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Project Identification Form (PIF) entry – Full Sized Project – GEF - 7

## Enhancing integrated sustainable management to safeguard Samoa's natural resources

### Part I: Project Information

GEF ID

10410

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

☐ CBIT

☐ NGI

Project Title

Enhancing integrated sustainable management to safeguard Samoa's natural resources

Countries

Samoa

Agency(ies)

UNDP

Other Executing Partner(s)

Ministry of Natural Resource & Environment

Executing Partner Type

Government

**GEF Focal Area**

Biodiversity

**Taxonomy**

Focal Areas, Biodiversity, Mainstreaming, Agriculture and agrobiodiversity, Species, Invasive Alien Species, Protected Areas and Landscapes, Productive Seascapes, Coastal and Marine Protected Areas, Community Based Natural Resource Mngt, Terrestrial Protected Areas, Tropical Rain Forests, Biomes, Rivers, Mangroves, Convene multi-stakeholder alliances, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approach, Beneficiaries, Stakeholders, Local Communities, Type of Engagement, Consultation, Partnership, Information Dissemination, Participation, Civil Society, Non-Governmental Organization, Academia, Community Based Organization, Indigenous Peoples, Private Sector, Individuals/Entrepreneurs, SMEs, Communications, Awareness Raising, Education, Public Campaigns, Behavior change, Gender Mainstreaming, Gender Equality, Sex-disaggregated indicators, Women groups, Gender results areas, Knowledge Generation and Exchange, Access and control over natural resources, Participation and leadership, Capacity Development, Knowledge Exchange, Capacity, Knowledge and Research, Innovation, Knowledge Generation, Learning, Theory of change, Adaptive management, Indicators to measure change, Land Degradation, Food Security, Sustainable Land Management, Improved Soil and Water Management Techniques, Restoration and Rehabilitation of Degraded Lands, Ecosystem Approach, Sustainable Agriculture, Sustainable Livelihoods, Community-Based Natural Resource Management

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 1

**Climate Change Adaptation**

Climate Change Adaptation 0

**Duration**

72 In Months

**Agency Fee(\$)**

332,782

**Submission Date**

10/11/2019

## A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-2-6	GET	1,751,484	10,000,000
BD-1-1	GET	1,751,484	10,000,000
Total Project Cost (\$)		3,502,968	20,000,000

## B. Indicative Project description summary

### Project Objective

To equip and empower local communities to safeguard Samoa's indigenous species, natural ecosystems and food production systems from Invasive Alien Species (IAS) and unsustainable land use practices.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
1. Enhancing institutional and technical capacity in safeguarding indigenous species, natural ecosystems and production systems from IAS.	Technical Assistance	<p>1. Strengthened institutional and technical capacity to monitor and address impacts of IAS on biodiversity and food production systems. Measured by:</p> <p><i>(i) Establishment and operationalization of ISU and SNITT; (ii) Modular training programme operational from Year 2 and institutionalized prior to project end under partnership arrangement between relevant Ministries (MNRE, MAF, Education, Women, Community &amp; Social Development); (iii) Strengthened national capacities in key agencies as measured by the UNDP Capacity Development Scorecard; (iv) Reduced entry and spread of IAS into Samoa through biosecurity inspections of goods and persons who arrive on the islands by air or sea</i></p>	<p>1.1 Multi-sectoral institutional framework strengthened to implement the National Invasive Species Strategy and Action Plan (NISSAP)</p> <p>- Invasive Species Unit (ISU) formalized to function as lead national body for implementation of the NISSAP;</p> <p>- Environment Management and Conservation Bill revised to incorporate IAS Management and the establishment of Samoa National Invasive Task Team (SNITT);</p> <p>- Based on an IAS capacity needs assessment, capacity strengthened in key agencies and organizations for IAS prevention, control and management through modular safeguards training on IAS and agro-environmental farming developed using existing and new materials as necessary, delivered primarily through learning-by-doing to target sectors comprising Quarantine</p>	GET	950,000	2,200,000



*Indicators, baseline and targets will be confirmed during the PPG.*

Services staff (36), Agriculture Extension Officers (40), field-stationed Forest and PA staff (90), Port Authority security workers (15), Customs Officers (20), developed and delivered by MAF, MNRE and their partners.

