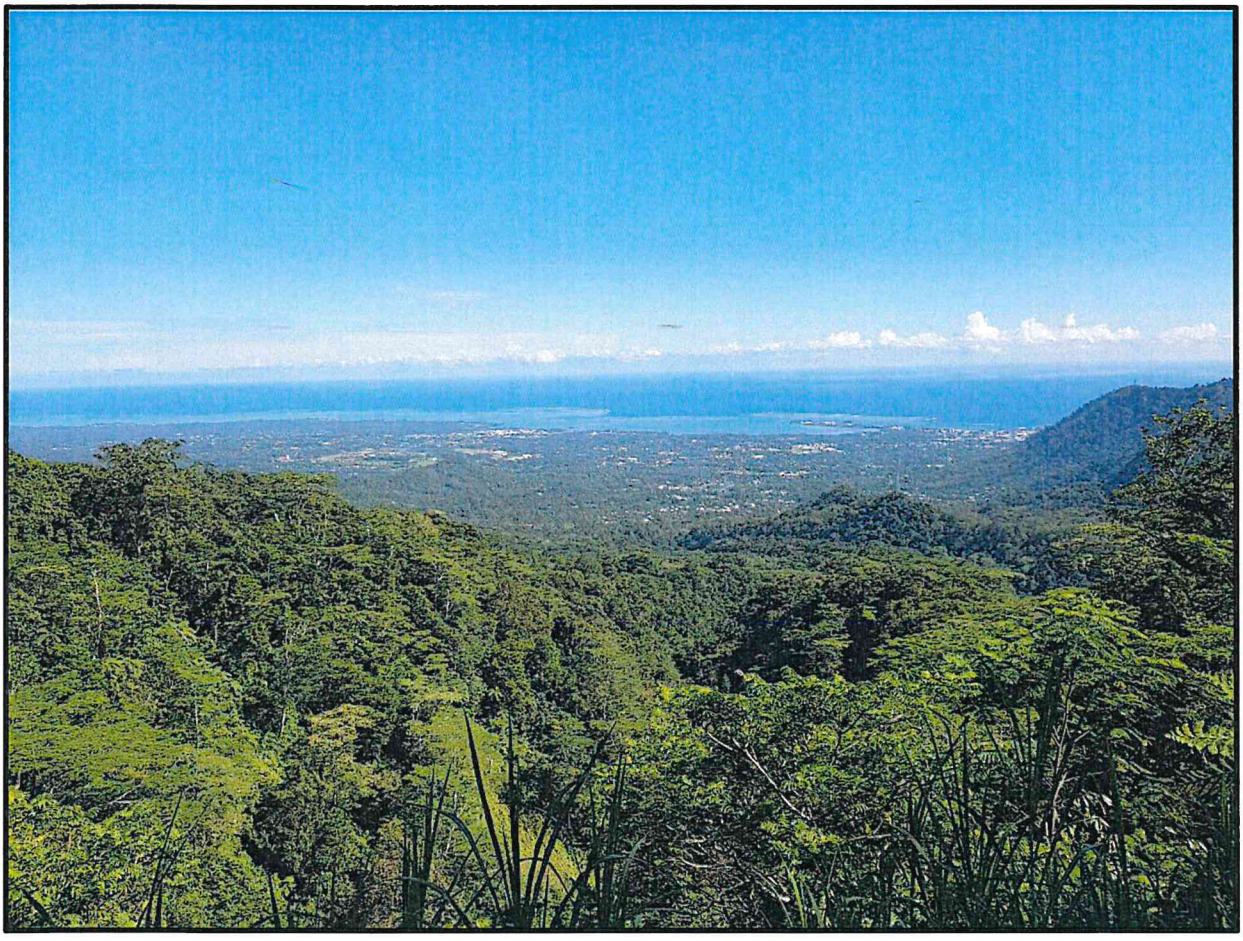
Management Plan for Malololelei Conservation Area 2024-2033



Prepared by the PES Consultancy Team, January 2024

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Acknowledgements

The management plan preparation team would like to thank the landowners of the Malololelei conservation area for setting aside their land for conservation, namely the Catholic Church of Samoa, Bluebird Lumber and Hardware Ltd and the Government of Samoa. Through your commitment this land as well as its constituent natural and cultural resources will be protected in perpetuity for the benefit of the people of Samoa. The team would also like to thank the neighbouring communities of Moamoa fou, Malololelei, Afiamalu and Tiapapata for your support for this critical conservation area for Samoa. *Faafetai tele mo le tou fesoasoani i lenei poloketi.*

Acronyms

CA Conservation Area
DEC Division of Environment and Conservation (of MNRE)
EFA Eligible Forest Area
IUCN International Union for the Conservation of Nature
KBA Key Biodiversity Area
MCF Malololelei Conservation Foundation
MNRE Ministry of Natural Resources and Environment
MOA Memorandum of Agreement
MRR Malololelei Recreation Reserve
NGO Non-Governmental Organisation
PC Project Coordinator
PES Payment for Ecosystem Services
SCS Samoa Conservation Society

Executive summary

This document is a management plan for the conservation of the natural resources and biodiversity of the Malololelei Conservation Area (CA) for the period 2024-2033 (10 years). The Malololelei CA is located near the centre of Upolu and covers an area of approximately 640 hectares (1580 acres) and ranges in elevation from 120m to 620m asl. The CA protects the upper Gasegase catchment, one of Apia's three main catchments within the Apia Catchments Key Biodiversity Area (KBA). A particular focus of the conservation of the Malololelei CA will be to certify the project as a carbon project and Samoa's first payment for ecosystem services (PES) project.

This management plan describes the vision, targets, threats, objectives and proposed strategies and rules for the conservation and maintenance of the forests and biodiversity of the Malololelei CA. Conservation involves the maintenance of the ecological components of soil, water and fauna and flora, the ecological processes including water flow, carbon cycles, connectivity between land and sea, including species movements as well as the ecosystem services including all the human benefits provided by the CA. Detailed workplans and costed implementation plans will need to be prepared at a later date for implementation of project strategies.

The Malololelei CA is owned by three landowners – namely the Catholic Church, the Government of Samoa and Bluebird Lumber and Hardware Ltd. No people live within the CA but adjacent to the project area to the north and south are recent subdivisions (formerly Catholic land) with freehold landowners and low-density housing. Although around 80% of the project area is forested, parts of the CA are invaded with invasive plants and in need of restoration.

A 2015 baseline survey of the Malololelei area confirmed the conservation values of the area and its priority for conservation. Biodiversity recorded in the site includes the following:

- 42 tree species, including the endangered bush palm, *Clinostigma samoensis*
- 21 bird species plus an uncorroborated observation of the Tooth-billed Pigeon (*Didunculus strigirostris*)
- 5 butterfy species
- 2 flying fox species

The management planning process was conducted over 12 months starting with a review of the existing biological data. Stakeholders were consulted on the draft plan in November 2023 and the draft management plan was discussed at a community landowner meeting held on November 24, 2023 and was endorsed on the 5th of June 2024.

1. Introduction

This document is a Management Plan for the conservation of the natural resources and biodiversity of the Malololelei Community Conservation Area (CA) for the period 2024-2033 (10 years). The Management plan is a living document that will evolve and improve through learning from implementation. The Management plan will be reviewed at least every 5 years and may be re-developed or extended beyond the current plan period subject to consultation with stakeholders. It was prepared for the Government of Samoa by a consultancy team including James Atherton and Faleafaga Toni Tipamaa of the Samoa Conservation Society and Robbie Henderson and Sarah Liversidge of the Nakau Programme.

The Malololelei CA is located near the centre of Upolu and covers an area of approximately 640 hectares (1,580 acres) (see Figure 1). The CA is the site of Samoa's first "Payment for Ecosystem Services" (PES) project where payments for the maintenance of the ecosystem services are being sought from the international carbon market. However, the financing through the carbon market is being used to achieve broader impacts, including flood mitigation, and maintaining healthy catchments and biodiversity.

The Malololelei CA Management Plan was developed following biodiversity surveys conducted in 2015 (DEC 2015) and as well as consultations with landowners in November 2023. The purpose of this management plan is to identify the strategies for the conservation and sustainable management of the natural resources of the Malololelei CA.

The plan recognizes three broad stakeholders and interest groups whose collective goal is to sustainably manage the natural resources of the CA: the interests of the Government of Samoa as stated in its laws and policies; the individual interests of landowners and finally community interests and collective concerns and responsibilities. The plan mediates between the three stakeholder groups by developing mutually agreed rules that promote sustainability.

The plan has been developed in conjunction with a forest carbon PES project designed under the Nakau Programme to meet requirements of the Plan Vivo Standard (PV Carbon). Full implementation of this plan is dependent upon finance to be obtained from production and sale of carbon credits on the voluntary carbon market. As such, various design elements of this plan (e.g. monitoring) are designed to meet carbon standard requirements.

