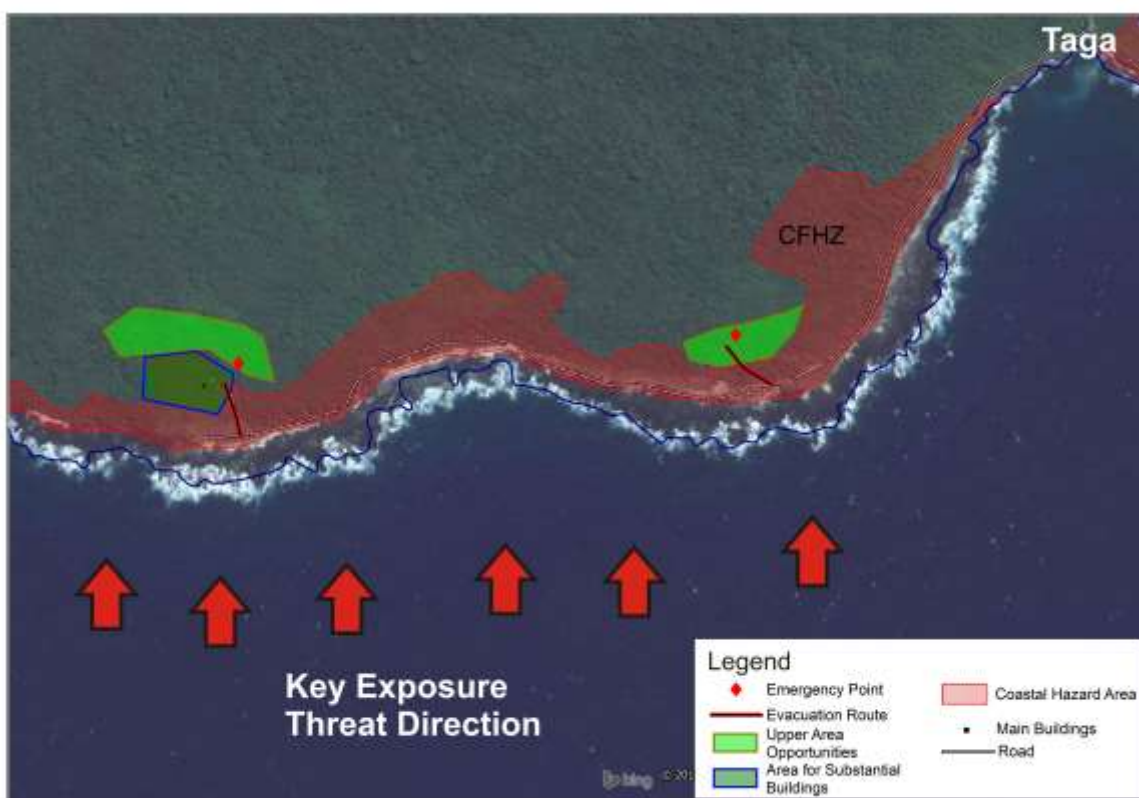
- shoreline protection (including enhanced design and siting of tourism facilities and surrounding landscape);
- water resources management;
- Ecosystem responses (including development of climate conscious tourism products, alternative tourism sites and recreational activities); and
- disaster preparedness and emergency facilities in case of disaster events.

Figure 1 below presents an overview of the recommended structural options for Palauli.



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Figure 1 Overview of Structural Management Plan Options for Palauli



**Figure 2 Overview of Structural Management Plan Options for Taga**

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## ACRONYMS

CEHZ	Coastal Erosion Hazard Zone
CFHZ	Coastal Flooding Hazard Zone
CIM	Coastal Infrastructure Management
DMO	Disaster Management Office
GDP	Gross Domestic Product
GEF	Global Environment Facility
LDCF	Least Developing Countries Fund
MNRE	Ministry of Natural Resources and Environment
M&E	Monitoring and Evaluation
P3D	Participatory 3 Dimensional
STA	Samoa Tourism Authority
TDA6	Tourism Development Area 6 South East Savaii
TDA	Tourism Development Area
UNDP	United Nations Development Program

## 1. INTRODUCTION

This document is a Management Plan prepared for Tourism Development Area 6 South East Savaii (TDA 6). This Management Plan should be read in conjunction with the Enhancing the Resilience of Tourism Reliant Communities to Climate Change Risks TDA Management Plan Report (“the Report”), which describes the overall background and methodology for the preparation of Management Plans for six nominated Tourism Development Areas in Samoa. The Management Plan is also supported by the Samoa Tourism Authority’s Technical Guidelines for Tourism Operators.

The preparation of this Management Plan is one aspect of the *Enhancing the Resilience of Tourism-Reliant Communities to Climate Change Risks Project* (“the Project”). The objective of the overall Project is to enhance the resilience of tourism-reliant communities to climate change risks by integrating climate change into development policy and instruments and investing in adaptation actions supporting tourism reliant communities. The Project recognises that Samoa’s tourism sector, which is a mainstay of Samoa’s economy and a core contributor to Gross Domestic Product (GDP), is highly vulnerable to the slow onset impacts of climate change.