1.2 Decision making tools aimed at informing cost effective management decisions to address IAS threats to biodiversity in globally significant ecosystems and key sectors

-Baseline of information on the status and distribution of invasive species updated;

- National invasive alien species information system operating and informing sectoral policy and investments;

- Invasive species monitoring network to detect change and emerging impacts on soil erosion, hydrology, and IAS distribution and abundance, developed and operational;

- Risk Assessment procedures expanded for new species and to include environmental, social and economic impacts.

1.3 Strengthened capacity to screen for, identify and control prioritized IAS

- Basic IAS fumigation and laboratory equipment (fixed and portable) provided and operational in all airports and seaports, with clear protocols developed and documented (including health and safety procedures) and technicians/officers trained in their use and maintenance;

-Mobile application developed to enable farmers, landowners, government agencies, NGOs and members of public to identify IAS, register sighting locations and seek technical support.

1.4 Sustainable Financing Strategy for safeguarding biodiversity, including natural ecosystems and production systems, from IAS and climate-induced impacts scoped, developed and implemented.

- financing mechanisms identified to recover costs of securing port entry and exits ports from IAS, emergency responses to safeguard PAs and production systems from IAS.

2. Demonstrating integrated management of	Investment	2 (a). Sustainable management of catchments as holistic, integrated entities established and demonstrated in respect of safeguarding indigenous species, natural	2.1 Community Integrated Management (CIM) Plan interventions assessed and safeguards prioritized (based on inputs from 1.2) to ensure that the selected catchments are	GET	2,050,000	17,049,788
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catchments from ridge to reef to safeguard indigenous species, natural ecosystems and food production systems from IAS and unsustainable land use practices.

ecosystems and food production systems from IAS and unsustainable land use practices.

Measured by:

*(i) Effective catchment management to safeguard indigenous species, natural ecosystems and food production systems from IAS and unsustainable land use practices demonstrated through R2R approach covering at least 59,804 ha of which 15,553 ha are terrestrial KBAs and 5,292 ha of marine KBAs abutting the target catchments and, therefore, are benefited from their improved management practices; (ii) at least 60% of farmers/ households of selected catchments engaged in integrated IAS management, SLM and ecosystem restoration.*

2(b) IAS threats managed, and ecosystem functions restored in selected PAs covering 5,495 ha of terrestrial PAs and 181 ha of marine PAs. Measured by:

*(i) Improved management of effectiveness of target PAs covering a total of 5,676 ha*

effectively managed for biodiversity, soil and water conservation, and food security whilst ensuring that IAS risks are minimized from ridge to reef;

- Priority IAS<sup>[1]</sup> action plans developed, annexed to CIMs, and implemented in selected catchments (9);

- Restoration Strategy developed for target catchments in line with GEF-7 restoration criteria and priorities, focusing on habitat in high biodiversity value forests and watersheds outside PAs, affected by IAS in the selected catchments through IAS removal, planting of native species and the use of analogous species;

- Improved SLM and SFM compatible land-use by farming households involving the adoption of best agricultural practices and integrated organic and local innovations (i.e. soil and water conservation techniques, agricultural runoff control, mixed cropping, terracing, organic waste management [green/IAS waste and livestock manure], organic fertilizer use, improved silvo-agro-pasture management, agroforestry, etc.).

*(Asau-Falelima NP 2,496 ha, Mauga Salafai NP 1,784 ha, Coastal Conservation Area 1,215 ha, Community Fish Reserves 181 ha) as measured by METT scores.*

*Indicators, baseline and targets will be confirmed during the PPG.*

[1] Prioritized IAS for Samoa include i. Merremia; ii. Myna birds; iii. 2 alibizia trees (tamaligi); iv. 2 rubber trees (Funtumia and Castilloa elastica); v. Rattan; vi. Rhinoceros beetle; vii. Mint weed; viii. Leucaena; ix. Solanum torvum; x. Crown of thorns; xi. Little Fire Ant (considered a potential invasive)

2.2 Biodiversity conservation and ecological restoration of 3 terrestrial PAs and 1 conglomerate of Community Fish Reserves

-IAS management systems established to prevent introduction and reduce or eliminate the impacts of prioritized IAS to selected PAs (based on 1.2). This will include strengthening institutions for IAS control, introducing best practices in sectors to reduce IAS spread;