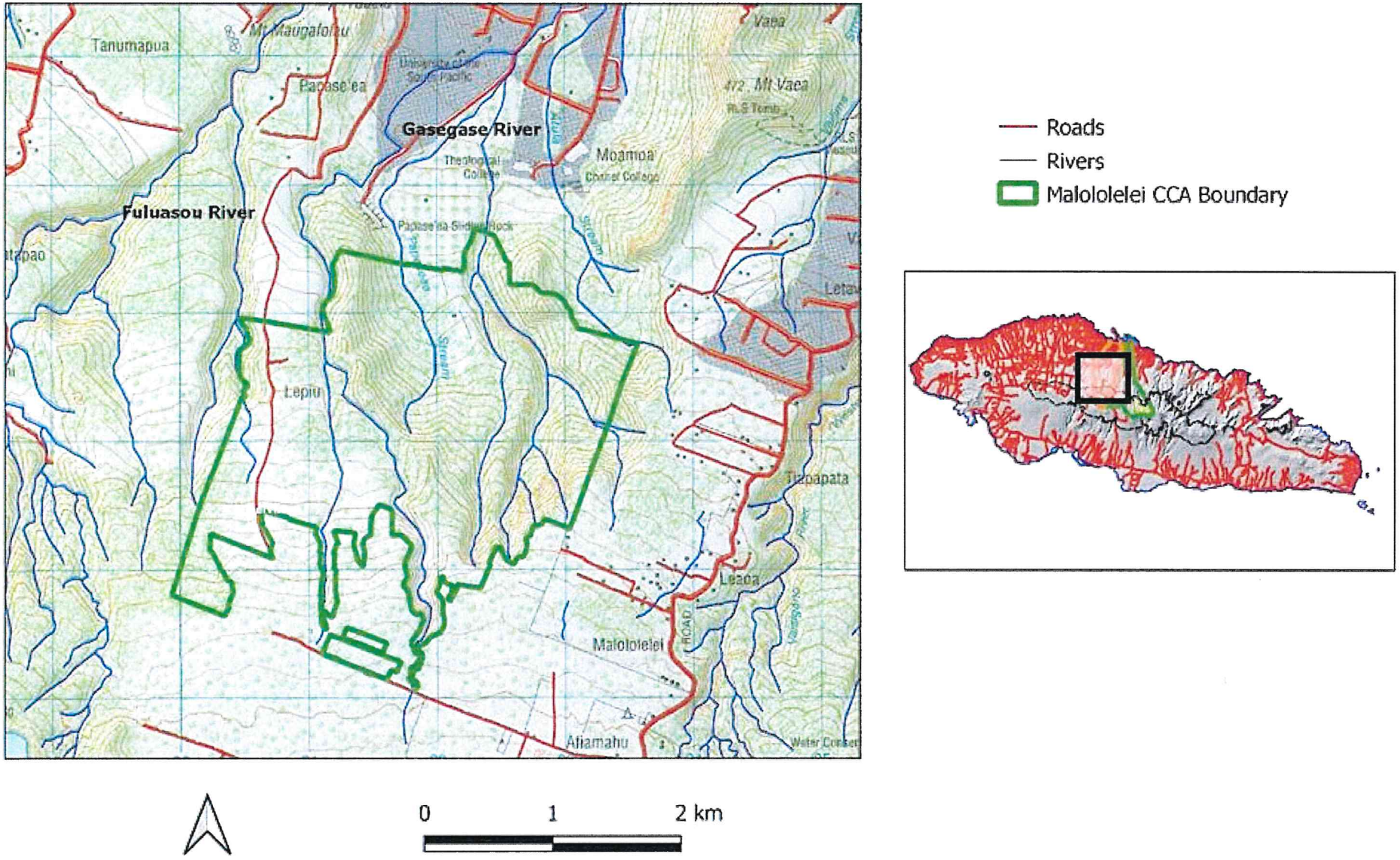
1.1 Purpose

This management plan describes the vision, targets, threats, objectives and proposed strategies and rules for the conservation and maintenance of the forests and biodiversity of the Malololelei CA. Conservation involves the maintenance of the ecological components of soil, water and fauna and flora, the ecological processes including water flow, carbon cycles, connectivity between land and sea, including species movements as well as the ecosystem services including all the human benefits provided by the CA. The plan also seeks to contribute to mitigating flooding risk to Apia through restoration and protection of forest in a key watershed areas.

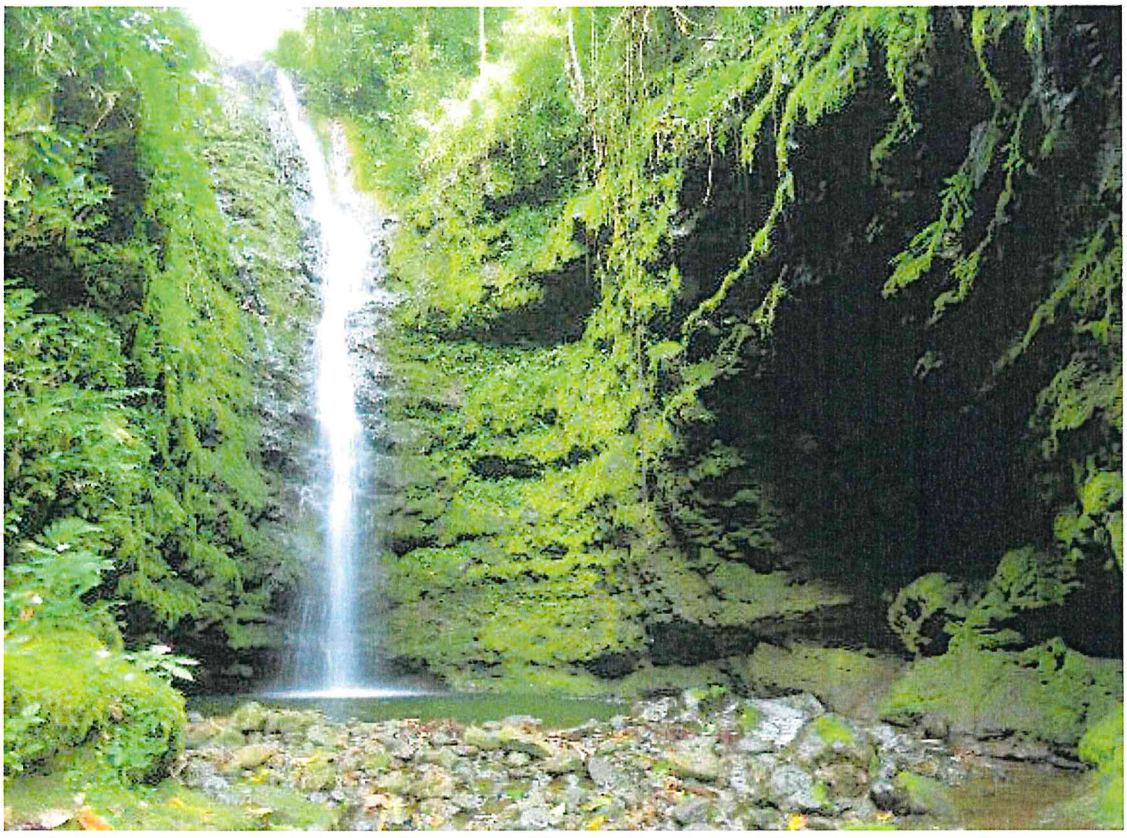
1.2 Process

The management planning process was conducted over 18 months starting with a review of existing biological data (DEC 2015). Landowners were consulted on the draft plan during late 2023. The management plan was discussed at a landowner workshop held on November 24, 2023 and official endorsed on the 5th of June 2024 (Annex 2).

Figure 1. Location and general features of the Malololelei CA



Above: The headwaters of the Gasegase stream at Malololelei showing the steep and thickly wooded catchment with high biodiversity values



Above: A waterfall in the upper Gasegase stream at Malololelei

2 Legislative and policy context

2.1 Core legislation

There are several laws that relate to the establishment of conservation areas in Samoa or for the preparation of management plans for the conservation of such areas.

The *Forest Management Act 2011* consolidates the law for the sustainable management of forests and makes provisions for the establishment of management plans for national parks and reserves.

The draft *Environmental Management and Conservation Bill 2014* specifically covers the establishment of conservation areas as well as the development of community conservation area management plans. This law is expected to be put before parliament very soon for enactment (Sala Josephine Stowers pers.comm).

3 Site description

3.1 General description

The Malololelei CA is located near the centre of Upolu around 7km south of downtown Apia (see Figure 1). Included in the CA is a small existing private reserve (18 Ha) established by Bluebird Lumber and Hardware Ltd and called the Malololelei Recreation Reserve (MRR). The reserve is under an MOU between the Ministry of Natural Resources and Environment (MNRE) and the landowner which was signed in June 2015 and establishes a partnership between MNRE and the landowner to conserve the land for biodiversity conservation purposes and with MNRE providing strategic guidance.

No people live in the CA, however, adjacent to the project area to the north and south are recent subdivisions (formerly Catholic land) with freehold landowners and low-density housing. Adjacent villages include Malololelei, Afiamalu East and Afiamalu West to the south of the CA and Moamoa Fou to the north (see Figure 1). The CA covers approximately 640 hectares and ranges in elevation from 120m to approximately 620m asl. The project site includes one major river catchment- the Gasegase river stream which flows northwards towards Apia. The CA is entirely within the Apia Catchment Key Biodiversity Area or KBA. Although around 80% of the project area is forested (the rest is mostly former livestock areas) a sizable portion of the forest is degraded and invaded by invasive plants and in need of restoration.

3.2 Landowner groups and communities

The CA and management plan cover land owned by the following groups (see Figure 2):

1. Government land managed by the Ministry of Natural Resources and Environment (MNRE). This includes land acquired by Government for watershed protection over the past 10 years totalling around 75 Ha. The more recently purchased land parcels were purchased from the Catholic Church and the National Provident Fund (NPF). The Government land parcels included in the project consists of non-forest or highly degraded forest that is intended to be reserved and restored. The plans for restoration are linked to carbon financing to enable replanting and maintenance of native species. The beneficiary of the carbon project on Government land would be the Samoan Government through MNRE. However, MNRE intends to enter into partnerships and benefit sharing arrangements (e.g. for employment) with local communities and traditional landowners who previously held rights to land in the area (see details below).

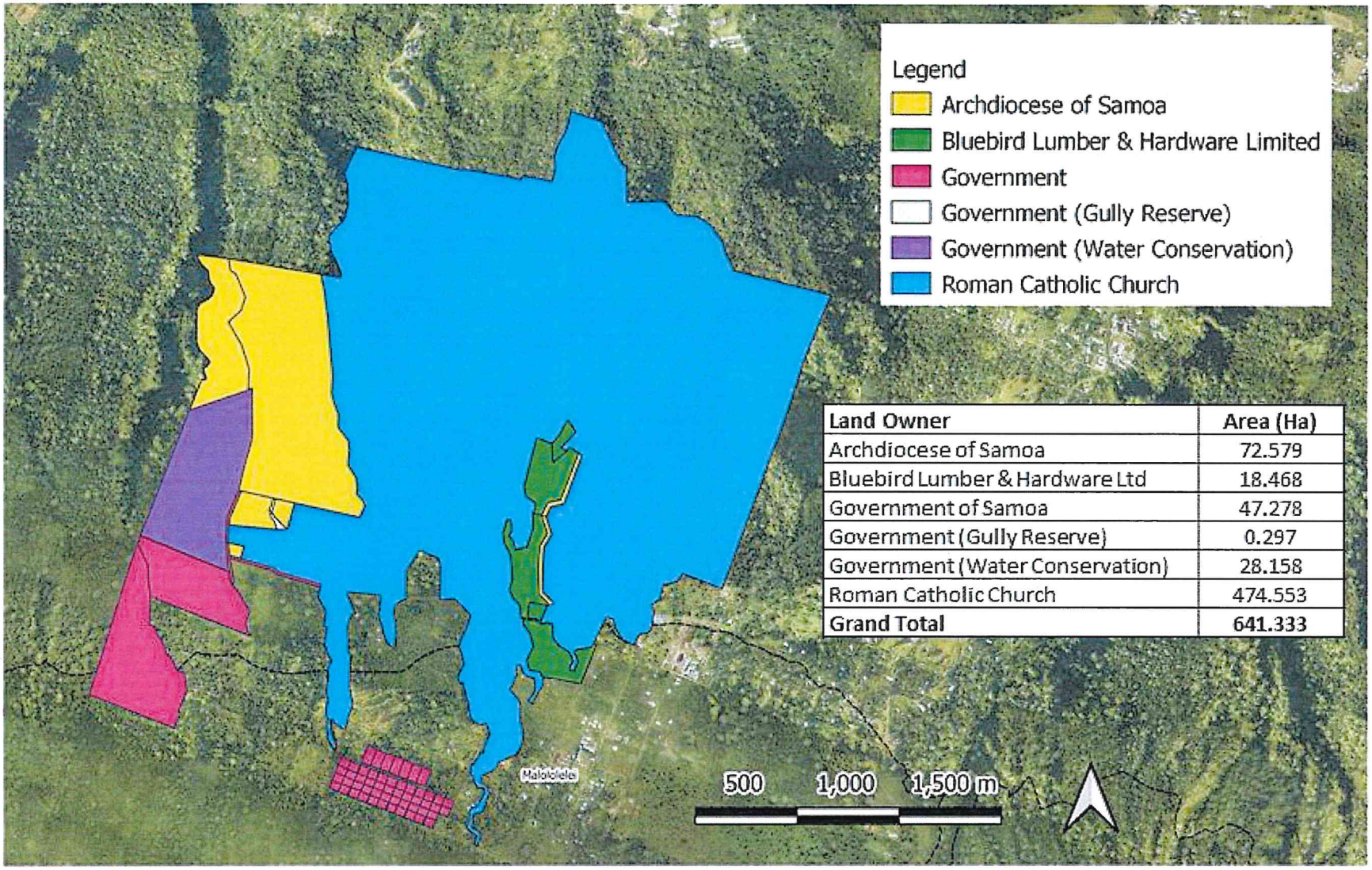
2. Bluebird Lumber and Hardware Ltd (Private Landowner). Bluebird Lumber and Hardware Ltd is a private landowner that have offered 18 Ha of freehold land to be included in the CA under this management plan. The land portion is currently termed the Malololelei Recreation Reserve. Mr Fa'amausili Tuiaopo Ah Liki is the Managing Director and main shareholder of the company. The