The Project is being implemented by the Government of Samoa with financial assistance from the Global Environment Facility (“GEF”)/Least Developing Countries Fund (“LDCF”) through United Nations Development Program (UNDP). The national executing partners are the Samoa Tourism Authority (“the Authority”) and the Ministry of Natural Resources and Environment (“MNRE”).

This Management Plan identifies and prioritises adaptive measures for tourism management planning for South East Savaii, building on the community’s vision and integrating climate change adaptation and disaster risk management measures. The Plan focuses on small to medium tourism operators and the communities in which they operate. Some of these measures can be implemented with funding connected to this component of the Project. Other strategies fall outside the scope of this funding. However information and Technical Guidelines have been developed and made available to tourism operators, prospective operators and communities so that they can plan for the implementation of adaptive measures. In some cases tourism operators or groups of tourism operators may use this information to seek funding through other mechanisms including the Tourism Climate Change Small Grants Program.

## 2. DESCRIPTION OF TDA 6 SOUTH EAST SAVAII

### 2.1 Overview

Tourism Development Area 6 extends west from the village of Palauli and includes the areas along the southern coast of the island as far as the village of Taga on Savaii's south western tip (see Figure 2.1 TDA 6 South East Savaii Overview).



Figure 2.1 TDA 6 South East Savaii Overview

### 2.2 Community Vision

A community visioning exercise for TDA 6 was undertaken with active participation by tourism operators and community representatives during a four day workshop in March 2015. The workshop utilised a combined approach in which community visioning was conducted by the Samoa Tourism Authority team and Participatory 3 Dimensional modelling (P3D) was facilitated by the P3D team from Ministry of Natural Resources and Environment – Forestry Division. Participants were asked to consider the 'past, present and future' of their TDA in order to identify common goals and a realistic practical path forward within the constraints of changing climatic conditions. The P3D process enabled participants to contextualise adaptation options according to geographic and physical variables. Figure 2.3 shows the workshop attendees with the model they developed during the workshop.

The community and tourism operators from TDA 6 came together with a consensual 'Vision' for the management of climate change variables in TDA 6: South East Savaii. The community's vision is set out in Figure 2.2.



### **Community Vision for Palauli**

*A sustainable and practical tourism development area which recognises, protects and promotes the environmental and cultural assets of the area to benefit tourists, based on a partnership approach between the community; the tourism operators; and the government, and accordingly enhances the quality of life of the Palauli community.*

*We can achieve this through:*

- 1. Improved protection to the coastline to safeguard coastal environment and people*
- 2. Improved protection of the forest assets*
- 3. Improved promotion of the assets and strengths of Palauli to travellers including 'telling the areas story'*
- 4. Working together transparently as a community and tourism destination area*
- 5. Improved access to attractions for tourists*

**Figure 2.2 Community Vision**



**Figure 2.3 Workshop attendees with P3D model**

## **2.3 Geographic location & characteristics**

In this areathere are rocky headlands along the coast, with some small areas of mangrove established in the rocky bays and little sand along the shoreline. The hard coastlines in these villages are estimated to be eroding at 0.0-0.2 m per year. The lagoon is 2-5km wide and shallow. Salelologa to the east of this area is the largest settlement, and the main commercial and government centre

on Savaii. The ferry wharf at Salelologa is the main arrival and departure point for most people travelling to and from Savaii.

Adjacent to the eastern end of the Tourism Development Area (TDA) is the Tafua Rainforest Preserve and Tafua Crater. At Taga on the western end of the TDA lava flows have created a series of tubes connecting a flat clifftop of lava rock with the ocean below.

In some areas where the South Coast Road hugs the coastline it is highly vulnerable to coastal erosion. Seawalls have been constructed along some of the coast. Freshwater pools on the Coast are at high risk from coastal hazards and many households collect rainwater as an alternative water source.

Figure 2.4 and Figure 2.5 illustrate the CEHZ and CFHZ and the positions of the main access roads in TDA6.



Figure 2.4 Geographic features around FaalaPalauli





Figure 2.5 Geographic features of Taga

## 2.4 Visitor trends

The study team has been unable to access records of visitor numbers for South East Savaii. Data from the 2012-2013 Samoa International Visitor Survey indicate that over 20% of holiday makers who visit Samoa visit the Alofaaga Blowholes. At the time of this study there were several visitors at Aganoa Beach Retreat where reportedly 90% of visitors are surfers.

## 2.5 Operators' profiles

Within the South East Savaii TDA, small to medium tourism operators within the scope of this Management Plan include 1 Beach Fale accommodation operator and 3 attraction operators. Table 2.1 lists Tourism Operators targeted in this project based on information provided by Samoa Tourism Authority (STA).