-Promoting local community (e.g. fisherfolk, farmers, students, etc.) and private sector (i.e. tourism operators) participation in conservation efforts and IAS control;

-Integrated IAS management in selected PAs implemented to provide appropriate level of protection to vulnerable ecosystems, through

prioritization of species,  
determining current and  
potential impacts on  
conservation goals, assessment  
of existing control and  
containment strategies,  
integrating IAS management in  
PA management programs and  
training of staff (see 1.1)

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weed; viii. Leucaena; ix. Solanum  
torvum; x. Crown of thorns; xi.  
Little Fire Ant (considered a  
potential invasive0

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3. Gender mainstreaming and knowledge management	Technical Assistance	3 (a) Gender fully mainstreamed in project implementation indicated by gender-based indicators	3.1 Gender mainstreaming plan implemented, and its results monitored and reported.	GET	336,160	500,000
		3 (b) Awareness of environmental impacts of IAS and unsustainable land use practices increased by at least 50% based on KAP survey scores.	3.2 A national IAS and R2R communications and awareness strategy and action plan is developed and implemented, with steps to ensure that international good practice related to IAS and R2R is embedded in policy and practice.			
		3 (c) Best practices and lessons are accessed and applied in other catchments in the country, regionally and internationally.	3.3 Experiences, best practices, and lessons learned about integrated IAS and environmental management of the target catchments (e.g. tools, manuals to complement training courses and guidelines) are systematized and made available for use in other catchment areas in the country and shared regionally and internationally for replication.			
		<i>Indicators, baseline and targets will be confirmed during the PPG.</i>				
Sub Total (\$)					3,336,160	19,749,788
Project Management Cost (PMC)						
GET					166,808	250,212
Sub Total(\$)					166,808	250,212
Total Project Cost(\$)					3,502,968	20,000,000

## C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Government	Ministry of Natural Resources and Environment (i.e. Division of Environment and Conservation, forestry, water resources, disaster management office, DEC	Public Investment	Investment mobilized	8,000,000
Government	Ministry of Natural Resources and Environment (i.e. Division of Environment and Conservation, forestry, water resources, disaster management office, DEC	In-kind	Recurrent expenditures	1,700,000
Government	Ministry of Agriculture and Fisheries (i.e. Quarantine, Crops, fisheries and Animal Protection and Health Division)	Public Investment	Investment mobilized	6,350,000
Government	Ministry of Agriculture and Fisheries (i.e. Quarantine, Crops, fisheries and Animal Protection and Health Division)	In-kind	Recurrent expenditures	1,350,000
Government	Ministry of Finance (PPCR Project)	In-kind	Recurrent expenditures	1,600,000
Government	Ministry of Finance	In-kind	Recurrent expenditures	300,000
Government	Ministry for Women and Community Development (MWCSD)	In-kind	Recurrent expenditures	100,000
Government	Ministry for Customs and Revenue	In-kind	Recurrent expenditures	100,000
Beneficiaries	Scientific Research Organization of Samoa (SROS)	In-kind	Recurrent expenditures	100,000
Government	Ministry of Finance (Civil Society Support Programme-CSSP Project)	In-kind	Recurrent expenditures	100,000
CSO	Samoa Umbrella of Non-Government Organizations (SUNGO)	In-kind	Recurrent expenditures	100,000

GEF Agency	United Nations Development Programme	Grant	Investment mobilized	50,000
GEF Agency	United Nations Development Programme	In-kind	Recurrent expenditures	150,000
<b>Total Project Cost(\$)</b>				<b>20,000,000</b>

#### **Describe how any "Investment Mobilized" was identified**

National Government: These are parallel grants mobilized by Government of Samoa to support implementation of activities such as programmes in agriculture and fisheries sectors to increase economic productivity of community farmers and local fishers through resilient and sustainable practices, such as mixed cropping, organic farming, sustainable pest control, improved fisheries resource management and conservation of critical ecosystems. This also includes USD 2,190,000 budgeted to initiate the implementation of the NISSAP. Please note that "In Kind" co-financing under MAF and MNRE can be interpreted as investments mobilized as it is actually money to be invested in the implementation of forest restoration through the 2-million tree initiative and ecosystem services activities via Ministry of Natural Resources and Environment/ However, Government has decided to tag this as in kind as it refers to forest restoration inputs. The categorization of these co-financing figures will be reconfirmed during PPG. UNDP: UNDP will provide grant co-financing of \$50,000 for support to sustainable invasive alien species management and critical land/seascapes restoration under the Country Programme Action Plan, contributing towards the project's overall objectives.