land comprises areas of remnant forest to be protected, and non-forest and degraded areas suitable for restoration activities and which is under an MOA with the Government of Samoa.

3. Catholic Church. The Catholic Church is a major owner of freehold land in Upolu and owns around 547 Ha of the upper Gasegase catchment that is included in the CA under this plan. All church assets, including land, are managed by the Church's Finance Committee (FC). This seven-member committee are appointed by the Archbishop and reports to the Archbishop on all financial and legal matters affecting the church. Members serve three-year terms. The secretary of the FC is the Church's Chief Financial Officer. According to Samoa's 2016 census there were 36,766 Catholics in Samoa, out of a total population of 195,979 making the Catholic Church the second largest Church in Samoa. Over the past decade the Church has been subdividing land for rural and residential development in the catchment, which has contributed to the high deforestation rate. Under the proposed project the Catholic Church would commit an area of their land to the forest carbon project; the majority of this land to be protected is forested.

4. Local communities and traditional landowners. The proposed CA lies adjacent to the small communities of Moamoa Fou, Malololelei, and Afiamalu East and West (see Figure 1). These communities are relatively recently established and include residents from different parts of Samoa, most of whom have bought freehold land. The residents do not hold land or carbon rights to the CA, however some residents have historic connections through their customary affiliations. A small number of residents utilize uninhabited areas of the project area for subsistence gardens and firewood collection but to a minimal extent. The management plan will consider local community dependency on the forests. The intention is to ensure forest dependent people are not disadvantaged by the conservation activities, and where possible provide opportunities for affected communities to benefit from the conservation and PES activities, such as through employment.

Figure 2. Land ownership of the Malololelei CA



Land Owner	Area (Ha)
Archdiocese of Samoa	72.579
Bluebird Lumber & Hardware Ltd	18.468
Government of Samoa	47.278
Government (Gully Reserve)	0.297
Government (Water Conservation)	28.158
Roman Catholic Church	474.553
Grand Total	**641.333**

3.3 Geographical features

The topography of the CA is mostly rugged river valleys, ridges and tributaries of the upper Gasegase river catchment as well as the headwaters of one small tributary of the Fuluasou river in the far west of the site (see Figure 1). Around 1/3rd of the CA has slope greater than 30^0. The geology of the site is the Salani volcanics, which is relatively old (for Samoa), heavily weathered and deeply incised lava flows around 750,000 years old (Jopling 2019).

3.4 Biodiversity

The Malololelei CA has high biodiversity value because it is still relatively densely forested and is in the transition zone between lowland and montane rainforest. Although the area has been disturbed by cyclones and agricultural activity, the area has many large native trees still standing, in particular the keystone banyan trees or Aoa (*Ficus prolixa* and *Ficus obliqua*) and other large native trees that are a habitat for native biodiversity. A summary of key findings of various biodiversity surveys done in Malololelei is provided below (MNRE 2015).

Forty two native trees were recorded in the CA, including the threatened bush palm (*Clinostigma samoensis* IUCN Redist 2022-Endangered). The undergrowth is mostly ferns and low shrubs, with 9 introduced species and 11 invasive species. Although the physical and natural features of Malololelei had been altered for commercial purposes (housing, plantations and road tracks), the forest is still relatively intact with a good cover of native tree and other plant species. All layers of the forest are present with Aoa and Tamaligi (*Albizzia* species) being the main emergent trees, whilst ferns and other native shrubs make up the ground cover.

Invasive plant species such as the African rubber or Pulu vao (*Funtumia elastica*), African tulip or fa'apasi (*Spathodea campanula*), Panama rubber or Pulu mamoe (*Castilla elastica*) and Tamaligi (*Albizzia)* species dominate in parts of the secondary forests by number of tree stems. Native seedlings such as Tava (*Pometia pinnata*), Maali (*Canarium vitiense)* and Atone (*Myristica fatua*) establish themselves well as groundcover, but the dominancy of Pulu vao along with other invasive shrubs such as the Shoebutton Ardesia (*Ardesia elliptica*), Night blooming cestrum (*Cestrum nocturnum*) and vines and grasses hinder the growth of native seedlings and regeneration of native forest.

The area is rich in native birds with 21 land birds recorded including 2 invasive birds (the jungle and common myna), 3 seabirds and flying fox (*Pteropus samoensis*)- (IUCN Redlist 2022-Near Threatened) see table 1. The site has half the native birds and ¾ of the endemic birds of Samoa including good populations of the threatened Maomao (*Gymnomyza samoensis)*. An uncorroborated bird call was heard during the 2015 surveys that was suspected to be Samoa's national bird, the Critically Endangered Manumea (*Didunculus strigirostris*) although it disappeared before confirmation. In 2023 Tropical Shearwaters were observed in the CA, and may breed there (K.Baird 2023 pers. comm.)

Table 1. Birds recorded in the Malololelei forest in descending order of dominance (MNRE 2015 and Baird 2023 pers. comm.)

Common Name	Scientific Name	Samoan Name	Type (IUCN Red list category)
Terrestrial birds			
Crimson crowned fruit dove	*Ptilinopus porphyraceus*	Manutagi	Native
Wattled honeyeater	*Foulehaio carunculata*	Iao	Native
White rumped swiftlet	*Aerodramus spodio- pygius*	Peapea	Native
Samoan starling	*Aplonis atrifusca*	Fuia	Endemic
Pacific pigeon	*Ducula pacifica*	Lupe	Native

Common Name	Scientific Name	Samoan Name	Type (IUCN Red list category)
Cardinal honeyeater	*Myzomela cardinalis*	Segasegamauu	Native
Samoan triller	*Lalage sharpei*	Miti	Endemic
Many coloured fruit dove	*Ptilinopus perousii*	Manuma	Native
Jungle Myna	*Acridotheres fuscus*	Maina vao	Introduced/Invasive
Banded rail	*Gallirallus philippensis*	Vea	Native
White throated pigeon	*Columba vitiensis*	Fiaui	Native
Polynesian starling	*Aplonis tabuensis*	Fuia vao	Native
Samoan whistler	*Pachycephala flavifrons*	Vasavasa	Native
Polynesian triller	*Lalage maculosa*	Miti tai	Native
Red-headed parrotfinch	*Erythrura cyanovirens*	Segaula	Endemic
Mao (Samoan Forest honeyeater)	*Gymnomyza samoensis*	Mao	Endemic (Endangered)
Common Myna	*Acridotheres tristis*	Myna fanua	Introduced/Invasive
Samoan fantail	*Phipidura nebulosa*	Seu	Endemic
Flat-billed kingfisher	*Todirhamphus recurvi-*	Tiotala	Endemic
Scarlet robin	*Petroica multicolor*	Tolaiula	Native
Purple swamphen	*Porphyrio porphyrio*	Manualii	Native
Seabirds			
Brown noddy	*Anous stolidus*	Gogo	Native
White tern	*Gygis alba*	Manusina	Native
White-tailed tropic bird	*Phaethon lepturus*	Tava'e	Native
Tropical Shearwater	*Puffinus bailloni*	Tai'o	Native

The vegetation of the CA is mostly classified as secondary forest or forest dominated by introduced plant species with patches of native forest within (80% of the landcover) and farmland (20% of landcover principally for cattle or mixed crops such as taro and bananas). Between 1999 and 2013 around 74 ha of forest was converted to farmland (around 11% of the CA).

3.4.1 Significant Species

Significant species (species that are rare and/or threatened or have important ecological value) found in the CA, including those classified as threatened on the IUCN Red List 2022, as well as those considered locally significant are as follows.

Table 2. Significant species found in the Malololelei CA

Scientific name	Samoan Name (English Name)	Taxonomic Group	Reason for inclusion
Clinostigma samoensis	Niu vao (Samoan bush palm)	Plants (Palms)	IUCN Endangered
Columba vitiensis	Fiaui (White throated pigeon)	Birds	Locally threatened
Ducula pacifica	Lupe (Pacific pigeon)	Birds	Locally threatened
Emoia samoensis	Pili lape (Samoan skink)	Reptiles	IUCN Vulnerable

Scientific name	Samoan Name (English Name)	Taxonomic Group	Reason for inclusion
Ficus prolixa and Ficus obliqua	Aoa (Banyan trees)	Plants	Key stone species
Gymnomyza samoensis	Mao (Samoan Forest honeyeater)	Birds	IUCN Endangered
Pteropus samoensis	Pea vao (Samoan flying fox)	Flying Foxes (Mammals)	IUCN Near Threatened (Endangered in Samoa)
Puffinus bailloni	Taio (Tropical Shearwater)	Birds	Locally rare

3.5 Key threats

Several threats to the natural heritage of the Malololelei forests have been identified and can be divided into two main types: "direct" and "indirect". Direct threats are those that act directly on the natural resources, while indirect threats are the forces or root causes driving the threats. Many of the anthropogenic or man-made threats are of lower impact now than historically now that the land has been set aside for conservation.

There are four major direct threat groups: forest clearance for agriculture and residential subdivision, overharvest of native fauna and flora, invasive species and natural disasters such as from cyclones, heavy rainfall and to a lesser degree drought. The indirect threats or driving forces for these threats include population growth, demand for money or for increased consumption, development pressures and natural disasters exacerbated by climate change.