Accommodation Providers	
<b>Aganoa Beach Surf</b>  Source: www.samoa.travel	<b>Location:</b> FaalaPalauli  <b>Number and Type of Fales:</b> 8 fales (beach and garden) providing 16 beds <b>Facilities and Services:</b> Shared facilities Some fales with ensuites <b>Tourist Experience Offered</b> Surfing Snorkelling
Attractions	
<b>AfuAau/Olemoe Waterfall</b>  Source: www.samoa.travel	<b>Location:</b> VailoaPalauli  <b>Description:</b> Waterfall and freshwater swimming hole and smaller pools waterfalls <b>Facilities and Services:</b> Open to the public for small fee Toilets Some parking Waterfall reduces to a trickle during long drought
<b>Mu Paga Falls</b>	<b>Location:</b> Papa Puleia <b>Description:</b> Waterfall where river falls 3 metres over volcanic rock face onto black sand beach and into the ocean. Accessed by walking through family compound.





Accommodation Providers	
 <p>Source: www.samoa.travel</p>	<p><b>Facilities and Services:</b></p> <p>Open to the public for small fee Access to the family's toilets</p>
<p><b>Alofaaga Blowholes</b></p>  <p>Source: www.samoa.travel</p>	<p><b>Location:</b></p> <p>Taga</p> <p><b>Description:</b></p> <p>Lave rock shelf that drops into the ocean with blowholes spraying highly pressurised water and air into the sky. Entertainment provided by a man throwing coconuts into the blowhole for a charge.</p> <p><b>Facilities and Services:</b></p> <p>Open to the public for small fee and parking fees Eating fale Toilets</p>

Table 2.1 TDA 6 Tourism Operators targeted in this Management Plan

## 2.6 Potential for Diversification of Tourism Offerings

Tourism within TDA 6 focuses on the natural attractions in the area including surfing, waterfalls and the spectacular coastal formations. However there may be potential for diversification of the tourist products on offer within TDA 6 to include ecotourism activities for example in association with the nearby Tafua Crater and Rainforest Preserve, archaeological attractions such as the Pulemelei Mound, cycling, provision of food (both raw and cooked) and traditional activities such as explaining and or demonstrating traditional massage, handicrafts and tattoo.

### 3. CLIMATE CHANGE VULNERABILITY AND ADAPTATION ASSESSMENT

#### 3.1 Overview

This Management Plan builds on work previously undertaken as part of the *Enhancing the Resilience of Tourism-Reliant Communities to Climate Change Risks Project* (the Project) which described hazards, risks and vulnerabilities for existing tourism assets within TDA 6 and identified existing climate adaptation mechanisms as well as further adaptation options (IPA 2015a and IPA 2015b). The Project's Implementation Plan (IPA 2015b) describes the key focus for South East Savaii as **flooding and water quality management**.

Key climate change related concerns in this TDA include:

- high seas and storm wave surge leading to coastal erosion and flooding;
- surface run-off during periods of heavy rain and cyclones leading to coastal erosion and flooding;
- buildings, structures and key infrastructure including the Main Road are within the CEHZ and CFHZ and are vulnerable during cyclones and storm surge;
- increased land clearing impacts on surface run-off during periods of heavy rain and cyclones leading to coastal erosion and flooding;
- water security is vulnerable to drought and storm surge as villages rely on water tanks, springs and village pools some of which are within the CFHZ.

The recommended adaptive measures in this Management Plan take into account initiatives which impact on climate change resilience in South East Savaii identified through a range of international, national and local projects. Information provided during the recent community visioning exercise has been reviewed in conjunction with previous initiatives and analysis of this information is grouped into categories in line with the following intervention areas:

- shoreline protection (including enhanced design and siting of tourism facilities and surrounding landscape);
- water resources management;
- Ecosystem responses (including development of climate conscious tourism products, alternative tourism sites and recreational activities); and
- disaster preparedness and emergency facilities in case of disaster events.

#### 3.2 Enhanced design and siting of tourism facilities and surrounding landscape

CIM Implementation Guidelines (MNRE IAMP-1 & MNRE SIAM-2) recommended that building foundations be built above the CFHZ and that investment and structures be planned taking into account the CEHZ and CFHZ. Where possible buildings requiring replacement should be relocated outside the CEHZ and CFHZ.

Adaptive measures that have been implemented include:

- The *Minimum Accommodation Standards for Beach Fales* were strengthened as part of the *Tourism Tsunami Rebuilding Program* which adopted a build back better approach. The revised Standards also specify the minimum distance from the high water mark for septic tanks.



### 3.3 Shoreline protection

During the visioning process the community identified improved protection to the coastline and of forest assets to safeguard the coastal environment and people as a strategy to achieve the community's vision of sustainable tourism. In discussions about the health of the reef participants in the workshop explained that there had been a recent crown of thorns outbreak and that they have been physically removing the starfish and monitoring for their presence.

The Menu of Adaptation Options (IPA 2015b) previously developed for The Project assesses and prioritises the following adaptation options out of a possible score of 25:

- improve and maintain culverts and drainage ditches to reduce flooding – 22/25;
- carry out awareness raising programmes on importance of maintaining drainages – 20/25;

CIM Implementation Guidelines(MNRE IAMP-1 & MNRE SIAM-2) recommended governments and villages manage sand mining and where necessary identify alternative sources of sand.

Adaptive measures that have been implemented include:

- Planting of coconuts along sandbanks to minimise erosion, although this would benefit from further planting using local species and implementing bioshield and landscaping design guidelines;
- Operators of the resort report efforts to maintain the health of the coral reef by removing crown of thorns and monitoring for its return.

### 3.4 Water resource management

Participants in the community consultation explained that the communities rely on water tanks and that the village at Taga now relies on a reservoir outside Lata for water as the pool at Taga was contaminated by salt water in the 2009 tsunami. CIM Implementation Guidelines (MNRE IAMP-1 & MNRE SIAM-2)noted that water is a significant issue in the district, although the water supply network is not considered to be at risk from coastal hazards.

The Menu of Adaptation Options (IPA 2015b) previously developed for The Project assessed the priority of a range of adaptation options and assigned a possible score out of 25 to each option (ie the higher the score the greater the priority). The Menu identifies the following options relating to water security in TDA 6:

- investigate technologies and promote practices that contribute to water conservation – 20/25; and,
- develop water safety plans – 18/25.

The Menu also identified options relating to waterway management:

- villages to ban clearing of forests in water catchments and dumping of solid and liquid waste in the drainage – 24/25;
- encourage riparian planting along rivers and streams – 22/25;
- improve and maintain culverts and drainage ditches to reduce flooding – 22/25;
- carry out awareness raising programmes on importance of maintaining drainages – 20/25; and
- develop integrated watershed management programme with communities – 18/25.

CIM Implementation Guidelines (MNRE IAMP-1 & MNRE SIAM-2)also recommended that the Village and Government develop and implement a solution to address erosion on the inland waterway at Vailoa.

### **3.5 EcoSystem Responses including Development of climate conscious tourism products, alternative tourism sites and recreational activities**

During the visioning process the community identified improved access to attractions for tourists as well as improved promotion of the assets and strengths of Paulauli to travellers including “telling the area’s story” as strategies to achieve their vision of sustainable and practical tourism. The community also identified a strategy to work together transparently as a community and a tourism destination area.

Relevant to access issues for tourists the Menu of Adaptation Options (IPA 2015b) assesses and prioritises the following adaptation options out of a possible score of 25

- improve inland river crossings with proper preliminary studies, particularly the access to the AfuAau Fall blocked by rocks and debris during flooding – 20/25.

CIM Implementation Guidelines (MNRE IAMP-1 & MNRE SIAM-2) recommended constructing and upgrading seawalls to protect the Main Coast Road and that the work road leading to Aganoa Beach Fales be relocated.

Adaptive measures that have been implemented include:

- Some sections of seawall have been completed or upgraded.

### **3.6 Disaster preparedness and emergency facilities in case of disaster events**

Disaster measures were not raised during the community visioning process.

## **4. RECOMMENDED ADAPTATION MEASURES FOR IMPLEMENTATION**

### **4.1 General**

Based on the previous investigations, the community visioning process, further investigations undertaken as part of this project and the timeframes and budget associated with this project a prioritised series of projects has been developed for TDA 6. The recommended adaptation measures have been presented according to the following intervention categories:

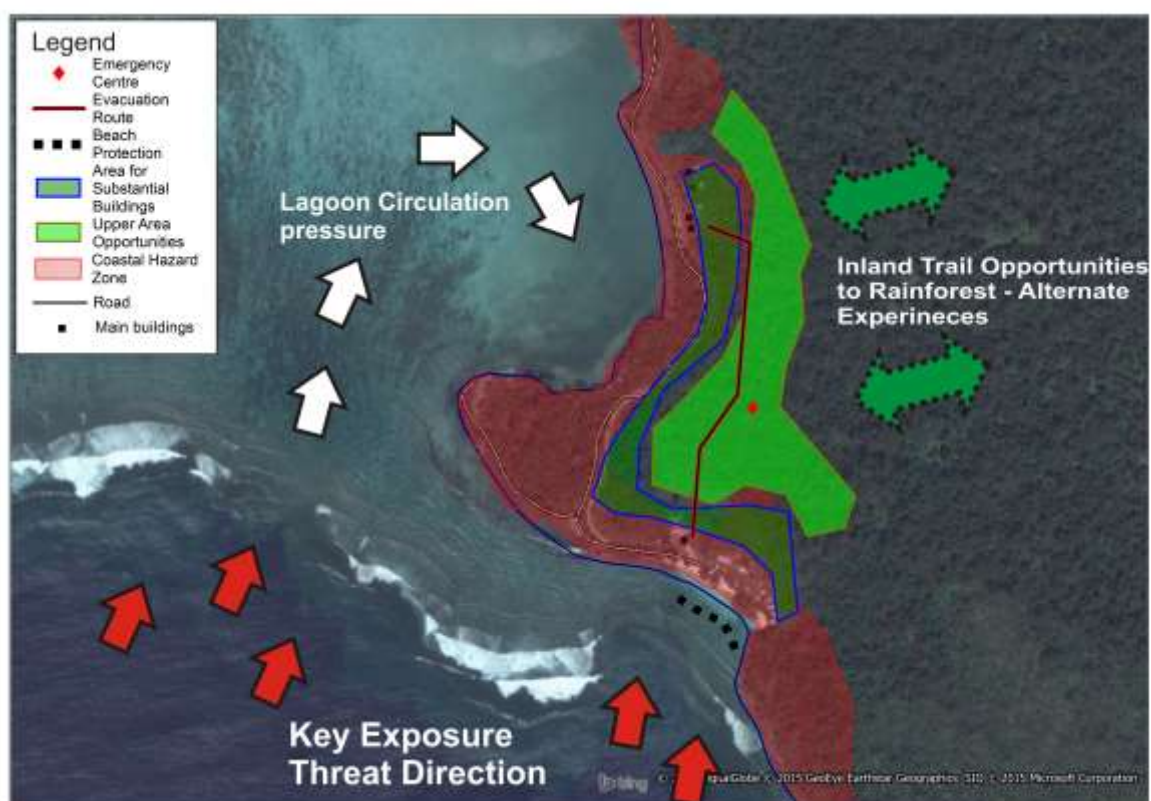
- Enhanced design and siting of tourism facilities and surrounding landscape;
- Water resource management;
- Shoreline protection;
- Development of climate conscious tourism products, alternative tourism sites and recreational activities; and
- Disaster preparedness and emergency facilities in case of disaster events.