Forest Clearance
Clearing of the Malololelei forests for housing, timber, agriculture, cattle, gardening, and tree cropping was a major issue in the past but has now diminished significantly since the land is now under conservation. Unfortunately, much of the cleared land has been abandoned and has now become dominated by invasive species.

Invasive Species
As elsewhere in Samoa, invasive species are a major threat to the native biodiversity in the Malololelei CA. Of particular concern are the following four plant species: African rubber tree (*Funtumia elastica* African tulip, Panama rubber or Pulu mamoe (*Castilla elastica*), Faapasi (*Spathodea campanula*) and Tamaligi (*Albizzia)* species. In addition to invasive plants are rats (Polynesian rat and Ship rat), cats, myna birds (Jungle and Common mynas) and wild pigs. Since 2017 rats have been managed for conservation purposes by the Samoa Conservation Society and MNRE via a rat baiting project in a 56 Ha patch of the CA centred on the Malololelei Recreation Reserve.

Overharvest of native fauna and flora
Despite bans on hunting native birds and flying foxes, some animal species are harvested from the Malololelei forests including pigeons and flying foxes as well as freshwater prawns, eels, and wild pigs. The hunted bird and flying fox species include the pigeon species of Lupe (Pacific Pigeon, *Ducula pacifica*), Fiaui (White-throated Pigeon, *Columba vitiensis*) and Samoan flying fox (*Pteropus samoensis*)- all protected under national law (Protection of Wildlife Regulations 2004).

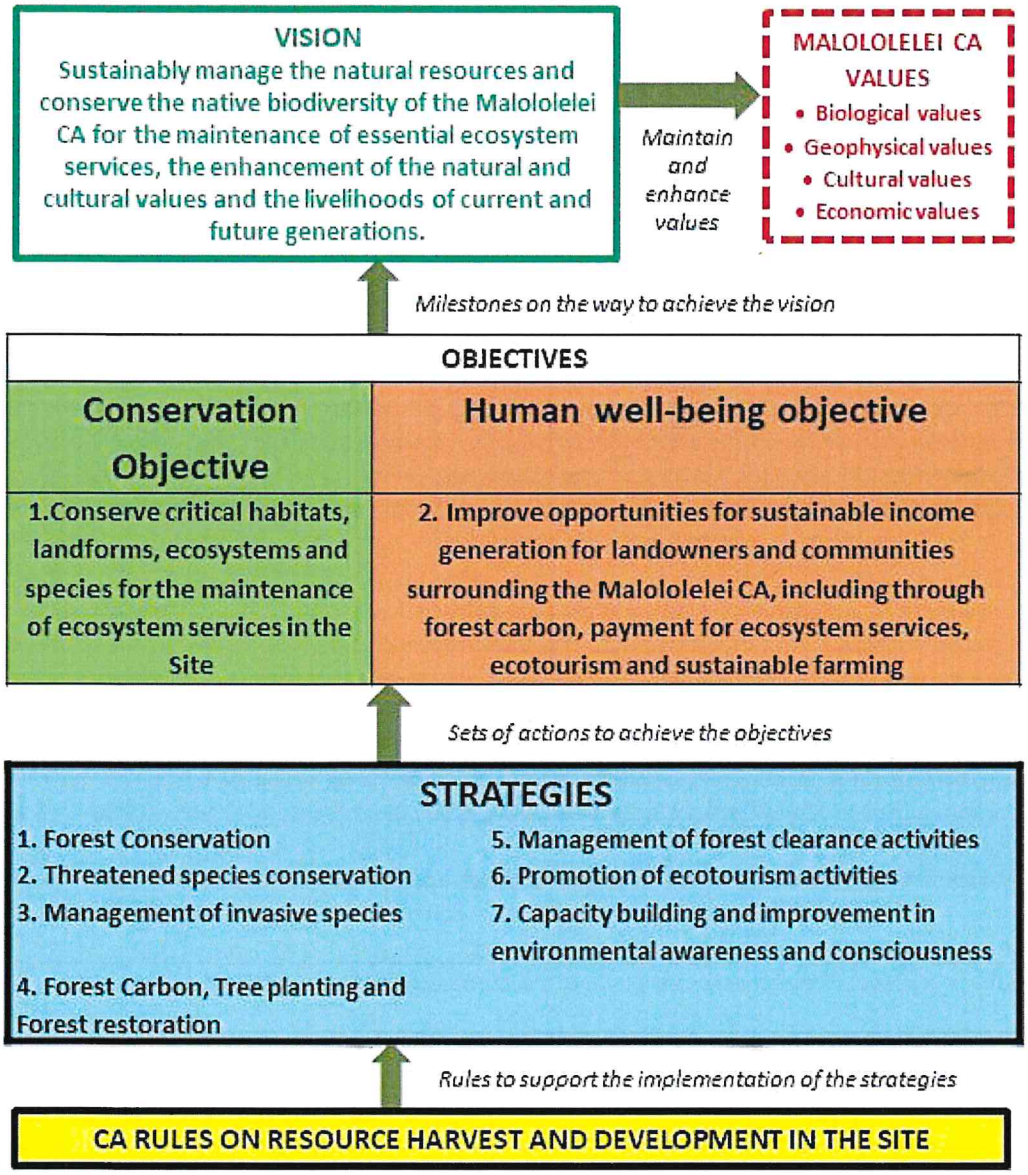
Natural disasters
Natural disasters such as cyclones, floods, fire, earthquakes and related phenomena such as tsunami are well recognised as major drivers of ecosystem change in the Pacific. Samoa is no exception and is particularly prone to cyclones with Apia experiencing approximately 10 tropical cyclones per decade. The Malololelei forests, like all areas in Samoa, have been impacted by many cyclones over the years including Cyclone Evan in 2012, and Gita in 2018 which blew down many trees in the CA. The best strategy to increase resilience against these natural disasters is to restore degraded areas with native plants,

to minimise further forest loss and to manage the spread of invasive species, especially invasive plants, all strategies that are included in this management plan.

4. Management context

The management plan follows a logical process and hierarchy down from a clear identification of the important values of the CA, a long-term vision to maintain and enhance those values, a set of intermediate objectives that are milestones on the way to achieving the vision as well as the strategy that outlines the actions and steps to be taken along the way. Finally, a set of CA rules established and enforced by the CA Management Committee for the use of the natural resources in the CA supports the strategies. The relationship and flow between all these elements can be illustrated diagrammatically as in Figure 2 below.

Figure 2. Relationship between key management plan elements



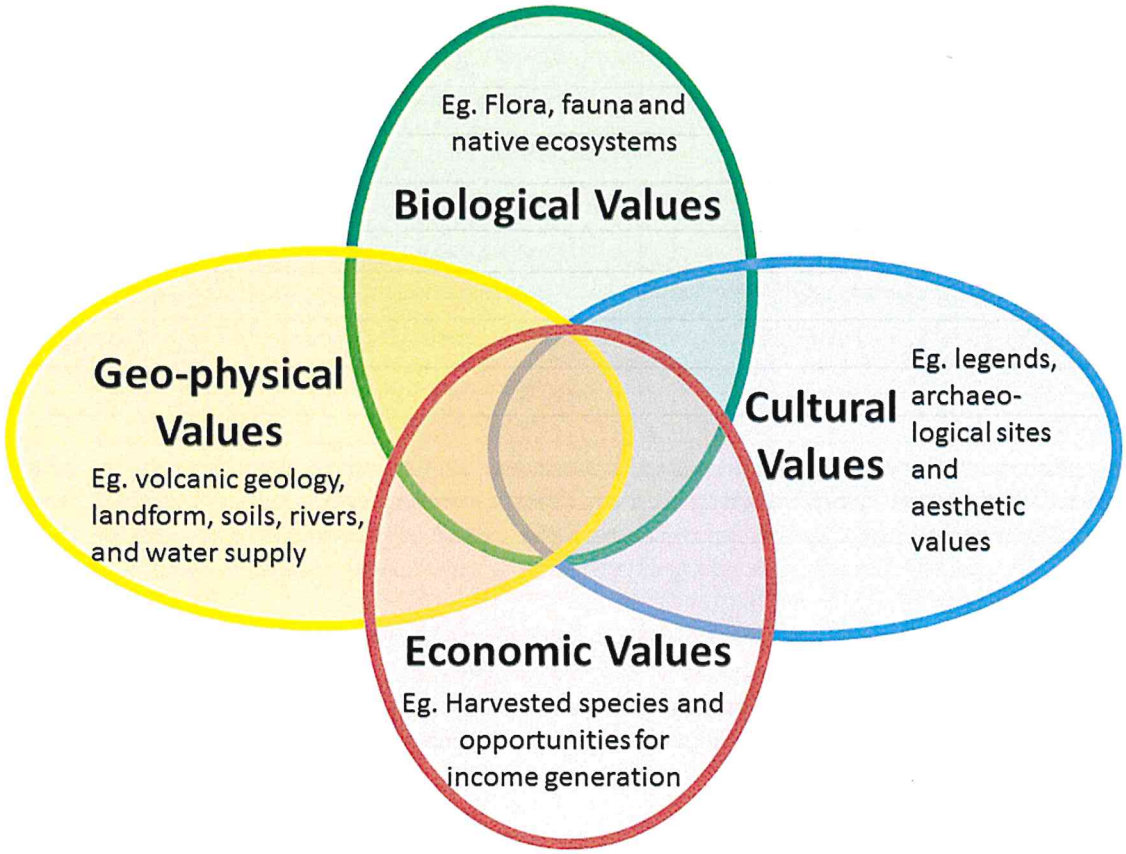
4.1 Conservation area values

The following are considered the values, or important features of the Malololelei CA, as identified by community groups and advisers. It is these values that the CA must try and maintain and ideally enhance.

- **Biological values** - the unique flora and fauna and ecosystems of the CA.
- **Geophysical values** - the unique geology, the landform and soils, and the streams and water supply.
- **Cultural values** - the unique cultural practices, legends, archaeological sites and aesthetic values.
- **Economic values** - the value of the CA as an internationally certified Payment for Ecosystem Services (PES) site and a site supporting the livelihoods of local people – from harvesting the natural resources as well as from ecotourism and other forms of livelihood generated from the CA.

Site values are all related, overlapping and influence each other as can be illustrated in Figure 3.

Figure 3. Values of the Malololelei CA



4.2 Vision statement

English: Sustainably manage the natural resources and conserve the native biodiversity of the Malololelei CA for the maintenance of essential ecosystem services, the enhancement of the natural and cultural values, and the livelihoods of current and future generations.