### **4.2 Discussion**

The recommendations in this section take into account the current focus of tourism products in TDA 6. Surfing, waterfalls and spectacular coastal scenery have underpinned the development of tourism in this TDA. However, the TDA's resilience to climate change could be enhanced through diversification of tourism products. As such this Management Plan contains recommendations relevant to diversifying tourism products and supporting business development for tourism operators, potential operators and those who carry out business within the supply and value chain.

Previous work identified the focus for this TDA as flooding and water quality management. Many of the previous recommendations related to improvement and management of hard engineering options such as roads, culverts and drainage ditches. However there was also an emphasis on the importance of riparian planting and practices that maintain and improve the health of forest and water resources.

## 4.3 Recommendations



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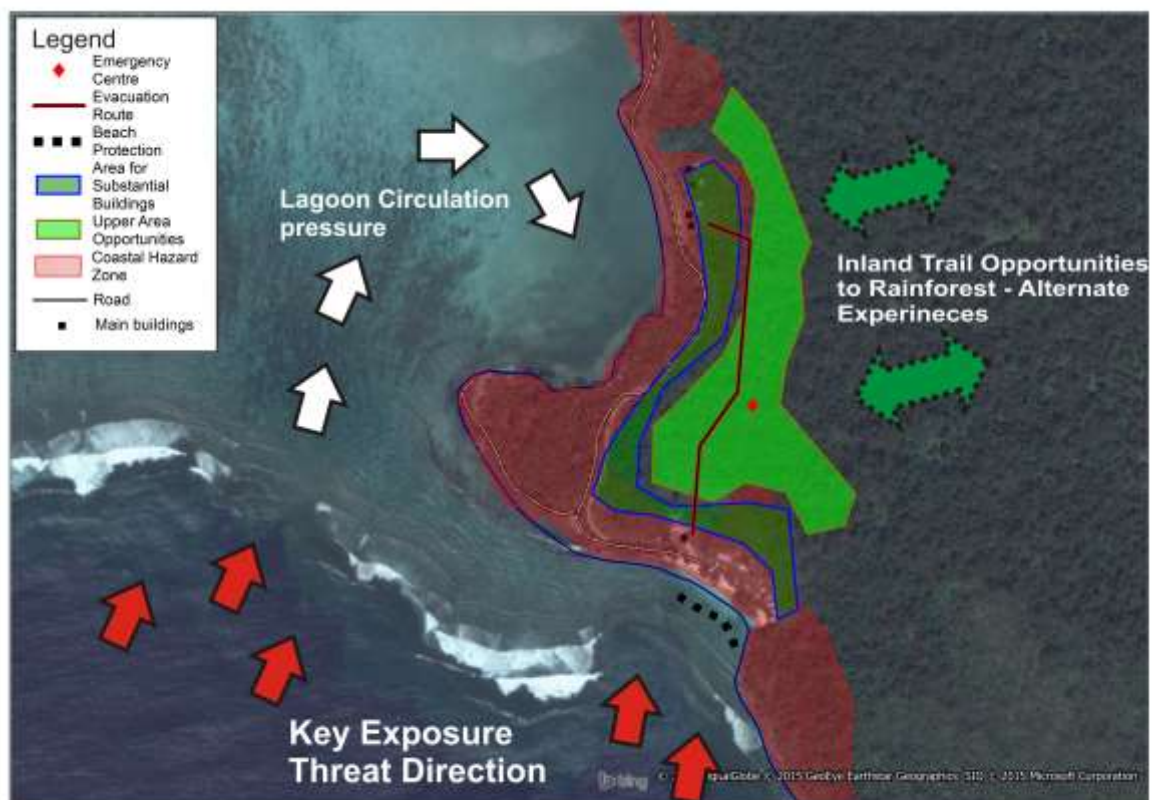
Figure 4.1 presents an overview of the structural options recommended for inclusion in the Management Plan for TDA6

Table 4.1 provides a summary list of the actions that have been prioritised for implementation as part of this project and also those that may be suitable for the Tourism Climate Change Small Grants Program.

Table 4.2 presents a proposed timeline for implementation of the prioritised actions.

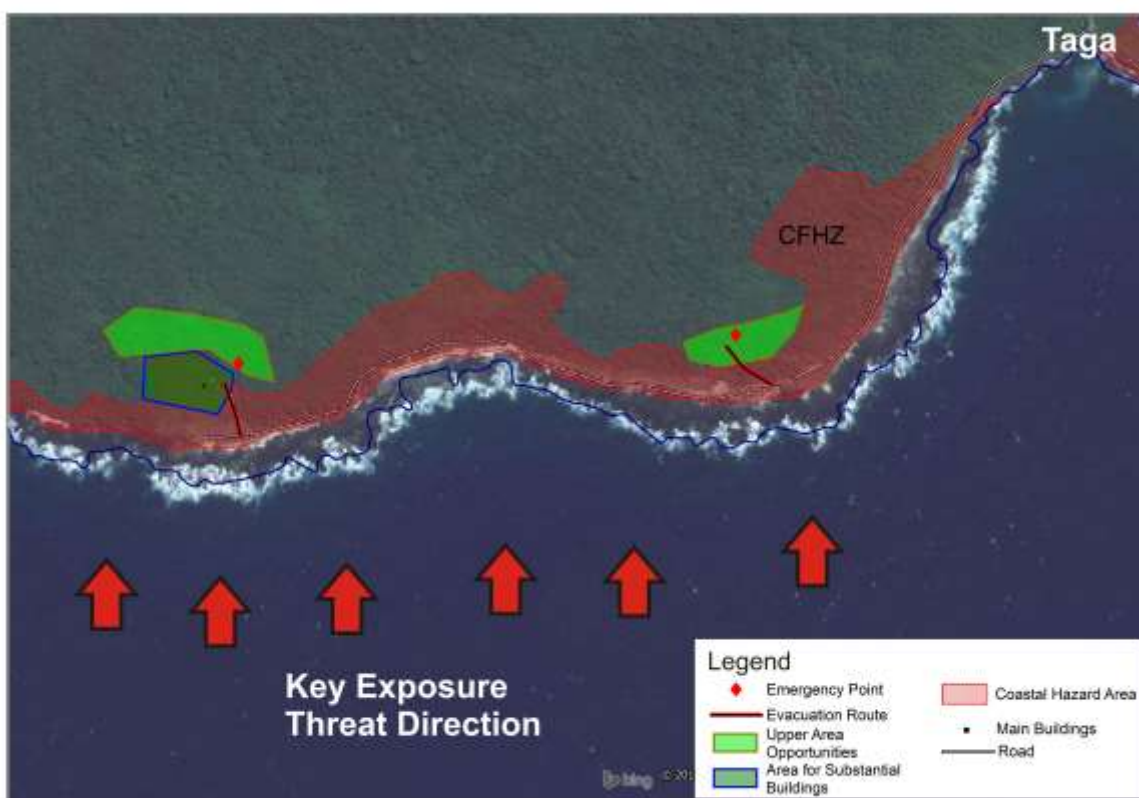
Table 4.3 provides a summary list of adaptive actions that emerged from the preparation of the Management Plans. It is recommended that where possible, STA support tourism operators to make approaches to the relevant project or government organisation to facilitate inclusion of those actions in other projects or programs.





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Figure 4.1 Overview of Structural Management Plan Options for Palauli





**Figure 4.2 Overview of Structural Management Plan Options for Palauli**

**Table 4.1 Priority Activities to take place under the Enhancing the Resilience of Tourism Reliance Communities to Climate Change Risk Project**

Activity	Outputs	Targeted (Operator/Prospective Operator/Community)	Priority	Commence	Duration	Budget Allocation (USD)	Relevant Technical Guideline
<b>Shoreline Protection</b>							
Knowledge sharing and transfer for tourism operators and community members in strategies and techniques to <b>protect the shoreline</b> and improve coastal defences including sea-wall construction and wave protection measures to reduce vulnerability.	Workshops developed and delivered to tourism operators and tourism reliant communities to share knowledge about shoreline protection.	Tourism operators and communities	Medium	January 2016	12 months		5
Utilising <i>Monitoring the Beach Technical Guidelines for Tourism Operators</i> , implementation of a Sandwatch (or equivalent) program for ongoing <b>beach monitoring</b> and knowledge transfer about beach conditions	Ongoing monitoring program, including use of education tools, established in each village	Community	High	September 2015	18 months		5
<b>Enhanced Design and Siting of Tourism Facilities and Surrounding Landscape</b>							
<b>Improved climate resilience of tourism related buildings</b> , such as beach fale, sanitation facilities and associated structures by implementation of prioritised elements of <b>Climate Conscious Sustainability Plans</b> by individual tourism operators or groups of	<ol style="list-style-type: none"> <li>1. Training developed and delivered for tourism operators about climate smart design, siting and standards and the application of the <i>Climate Smart Design and Siting Technical Guidelines for Tourism Operators</i>.</li> <li>2. Tourism operators assisted to develop long term <b>Climate</b></li> </ol>	Tourist operators	High	September 2015	2-3 years		3