Samoan: Ia faaauuuina le puleaina tatau o alaga-oa faalenatura atoa ai ma le faasaoina ma le puipuia o le ola faalenatura o meaola I laufanua ma vaomatua o Malololelei ma le toe totoina o vaomatua ma le faaleleia o nofoaga taua faale aganuu aemaise o le tulaga i le soifua manuia o auga tupulaga mo nei ma a taeao

4.3 Guiding Principles

Several guiding principles have been identified that guide the implementation of the management plan.

- All landowners and forest dependent communities of Malololelei are stakeholders in the management of the CA.
- All inhabitants of Malololelei and visitors to the CA have responsibilities for the management of the CA.
- All actions and developments in the Malololelei CA should adhere to the management plan.
- The Government of Samoa and its NGO and other partners will help build the capacity of Malololelei CA Management Committee to implement the management plan.
- Management of the Malololelei CA shall be supervised by the Malololelei CA Management Committee which will have the legal authority to conduct its role.
- The Malololelei CA Management Committee shall be a sub-committee of the Malololelei Conservation Foundation.
- The CA management committee will have the power to set all rules and fines in the CA.
- The CA management committee shall have transparent and accountable processes as well as established mechanisms for grievances and dealing with disputes.
- The Malololelei CA will be managed in an *adaptive management* approach, whereby management strategies, actions, rules and fines will be revised as required based on changing circumstances or new information.

4.4 Management objectives

Management objectives are the milestones, intermediate results or desired changes that are necessary to achieve the vision. The objectives specify the desired changes in the factors (direct and indirect threats and opportunities) that need to be achieved in the short and medium-term. A good objective meets the criteria of being results oriented, measurable, time limited, specific, and practical.

Two main types of objectives have been identified for Malololelei: a conservation objective and a human well-being (or socio-economic) objective, reflecting the close inter-relationships between environmental conservation, improving livelihoods and maintaining culture and traditions. Table 3 identifies the 2 main objectives for the Malololelei CA.

Table 3. Management Objectives for the Malololelei CA

Conservation Objective	Human well-being Objective
1. Conserve critical habitats, landforms, ecosystems and species for the maintenance of ecosystem services in the Malololelei CA	2. Improve opportunities for sustainable income generation for landowners and communities surrounding the Malololelei CA, including through forest carbon, payment for ecosystem services, ecotourism and sustainable farming

5. Management strategies

A strategy is a set of actions with a common focus that work together to achieve project objectives and to deal with threats. Implementation of many of the strategies can commence immediately. Seven strategies have been identified for the achievement of CA objectives and to manage current and anticipated future threats, including climate change. A major assumption in these strategies is that by dealing with current threats to the Malololelei forests such as from agricultural activity or invasive species, that the resilience of the CAs to future threats such as climate change will be increased. Many strategies can influence multiple objectives and strategies - for example, increasing environmental awareness helps achieve all objectives and contributes to all strategies while dealing with invasive species promotes site and species conservation.

5.1 Forest protection & restoration

The current condition of the vegetation in the proposed CA includes tall forest, degraded forest, and non-forest areas. The principal threats to the sustainable land management status of these forests over the next 30 years and more are:

1. Deforestation (moderate threat).
2. Forest degradation (significant threat).
3. Continuation of non-forest areas (significant threat).

Key sustainable land management (SLM) interventions required to safeguard these areas and the PES project methodologies applied are shown in Table 4.

Table 4. Sustainable land management (SLM) interventions in the Malololelei CA

SLM Intervention	Activity Type	Baseline Activity	Project Activity
Forest protection	Avoided forest degradation and deforestation	Planned or unplanned forest degradation or deforestation permanently changing land use (e.g. conversion to farms or sub-division for housing)	Legal protection of forest whereby rights to deforest are relinquished for the project period as per an MOA between MNRE and the Malololelei Conservation Foundation. Management of the Conservation Area under this management plan
Restoration of formerly degraded lands	Afforestation/ Reforestation	Continued non-forest land use and arrested natural succession due to weeds and feral animals.	Reforestation through active planting of new forest, combined with assisted natural regeneration (weed control) and legal protection of new forest.

5.2 Conservation of threatened species

The project aims to conserve all native species in the CA. However, some species have been identified as specific targets because of their rarity or threat including the native bush palm (Niu Vao) the forest honeyeater (Maomao), native pigeons (Manumea, Lupe, Fiaui), fruit doves (Manutagi, Manuma) and flying foxes (Pe'a).

Samoa has laws banning the hunting of native birds (pigeons in particular) and flying foxes but there is little effort to enforce these laws. Much greater effort needs to be placed on raising awareness of these laws and why they are important and should be adhered to.

It is also recommended that keystone species (species that are fundamental to the ecological integrity of native ecosystems) are also protected, either under national law, or local bylaws within the CA. Such species include the large banyan or Aoa trees (*Ficus prolixa* and *F. obliqua*) as they are the home for many native species of plants and animals including important food sources for native birds as well as pigeons, fruit doves and flying foxes which are all critical for the pollination and dispersal of native plants.

The recommended immediate action for the conservation of species targets is:

- *Develop and agree on the rules for the management of target species indicating harvesting rules and hunting bans or hunting seasons for particular species.*

5.3 Management of invasive species

Invasive species are a major threat to the native biodiversity in the project site and the most damaging invasive species should be managed in the CA. While it is not possible to manage all invasive species in the CA due to its large size, management of the plants with significant ecological impacts such as African rubber tree (*Funtumia elastica)* African tulip, Panama rubber or Pulu mamoe (*Castilla elastica*), Fa'apasi (*Spathodea campanula*) and Tamaligi (*Albizzia)* species as well as rats, cats and feral pigs would be beneficial.

The existing rat management project being led by the Samoa Conservation Society in partnership with MNRE on 56 Ha and centred on the Malololelei Recreation Reserve, should be supported as it is showing signs of success and is the only rat control project underway in Samoa at the current time and as such is a good demonstration of rat management in Samoa.

An effective way to manage invasive weeds is via habitat restoration. Areas planted with fast growing native species quickly shade out weeds. If the right species are planted and in the right density, weeds can be suppressed within a few years.

The recommended immediate actions for managing invasive species are as below:

- Raise awareness on the impacts of invasive species and the importance of their management
- Manage the spread of invasive plants by physical removal and forest restoration
- Continue the rat management project on 56 Ha and expand it to include feral cats and pigs

5.4 Forest carbon, tree planting and forest restoration

In many degraded areas, tree planting and forest restoration are needed to reverse ecosystem decline and to bring back the native forest. Only the appropriate native trees should be used in restoration efforts which should try and mimic nature as much as possible and focus on "helping nature to heal itself". In this case the trees to be planted need to be suitable for an elevation of 600 m in the transition zone between lowland and montane forest. Tree species selection should also be based on the appropriate "climate proof trees" that improve the resilience of the forest to climate change.

A restoration plan for the Malololelei forest has been prepared and has indicated around 31 Ha of land is in need of restoration in the CA. The main native tree species which will be planted includes *Pometia pinnata* (tava), *Terminalia richii* (malili), *Szygium inophylloides* (asi toa), and *Dysoxylum huntii* (maota mea). The project coordinator has been working with communities to identify the potential area and suitable species for the specific site. The afforestation and reforestation employ the following activities for forest establishment:

- Land suitability assessment and identification of suitable species for site.
- Pre-planting preparation such as land preparation and seedling acquisition
- Planting (2m x 2m to 3m x 3m spacing depending on the degree of "openness" of the land)
- Post planting management includes blanking, releasing, and weed control.

5.5 Management of forest clearance activities

There has been a steady deterioration in the ecological value of the forest in Malololelei as a result of decades of low scale tree cutting mostly for farming. As a priority, the clearing of any further forest should cease, and forest conservation should be promoted through education, awareness-raising and forest restoration efforts. Such actions require political support and incentives to assist the development of improved land-use management methods, and continued monitoring by CA staff.

A full list of recommended actions to protect the forest are as follows:

- Ban all logging or sawmilling in the CA;
- Raise awareness and educate villagers on the benefits of intact native forest (water catchment protection, wildlife, eco-cultural tourism, and other values);
- Support and integrate with local and regional political initiatives to stop the clearing of native forest and protect biodiversity values;
- Establish sustainable alternative income (e.g. bee keeping and eco-tourism) opportunities to offset the potential impact of the cessation of clearing;

The proposed rules related to infringements are shown in section 6. The recommended immediate actions to manage forest clearance activities in the CA are as below:

- No new gardens allowed in the CA;
- No logging or sawmilling allowed in the CA;
- Plant harvesting to only be allowed for traditional purposes in the CA (eg for medicines) and to comply with the Forestry Management Act 2011;
- Encourage improved agroforestry techniques in the areas surrounding the CA including for example bee farming and organic farming.

5.6 Development of ecotourism activities and sustainable income generating activities

Ecotourism development has long been promoted in Samoa as form of sustainable and appropriate development in Samoa. Malololelei has one of Upolu's premier tourist sites, the Malololelei Recreation Reserve, with numerous trails and waterfalls, and there is potential for further development of ecotourism in the CA in partnership with the landowners of the MRR.

The recommended immediate actions to improve the development of ecotourism in the CA are:

- Develop a costed strategy and workplan for the further development of the CA including trails, viewpoints, bird hides and signage.
- Develop promotional material to promote the CA amongst local and overseas visitors- e.g. website, Facebook page, brochures etc.
- Conduct training and capacity building of local communities in sustainable ecotourism.

5.7 Capacity building and improvement in environmental awareness and consciousness

Rangers employed under the Malololelei Conservation Foundation will require training and support to implement this management plan. Training will be needed in forest restoration, nursery development, tree planting as well as in monitoring, site surveys, signage and trails development. MNRE can support training in collaboration with partners such as the Samoa Conservation Society and Nakau.

There is a general need for increased public environmental awareness or appreciation of the critical values of native biodiversity and habitats in Samoa. There is also a need for improved understanding of linkages

and relationships between species and ecosystems, the threats to species and the steps needed to enhance natural heritage and thereby safeguard cultural heritage and promote sustainable development.
Although there is significant traditional knowledge of methods for the conservation of natural heritage in Samoa, and the values and uses of species such as for plants for traditional medicine etc this traditional ecological knowledge is being lost and needs to be revived and merged with modern conservation approaches.

The recommended immediate actions to build capacity and improve environmental awareness for management of the Malololelei CA are to:

- Provide training for rangers and community members in CA management, forest conservation, restoration, identification of fauna and flora and implementation and monitoring of project activities.
- Develop an environmental awareness program to revive traditional knowledge and to improve the understanding by CA communities of the values of the CA and on the importance of the CA rules.
- Develop awareness material on the project and on the value of the CA, such as posters, brochures, postcards for sale etc.

6. CA Management rules and penalties

6.1 General CA management rules

A summary of the proposed management rules in the CA is shown in Table 5 below.

Table 5. Proposed Malololelei CA Management Rules

Rule Number	English version	Samoan version
1	No logging or sawmilling in the CA	E faasa ni ili laupapa i le nofoaga faasao
2	No new gardens allowed in the CA	E faasa ni faatoaga fou i le nofoaga faasao
3	No harvest of native species protected under law in the CA (i.e. pigeons, flying foxes)	E faasa ona avesea se meaola ma laau patino o Samoa ua aiaia faaletulafono mai nofoaga faasao. (lupe ma pe'a)
4	The non-destructive traditional harvest of plants for medicines or other cultural traditions is allowed (this require awareness raising on details on extend of utilization that won't kill the plants – sustainable practices/harvesting)	Faaaogaina tatau o laau i auala gafataulimaina mo vai fofo ma le aganuu faa Samoa.
5	The hunting of pigs in the CA is allowed but only under permit from the CA committee	E fataga le tafanaina o pua'a i nofoaga faasao
6	No littering in the CA	E faasa le faalapisi i nofoaga faasao, ae maise mea efaatau mai faleoloa
7	No new livestock to be introduced to the CA	E faasa ona toe faia ni pa povi i nofoaga faasao (sei vagana solofanua e faaoaga mo avega fealaua'i)
8	No new invasive species to be introduced to the CA	E faasa ona toe faaofi nisi laau ma manu faalafua i le nofoaga faasao
9	No activities allowed that will cause degradation to ecological, hydrological, geological, cultural or scenic features in the CA	E faasa nisi ituaga o metotia ma galuega faatino e aafia ma soloiagofie ai le lelei o le natura, ma'a, papa, vaipuna, aganuu ma le faasaienisi o le nofoaga faasao.
10	No commercial activities such as tours, tour facilities, trails etc in the CA can be developed	E faasa ni atinae su'etupe e ai malaga turisi, fale turisi, ala savali ma isi i le nofoaga faasao e aunoa ma le maliliega ale Komiti Faafoe.

Rule Number	English version	Samoan version
	without the permission of the CA management committee	

6.2 Rules for Visitors to the CA

- Visitors must respect all the CA rules including a no litter policy.
- Visitors must always respect traditional Samoan customs including appropriate dress, activities on Sunday, making noise etc.

7. Summary of recommended conservation actions and priorities

A summary of the recommended conservation actions, responsibilities, timing and priority is shown in Table 6. Timing is grouped into immediate (for the next 12 months), and mid- term (within the next 12 to 24 months). Priority is considered high or medium.

Table 6. Summary of recommended conservation actions, responsibilities, timing and priority

Strategy and Action	Responsibility	Timing	Priority
1. Forest Conservation			
Develop and agree on the rules for the management of the CA indicating allowable and non-allowable activities (e.g. commercial logging, hunting of native birds)	MCF with support of MNRE and PC	Immediate	High
Develop short trails with interpretive signage in the CA to explain the biodiversity in the CA	Communities with support of MNRE and PC	Immediate	High
Place signs in the CA explaining the management rules	Communities with support of MNRE and PC	Immediate	High
2.Conservation of threatened species			
Develop and agree on the rules for the management of target species indicating harvesting rules and hunting bans or hunting seasons for particular species	Communities with support of MNRE and PC	Immediate	High
3. Management of invasive species			
Raise awareness on the impacts of invasive species and the importance of their management	MNRE and PC	Immediate	High
Manage the spread of invasive weeds by physical removal and forest restoration	MNRE and PC	Immediate	High
Continue the rat management project in the Malololelei Recreation Reserve	SCS with support of MNRE	Immediate	High
4. Forest Carbon, tree planting and forest restoration			
Develop the existing native tree nursery in the MRR to propagate the relevant native trees for later planting out	Communities with support of MNRE	Immediate	High
Implement restoration and weed management in degraded areas (i.e. planting with native trees)	Communities with support of MNRE	Immediate	High
5.Management of forest clearance activities			
No new gardens allowed in the intact forest areas	Communities	Immediate	High
No commercial logging allowed in the CA	Communities	Immediate	High
Plant harvesting must be non-destructive and only allowed for traditional purposes such as for medicines in the CA	Communities	Immediate	High
Encourage improved agroforestry techniques in the lands adjacent to the CA such as bee keeping and organic farming	Communities with support of MNRE	Mid term	Medium
6. Development of ecotourism and sustainable income generating activities			

Strategy and Action	Responsibility	Timing	Priority
Develop a costed strategy and workplan for the sustainable development of Malololelei CA	MNRE and Samoa Tourism Authority	Immediate	High
Develop promotional material to promote the CA amongst visitors e.g. website, Facebook page, brochures etc	MNRE and Samoa Tourism Authority	Mid term	Medium
Conduct training and capacity building of the community in sustainable ecotourism and farming systems (eg bee keeping)	MNRE and Samoa Tourism Authority	Mid term	Medium
7. Capacity building and improvement in environmental awareness and consciousness			
Provide training for community members in CA management, forest conservation, restoration, identification of fauna and flora and implementation and monitoring of project activities	MNRE and PC	Immediate	High
Develop an environmental awareness program to improve the understanding by project communities of the values of the CA and on the importance of the CA rules	MNRE and PC	Immediate	High
Develop awareness material on the project and on the value of the CA- such as posters, brochures, postcards for sale etc	MNRE and PC	Immediate	High

Acronyms: MCF = Malololelei Conservation Foundation, PC = Project Coordinator

8. Monitoring

Monitoring is a key component of this plan and is undertaken for several reasons:

- To determine the impact and effectiveness of management activities for learning and improvement.
- To monitor encroachment of threats to the forest areas to enable these to be mitigated.
- To collect data and stories about the conservation efforts for communication and visibility.
- To collect data required to monitor and quantify (where relevant) carbon stocks for compliance with carbon market standards.

Where possible the monitoring effort is integrated to meet the above objectives.

8.1 Forest carbon monitoring

Management activities under this plan will be financed through a forest carbon PES project. As such, monitoring and reporting of forest carbon sequestration is required. The forest carbon monitoring serves two purposes. Firstly, it is undertaken for a 'management purpose;' to ensure that the CA is protected and that any threats or opportunities for improvement are identified and acted upon. For example, monitoring can identify threats from farm encroachment on CA boundaries and enable an intervention to occur before impacts escalate. Forest carbon monitoring is also required for measurement and reporting of emissions reductions and removals, to quantify carbon credit volumes.

Forest carbon monitoring is applied to each of two activity types, namely forest protection and forest restoration, and to assess changes to the baseline conditions. The project must also monitor to determine if the project causes activities that cause forest to move to new areas, which is known as "activity shifting leakage." However, as these impacts would occur off site, they are not included under the management plan. A map of the two activity zones- forest protection and restoration is shown in Figure 4.

8.1.1 Forest protection zone

Potential forest cover loss in the project is monitored in the field by means of transect and boundary patrols carried out by forest rangers. Any reversal incidents (forest loss) are measured and recorded. Field monitoring should focus on risk areas where there is an elevated likelihood of human disturbance. Field monitoring aims to ensure a timely detection of forest cover loss incidents and enable rangers to take

management actions to avoid further disturbance and reversals. The monitored data and parameters for the forest protection zone are summarized in table 7 below.

Table 7. Monitoring parameters for forest protection zone

Data Unit / Parameter:	Forest Protection Zone
Parameters:	Permanence of forest protection in CA. Land use change in the catchment (reference areas) outside of the CA
Description:	Monitoring of forest protection the project and reference areas which are the basis for creating carbon credits by avoiding emissions. The area used for carbon crediting is called the Eligible Forest Area (EFA) and represents the area of forest that is expected to be lost or degraded if the forest was not protected. Forest cover loss events in the EFA or Conservation Area (CA) represent a reversal of carbon benefits that are intended to be secured for the entire project period.
Method:	Transect inspections in 'eligible forest area' (EFA) of the forest protection zone. Boundary surveys Remote sensing (satellite imagery) to detect forest loss or land use change
Frequency of monitoring/recording:	Transect and boundary inspections: progressive ongoing monitoring effort conducted throughout each year Satellite imagery: Once every monitoring period (3-5 years)
Monitoring resources	GPS or Smartphone with mapping app, desktop computer with GIS software, transect/boundary map, long tape Satellite data
Value monitored:	Area of forest disturbance or loss

Preparation of Monitoring Areas: The first step in the process is to identify the priority areas that are at risk of forest cover loss for field monitoring. In a second step, transects and boundaries are designed and mapped using an application suitable for use in the field by rangers. The following risk areas are identified but will be further refined in monitoring maps.

Table 8. Description of risk areas for monitoring potential forest cover loss in the Malololelei CA

Area	**Risk**	**Rationale**
Ridges or plateaus	Risk of unauthorized gardening or timber milling	Ridges or plateaus are generally accessible and suitable for gardening and are also relatively easy and safe to patrol.
Garden areas	Risk of farming encroachment into EFA	Protected forest areas adjacent to garden areas need to be monitored, to ensure that gardens do not encroach.
EFA/CA Boundary	Risk of encroachment of production activities from adjacent lands into the EFA	The boundary of the EFA represents the border to adjacent, potentially non-conservation land uses and is a high-risk zone that needs to be monitored
Areas in the proximity of roads and tracks	Risk of encroachment of production activities from adjacent lands into the EFA	Roads and tracks provide potential access and transport ways for outsiders to trespass into the conservation area

Preparation of Transect and Boundary Maps: Transect and boundary maps are to be created using GIS software and composed as georeferenced images or pdfs. Transects are to be created over pre-defined risk areas inside the eligible forest area, as described in the table above. The transects need to be changed every monitoring period to allow detection of potential loss incidents happening away from the monitored area.

Preparation of Mapping with a Mapping App: Once completed, the transect and boundary maps are uploaded into a mobile mapping app (for example Avenza Maps), prior to monitoring. Nakau has created an Avenza user guide that describes the mapping preparation procedures in more detail.

Field Monitoring Activity: The monitoring method consists of rangers patrolling risk areas in the interior and boundary of the EFA along monitoring transects and a boundary track. During patrolling, the rangers will identify and record any forest cover loss events detected in the vicinity of the tracks. Forest cover loss relevant under the technical specification refers to the following incidents:

- Sites where trees were felled for harvesting
- Sites where trees have fallen due to storms or landslides (if significant)

When a forest cover loss incident is encountered, the rangers must map the site by recording a waypoint to describe the specific type of forest cover or tree loss in the mapping app or a field data collection form.

Areas of forest cover loss further need to be measured in the field. This can be done by using measuring functions in the mapping app or by manually measuring the impacted area using measuring tapes. Subsequently the area of forest cover loss must be saved to file and the extent calculated in the mapping app or later, in a GIS.

Active land clearing sites (e.g. for housing development or gardens) detected near the boundary on adjacent lands should also be recorded. Any presence of land clearing activities near the boundary poses a threat to the integrity of the EFA from potential encroachment. Any active land clearing detected near the EFA boundary is therefore declared a risk zone and needs to be patrolled with increased frequency.