Activity	Outputs	Targeted (Operator/Prospective Operator/Community)	Priority	Commence	Duration	Budget Allocation (USD)	Relevant Technical Guideline
tourism operators.	<p><b>Conscious Sustainability Plans</b> utilising <i>Planned Retreat Technical Guidelines for Tourism Operators</i>.</p> <p>3. Prioritised elements of Climate Conscious Sustainability Plans implemented.</p>						
<b>Water Resources Management</b>							
<p><b>Improved Water Security</b> development of an <b>Integrated Rainwater Use and Capture Plan</b> for each tourism facility.</p>	<ol style="list-style-type: none"> <li>1. Training developed and delivered for tourism operators in integrated water resource management techniques including the application of the <i>Water Resources Security Technical Guidelines for Tourism Operators</i>.</li> <li>2. Tourism operators assisted to develop <b>Integrated Rainwater Use and Capture Plan</b> utilising <i>Water Resources Security Technical Guidelines for Tourism Operators</i>.</li> </ol>	Tourist operators	High	September 2015	6 months	\$81,429	4
<p><b>Implementation of Integrated Rainwater Use and Capture Plans</b> through installation of water tanks, guttering, pumps, filters etc by individual accommodation providers or groups of accommodation providers.</p>	Individual tourism operators or groups of tourism operators make application through the Tourism Climate Change Small Grants Scheme.	Tourist operators	High	September 2015	12 months	Tourism Climate Change Small Grants Scheme	4

Activity	Outputs	Targeted (Operator/Prospective Operator/Community)	Priority	Commence	Duration	Budget Allocation (USD)	Relevant Technical Guideline
Utilising <i>Revegetation and Landscaping Technical Guidelines for Tourism Operators</i> , establish demonstration sites for <b>landscaping initiatives around waterways and estuaries</b> including planting of vegetation and bio-shields to assist with increasing the resilience of waterways and improved water quality.	Revegetated foreshore demonstration sites established in conjunction with each village	Community	Medium	January 2015	18 months	\$40,000	4
<b><i>EcoSystem Based Responses including Development of Climate Conscious Tourism Products, alternative Tourism Sites and Recreational Activities</i></b>							
Develop and deliver <b>climate change resilience training</b> for tourism operators and prospective tourism operators	Training in climate change resilience developed and delivered to tourism operators and prospective tourism operators.	Tourism operators and prospective tourism operators	High	September 2015	12 months	\$10,000	6
Building on the outcomes of the Participatory 3D Mapping and previous work by STA and with ongoing consultation with the community, develop implementation plan for tourism opportunities based on <b>cultural, archaeological and natural attraction identification development study</b>	<ol style="list-style-type: none"> <li>1. Cultural, archaeological and natural attraction development study undertaken in consultation with the community</li> <li>2. Implementation plan developed</li> </ol>	Community	Medium	January 2016	18 months	\$61,429	6
Assist tourism operators, prospective tourism operators and villages to increase climate change resilience of local tourism by	Useful resources and support available to tourism operators and prospective tourism operators who are considering diversifying tourism offerings or	Tourism operators, prospective tourism operators and community	Medium	January 2016	2 -3 years	\$50,000	6

Activity	Outputs	Targeted (Operator/Prospective Operator/Community)	Priority	Commence	Duration	Budget Allocation (USD)	Relevant Technical Guideline
<p>diversifying tourism offerings through:</p> <ul style="list-style-type: none"> <li>• <b>development of climate conscious tourism products</b> based on cultural, archaeological and natural resources identification.</li> <li>• identifying and planning for <b>infrastructure requirements to support diversified tourism activities</b></li> <li>• identifying pathways for funding the design and construction of those requirements.</li> <li>• building sustainability of diversified tourism offerings through facilitating access to <b>“Business Incubator”</b> support for businesses or prospective businesses within the tourism supply and value chain, addressing <ul style="list-style-type: none"> <li>○ Business management and marketing</li> <li>○ Mentoring/support</li> </ul> </li> <li>• Regulatory framework</li> </ul>	developing services within the tourism supply and value chain						



Activity	Outputs	Targeted (Operator/Prospective Operator/Community)	Priority	Commence	Duration	Budget Allocation (USD)	Relevant Technical Guideline
<b><i>Disaster Preparedness and Emergency Facilities in Case of Disaster Events</i></b>							
Improve <b>warning/escape route signage</b> in tourist accommodation.	Adequate written information about escape routes and procedures displayed for guests in tourist accommodation	Tourist operators	High	September 2015	6 months		-