8.1.2 Forest restoration zone

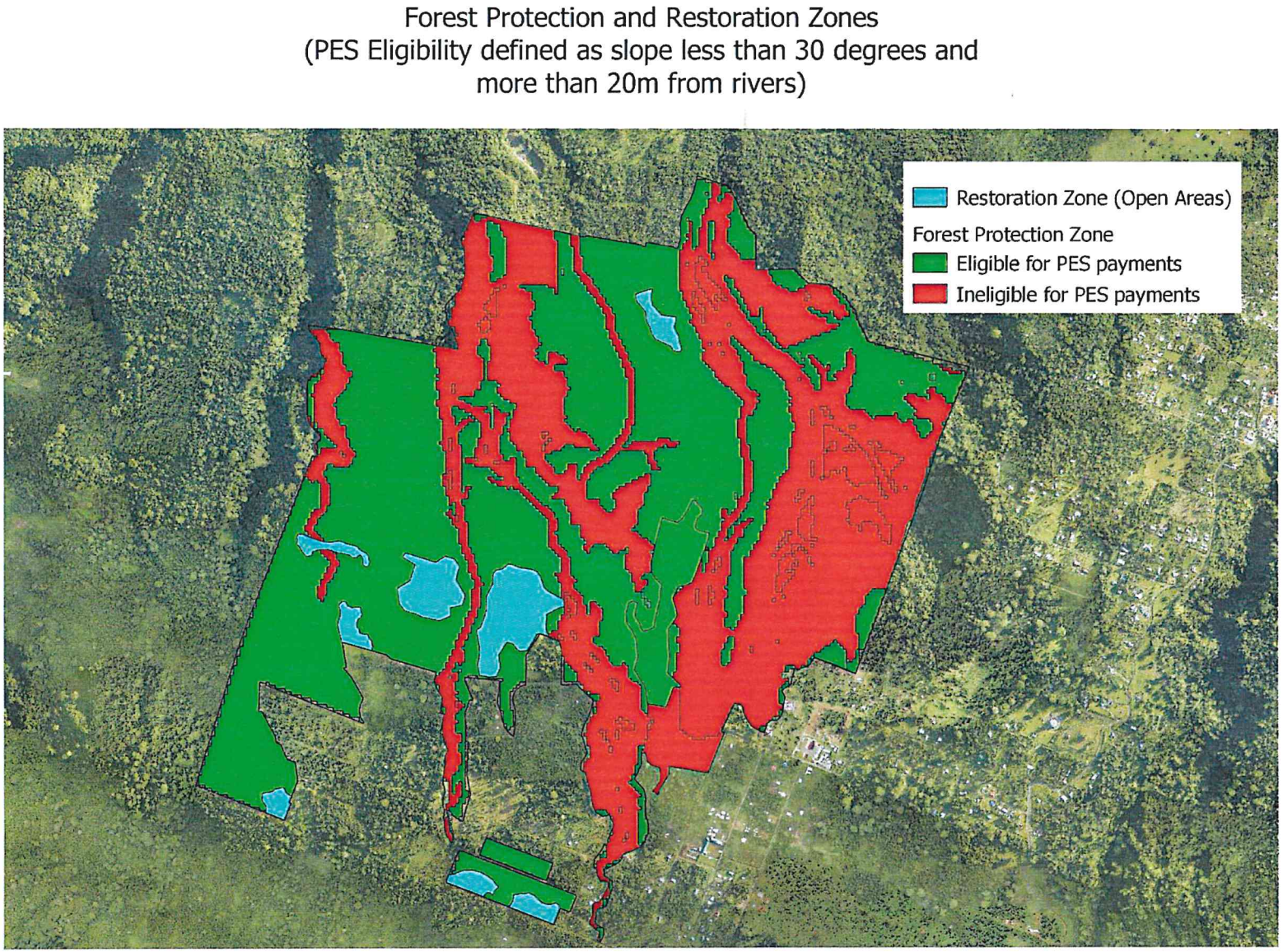
The increases in carbon sequestration through forest restoration ('removals') shall be measured in the field by means of permanent sample plots and mapping of areas restored. The monitoring will include sample plots in restored areas and unmanaged reference areas to determine how restoration activities perform against a baseline. The monitored data and parameters for the forest protection zone are summarized in table 9 below.

Further detail on the monitoring parameters for restored areas will be included in the Management plan upon completion of the technical specifications for carbon accounting from restoration activities (in prep).

Table 9. Monitoring parameters for restoration zones

Data Unit / Parameter:	Forest Restoration Zones
Parameters:	Area of assisted natural regeneration and/or replanting. Biomass change on restoration sites. Biomass change on unmanaged reference areas.
Description:	Monitoring of the restoration areas is the basis for carbon credit calculations from sequestration in tree growth, otherwise known as 'removals.' Monitoring will focus on the area and growth of trees in restored areas.
Method:	Remote sensing (satellite imagery) to detect forest loss or land use change
Frequency of monitoring/recording:	Annually
Monitoring resources	GPS or Smartphone with mapping app, Desktop computer with GIS software, transect/boundary map, measuring tapes
Value monitored:	Area (ha) and biomass (m^3 ha^{-1})

Figure 4. Forest Protection and Forest Restoration Zones



8.2 Biodiversity monitoring

Biodiversity monitoring will focus on the significant flora and fauna species including those described in section 3.4.1 (above). The species selected for monitoring are listed in Table 10, below. Species were selected based on one or more of the following characteristics:

- Characteristic of undisturbed forest habitats
- Possess high conservation value (Legal protection, IUCN red list status and/or endemism)
- Threatened by human impacts, and
- Well-known and conspicuous (can be easily identified and monitored)

Table 10. Significant species for monitoring

Group	Indicator Species Name	Method
Birds	All native birds but particularly endemic birds such as the Maomao (*Gymnomyza samoensis*)	5 minute bird counts at identified monitoring locations on monitoring lines
Reptiles	All native skinks (in particular the Samoan skink *Emoia samoensis*)	Sticky traps on monitoring lines
Flying foxes	Both species of native flying fox (*Pteropus tonganus* and *Pteropus samoensis*)	Counts of flying fox roosts at regular intervals
Plants	All native plants especially the threatened bush palm *Clinostigma samoensis*	50mx10m transect at 2 selected permanent sample plots (PSP)- one in an area of native forest, the other in an area of disturbed forest

Methodology

Biodiversity monitoring involves the periodic verification of the presence of selected key species that are threatened by human disturbance and therefore are indicative of potential project impacts on biodiversity. Monitoring does not include methods to determine species richness, abundance, population changes or other ecological characteristics such as breeding or recruitment etc. The monitoring approach is summarised in Table 11 (below).

Monitoring should be undertaken in the field in conjunction with the field monitoring of carbon indicators through transect and boundary patrolling (see 8.1.1). However, rangers or volunteers may also undertake separate or specific biodiversity monitoring activities and collect opportunistic observation while conducting other activities.

Table 11. Summary of biodiversity monitoring methodology

Indicator	**Methods of Measurement**	**Sampling Approach**	**Frequency of Monitoring**
Presence of key flora and fauna species	Record georeferenced observations of key flora and fauna species using	Observations collected during forest boundary and transect patrols. Observations documented with	Progressive ongoing monitoring effort conducted throughout each year. Reported (for carbon project verification)

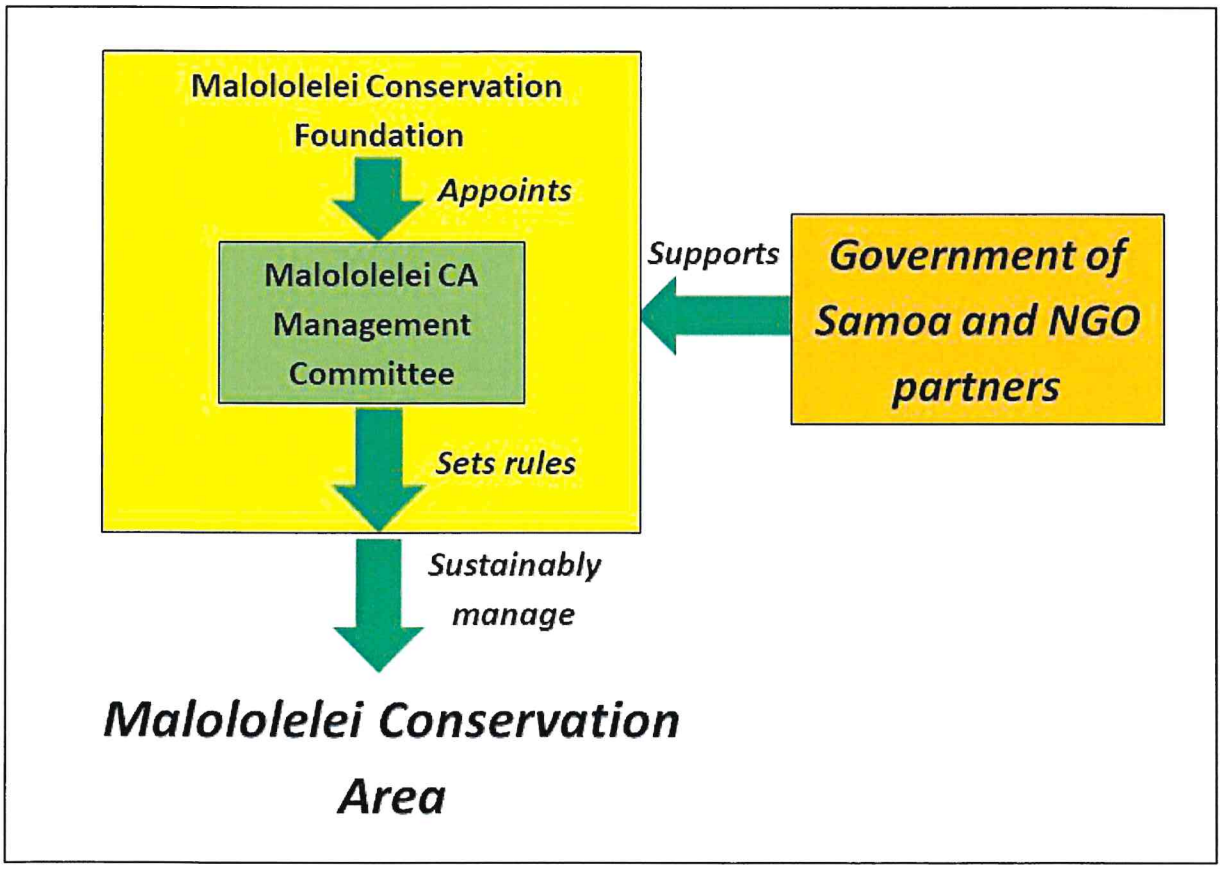
Indicator	Methods of Measurement	Sampling Approach	Frequency of Monitoring
	Avenza App (or similar)	photographic evidence (if possible) and mapped and stored in a GIS database.	once per verification period (3-5 years)
Species richness and abundance of key species	Birds: 5 min bird counts along transect line Reptiles: sticky traps along transect line Flying foxes: counts of roost trees Plants: monitoring of 2 permanent sample plots	For birds and reptiles: monitoring transect lines are to be set up the CA and visited at regular intervals For flying foxes: counts to be conducted of known roost trees For plants: DBH and species of plants to be recorded	Checking of biodiversity transect lines for birds and reptiles to be done every 6 months- June and December Flying fox roost trees to be monitored to same schedule as the birds and reptiles Plants: Measure tree growth in PSPs once a year

9. Institutional arrangements

9.1 CA governance

The proposed CA governance arrangements are shown in Figure 5.