**Table 4.2** Timeline for implementation of prioritised activities

Item	Description	2015						2016												2017											
		7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
3	Training Program - Climate Resilience																														
4	Training Program - Climate Smart Design																														
5	Ongoing Monitoring (Sandwatch) Program																														
6	Water Security Planning Tool																														
8	Business Incubator																														
9	Climate Conscious Sustainability Plans																														
10	Cultural and Natural Asset Identification																														
11	Climate Conscious Tourism Products																														
12	Marketing Plan																														
13	Pathways for infrastructure funding																														

**Table 4.3 Activities identified during the Enhancing the Resilience of Tourism Reliant Communities to Climate Change Risk Project to be referred to other Projects or Organisations**

Activity	Action Targeted (Operator/Prospective Operator/Community)	Priority	Commence
<b><i>Shoreline Protection</i></b>			
Review existing coastal defences and access structures and plan for development and implementation of appropriate new access structures and coastal defences	Refer to responsible body under CIM Plan	Medium	2-5 years
Coral seeding and crown of thorn removal to improve the resilience and barrier role of reefs	Support an approach to MNRE Forestry Division	Low	1-3 years
Improved enforcement of environmental protection legislation and agreements eg sand mining, land clearing, wetland management and protection, marine conservation areas	Recommend consideration as part of the Village Sustainability Plans	High	1-3 years
<b><i>Water Resources Management</i></b>			
Establish <b>emergency water supplies</b> within villages through development of agreed processes and installation of the necessary infrastructure (tanks, guttering) to capture run off from identified large roof area (eg school, church)	Recommend consideration as part of Village Sustainability Plans and support approaches to: <ul style="list-style-type: none"> <li>• Red Cross</li> <li>• Civil Society Support Program</li> </ul>	High	18 months
<b><i>Development of Climate Conscious Tourism Products, alternative Tourism Sites and Recreational Activities</i></b>			
Identify and develop <b>market niche</b> for the TDA reflecting diversified tourism offerings and developing <b>marketing plan for TDA</b> within broader Samoan tourism brand.	Recommend consideration by STA	Medium	1-3 years

<b>Disaster Preparedness and Emergency Facilities in Case of Disaster Events</b>			
Build/complete/maintain <b>escape routes</b>	Recommend consideration as part of the Village Sustainability Plans and support an approach to DMO	High	6 months
Improve <b>warning/escape route signage</b> within villages and along access and escape routes.	Recommend consideration as part of the Village Sustainability Plans and support an approach to DMO	High	6 months
Appropriate <b>siren</b> and location of siren in each village	Support an approach to DMO	High	6 months
Appoint and train 1 to 2 community <b>disaster wardens</b> per village	Recommend consideration as part of the Village Sustainability Plans and support an approach to DMO	Medium	12 months
Construct <b>disaster/safe houses</b> for each village including first aid centre.	Recommend consideration as part of the Village Sustainability Plans and support an approach to DMO	Low	1-3 years





## **5. MONITORING AND EVALUATION**

Specific Monitoring and Evaluation (M&E) recommendations do not form part of this current project. However, it is understood that M&E will be undertaken consistent with the overall M&E measures as detailed within Table 4 of IPA 2015b.

## 6. REFERENCES

Government of Samoa (2013), *Enhancing the resilience of tourism-reliant communities to climate change risks Project Document*.

IPA (2015a) *Enhancing the Resilience of Tourism-Reliant Communities to Climate Change Risks – Inception Report* prepared for Samoa Tourism Authority

IPA (2015b) *Enhancing the Resilience of Tourism-Reliant Communities to Climate Change Risks – Implementation Plan* prepared for Samoa Tourism Authority

Ministry of Natural Resources, Environment and Meteorology (2011) *National Adaption Program of Action - Samoa*

Ministry of Natural Resources and Environment *Coastal Infrastructure Management (CIM) Plans IAMP-1*

Ministry of Natural Resources and Environment *Coastal Infrastructure Management (CIM) Plans SIAM-2*

Pilot Programme for Climate Resilience (2011) *Samoa Strategic Programme for Climate Resilience (SPCR)*

Samoa Tourism Authority *National Tourism Climate Change Adaption Strategy for Samoa 2012-2017* funded by AusAid under NAPA4

Samoa Tourism Authority *Samoa International Visitor Survey 2012-13*

Samoa Tourism Authority *Samoa Tourism Sector Plan 2014-2019*

Samoa Tourism Authority (2012) *National Tourism Climate Change Adaptation Strategy for Samoa*, Government of Samoa, Apia Samoa.

Williams, S & Faasau, O V (2015). *Final Report, Status Review of the National Coastal Infrastructure Management Plans in Samoa*, Prepared for the Planning and Urban Management Agency, Ministry of Natural Resources and Environment, under the Adaptation Fund – Enhancing Resilience of Coastal Communities of Samoa to Climate Change Project