Figure 5. Proposed Governance Arrangements for the CA



Malololelei Conservation Foundation
The Malololelei CA Conservation Foundation will be formed by the PES site landowners to manage the Malololelei PES project as per the provisions of the Samoa Foundations Act 2016 (Government of Samoa 2016). This Foundation will appoint a management council which itself will appoint a sub committee to oversee the implementation of the management plan.

Malololelei CA Management Committee
A CA Management Committee will oversee the management of the CA and set all CA rules. The committee should have representation of the landowners and adjacent communities and other relevant partners. Ideally the committee would be gender balanced and socially inclusive. The specific functions and implementing rules and regulations of the committee and the duties and responsibilities of committee members need to be determined, but the proposed roles of this committee are to:

- Endorse the CA management plan.
- Supervise the implementation of the management plan with the support of project partners.
- Make decisions on all management plan strategies, actions, rules, laws and fines in the CA.
- Mediate, arbitrate and to decide in any complaints or grievances.
- Manage funds raised for the implementation of all CA management activities.

9.2 Partner roles

The proposed roles of partners to support the implementation of the management plan are shown in Table 12.

Table 12. Proposed roles of partners to support the implementation of the plan

PROJECT PARTNER	PROPOSED ROLE
Samoa Conservation Society	The Samoa Conservation Society has supported conservation interventions at Malololelei since 2017. In particular SCS has a role in: • Invasive species management including rat and weed management • Supporting threatened species research and conservation activities especially related to threatened birds, plants and butterflies • Supporting environmental outreach and awareness activities
MNRE	Provide support to the Malololelei CA Management Committee to develop and implement restoration plans and to monitor and manage biological resources in the CA and in particular to: • Assist with monitoring and management of biological resources in the CA • Conduct environmental awareness activities related to biological resources in the CA • Help the Malololelei CA Management Committee to liaise with other partners including donors, other government departments and NGOs
The Nakau Programme	Nakau will support aspects of the plan that enable operation as a forest carbon project, within the Nakau Programme. Nakau's role in relation to the carbon project includes: • Oversight over project design and development, preparation of PDDs • Ensuring conformance with PV Climate requirements and compliance with applicable policies, laws and regulations • Registration and recording of management plans, project agreements, monitoring results and sales agreements. • Provide data for annual reports and support coordinating verification events • Technical assistance and capacity building required for project participants to implement project interventions. • Design of monitoring system, monitoring of project indicators • PVC unit sales and marketing agent

PROJECT PARTNER	PROPOSED ROLE
	• Guardian of environmental and co-benefit integrity of Nakau Programme • Managing Plan Vivo Certificates (project registry agent)
Samoa Tourism Authority	Provide support to the CA communities and the Malololelei CA Management Committee to manage and monitor tourism activities in the CAs and in particular to: • Assist with monitoring and management of tourism in the CAs • Assist with capacity building for sound and sustainable tourism development in the CAs • Help the Malololelei CA Management Committee to liaise with other partners including donors, other government departments and NGOs

References

Government of Samoa 2004. *Protection of Wildlife Regulations*.
Government of Samoa 2016. *Samoa Foundations Act 2016.*
Jopling, W. 2019. *A guide to Samoa's geological history and natural sites*. STA, Apia.
MNRE 2015. *Malololelei Reserve Biodiversity Preliminary Report*. MNRE, Apia.
Atherton, J., Henderson, R. & Weaver, S. (2020*) PES Options and Recommendations Report*. MNRE, Apia
Atherton, J., Henderson, R. & Weaver, S. (2021) *PES Pilot Projects Full Feasibility Report for sites 1 & 2*. MNRE, Apia.

Annex 1. Attendance List at Consultations

GREEN CLIMATE FUND – VAISIGANO CATCHMENT PROJECT (GCF-VCP)
Activity: PES Mission – Workshop with Landowners & Community Representatives
Venue: Catholic Church Hall at Malololelei
Date & Time: Wednesday 24th November 2023, 9:30am-11:30am
Responsible IA: MNRE ESCD
Responsible Person: SCS/Nakau/PMU-MNRE Team

	Name	Organisations / Position	Village	Age Groups (A=<17[1]) (B = 18 - 35 yrs[2]) (C = 36 - 59 yrs) (D= 60+)	Gender[3]	Disability Yes or No. If Yes, what Type 1. Hearing 2. Seeing 3. Physical 4. Intellect	Email or Phone Number	Signature
1.	Yaitole Taleo	Mayor Maamoa Fou	Maamoafou	C	m	No	7745638	[illegible]
2.	Tupe Saaiga	Community - Rep	Maamoafou	D	F	No	7203413	[illegible]
3.	Sale Ah Fook	"	Maamoafou	D	m	No	7170728	[illegible]
4.	Orepa Lui	"	Maamoafou	B	F	No	7643870	[illegible] orepa.lui@mnre.gov.ws
5.	Halalei. Sue.	"	Malololelei	D	F	No	7272109.	
6	Anastasia.T.	"	Malololelei	C	F.	No.	7119351.	[illegible]
7.	F. Fuimaono Jo Classi	"	Malololelei	C	F	No	7265200	[illegible]
8.	Samani Juno Joanne Fk	"	Malololelei	D	M	No	7398503	[illegible]

[1] MWCSD Age definition for Children as a focal point for children
[2] MWCSD Age definition for Youth as focal point for youth
[3] Female/Male/Blank-not identified

	Name	Organisations / Position	Village	Age Groups (A=<17[1]) (B = 18 - 35 yrs[2]) (C = 36 - 59 yrs) (D= 60+)	Gender[3]	Disability: Yes or No. If Yes, what Type 1. Hearing 2. Seeing 3. Physical 4. Intellect	Email or Phone Number	Signature
9.	N. P. Meredith	Community Rep.	Malololelei	70	M	[illegible]	nofoatolu2013 @gmail.com 7667355	[illegible]
10.	[illegible]		[illegible]					
10.	Tevaga Mataaliga	Mayor Malololelei	Malololelei	65	m		7275511	[illegible]
11.	Timoteo M	MNRE - FD	Faleata	C	M	No	210024	[illegible]
12.	ARIETA . S.	Community Rep	MALOLOLELEI	C	F.	NO	7780946-	[illegible]
13.	LAUTALIE LEOTA.	"	MALOLOLELEI	C	F	NO	7637748.	[illegible]
14.	Ioane Etuale	Volunteer	Afiamalu	C	M	None	ifilele@gmail.com	[illegible]
15.	Fuimaono A. Wright	Bluebird	Vailoa	C	M	N,	fuimaono.wright@gmail.com	[illegible]
16.	Fuimaono R. Asafo	Richsan Avocado	Malololelei	C	M	N	7562710 richsan.avocado@gmail.com	[illegible]
17.	Tens Thompson	Sheep keep, ex forestry	Malololelei	D	M	N	7655090	[illegible]
18.	Taefu Lemi	KOSA	Vaimoso	D	M	N	7570586	[illegible]
19.	Sarah Liversidge	Nakau	Nakau	C	F	None	0434 591 866	[illegible]
20.	Robbie Henderson	Nakau	Australia	C	m	N	0437683929	[illegible]

[1] MWCSD Age definition for Children as the focal point for children
[2] MWCSD Age definition for Youth as the focal point for youth
[3] Female/Male/Blank-not identified

#	Name	Organisations / Position	Village	Age Groups (A=<17[1]) (B = 18 - 35 yrs[2]) (C = 36 - 59 yrs) (D= 60+)	Gender[3]	Disability: Yes or No. If Yes, what Type 1. Hearing 2. Seeing 3. Physical 4. Intellect	Email or Phone Number	Signature
21.	Sieufanga	Community Rep	Malaelaleai	C	M	No	7783667	[signature]
								[signature]
22.	Ele Tratici	AEF-PAUU	Vaitele	C	M	No		[signature]
23.	Falefaiga Tom	SES	Upu	C	M		7572139	[signature]
24.	Tam Atl.	S.C.S	Siuza	C	M	2	7770787	[signature]

[1] MWCSD Age definition for Children as the focal point for children
[2] MWCSD Age definition for Youth as the focal point for youth
[3] Female/Male/Blank-not identified

Annex 2. Letter of Endorsement of this Management Plan

Payment For Ecosystem Service (PES) Endorsement Letter

SUBJECT: ENDORSEMENT OF THE MALOLOLELEI CA MANAGEMENT PLAN

BACKGROUND: The Malololelei Conservation Area (CA) is located near the centre of Upolu and covers an area of approximately 640 hectares (1580 acres) and ranges in elevation from 120m to 620m asl. The CA protects the upper Gasegase catchment, one of Apia's three main catchments within the Apia Catchments Key Biodiversity Area (KBA). A particular focus of the conservation of the Malololelei CA will be to certify the project as a carbon project and Samoa's first payment for ecosystem services (PES) project.

The Malololelei Conservation Area management plan describes the vision, targets, threats, objectives and proposed strategies and rules for the conservation and maintenance of the forests and biodiversity of the Malololelei CA. Conservation involves the maintenance of the ecological components of soil, water and fauna and flora, the ecological processes including water flow, carbon cycles, connectivity between land and sea, including species movements as well as the ecosystem services including all the human benefits provided by the CA. Detailed workplans and costed implementation plans will need to be prepared at a later date for implementation of project strategies.

The Malololelei CA is owned by three landowners – namely the Catholic Church, the Government of Samoa and Bluebird Lumber and Hardware Ltd. No people live within the CA but adjacent to the project area to the north and south are recent subdivisions (formerly Catholic land) with freehold landowners and low-density housing.

We the Landowners of the Malololelei Conservation Area endorse this Conservation Area Management Plan and proposed governance arrangements and will support its implementation.

The endorsement is made today, the 5th of June 2024.

Signed by the following landowner representatives:

Bishop Peter Brown
Apostolic Administrator - Catholic Archdiocese of Samoa, Apia

Tuiaopo Andrew Ah Liki
Director - Bluebird Lumber and Hardware Company Limited

Toeolesulusulu Cedric Pose Salesa Schuster
Minister – Ministry of Natural Resources and Environment