## D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Samoa	Biodiversity	BD STAR Allocation	3,502,968	332,782	3,835,750
Total GEF Resources(\$)					3,502,968	332,782	3,835,750

## E. Project Preparation Grant (PPG)

PPG Required



PPG Amount (\$)

150,000

PPG Agency Fee (\$)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Samoa	Biodiversity	BD STAR Allocation	150,000	14,250	<b>164,250</b>
Total Project Costs(\$)					<b>150,000</b>	<b>14,250</b>	<b>164,250</b>

## Core Indicators

### Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5,618.00	0.00	0.00	0.00





### Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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### Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
5,618.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Asau-Falelima NP		National Park	2,496.00						
Coastal Conservation Area		Protected Landscape/Seascape	1,215.00						
Lake Lamot'oo		National Park	123.00						
Mauga Salafai NP		National Park	1,784.00						

## Indicator 2 Marine protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
6,152.00	0.00	0.00	0.00

## Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
0.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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## Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
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6,152.00	0.00	0.00	0.00
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Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Community Fish Reserves		Protected area with sustainable use of natural resources	181.00						
Safata Marine Protected Area		Protected area with sustainable use of natural resources	5,971.00						

## Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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0.00	0.00	0.00	0.00
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### Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

### Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

### Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

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**Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

**Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
59804.00	0.00	0.00	0.00

**Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)



59,804.00

**Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

**Indicator 4.3 Area of landscapes under sustainable land management in production systems**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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**Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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### Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	13,096			
Male	13,514			
Total	26610	0	0	0

## Part II. Project Justification

### 1a. Project Description

#### 1a. Project Description.

##### 1a.1. The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

1. Samoa is an island nation lying in the Polynesian Region of the South Pacific. It comprises two main islands of Upolu and Savai'i of 1,115 and 1,700 sq. km, respectively, and 8 smaller, peripheral islands (total land area is 2,935 sq. km), all of which are volcanic. Upolu's ridge rises to 1,100 m and Mt Silisili (1,848 m) on Savaii Island is highest peak. The central uplands of the main two islands are covered with primary and secondary forests; much of the coastal belt (below 1,000 m) comprises a mosaic of farms, plantations (e.g. palm, rubber), woodlands, grasslands, wetlands, settlements and urban areas. The total population is estimated to be 190,000 (Worldometer, August 2019)[1], 80% of which is largely subsistent on the land and sea for food and income[2].
2. Samoa comprises the Samoan Tropical Moist Forest ecoregion. It is part of the Polynesia-Micronesia Biodiversity Hotspot[3], one of 34 regions in the world where extraordinary levels of biodiversity and endemism are coupled with extremely high levels of threat (Mittermeier *et al.* 2004).
3. The five-million-year history of the Samoan archipelago resulted in the evolution of a unique native flora and fauna. Today, this comprises more than 2,500 species of insect, 770 species of native plants, 64 native land snails, 31 breeding birds, 14 reptiles and 3 native mammals on land. Marine diversity is also high with 890 coral reef fish, over 200 corals and several species of turtles, whales and dolphins[4]. Samoa coral reefs are in good condition overall, benthic cover and coral populations are doing well. In contrast, fish are moderately to very impacted. Sharks and other predators are considered depleted throughout the world and Samoa is no exception. In general terms, the territory is struggling against threats, such as pollution, overfishing, and global climate change[5].
4. Within Samoa itself, there are 540 native plant species (and about 500 introduced species), 64 native land snails species (and 14 introduced species), 33 native birds species (and 4 introduced species), 4 native reptiles (and 11 introduced species) and 1 native land mammal species (and 13 introduced species)[6]. Thus, introduced species account for 48% of Samoa's flora, 81% of land mammals, 73% of reptiles, 18% of land snails and 11% of birds.
5. Some of this diversity is threatened with extinction, including: 29 species of vertebrates (6 bird species, 16 fishes, 5 reptiles and 2 mammals), 62 invertebrates (including 52 coral species), and 2 flowering plant species – representing 7% of the 1,441 species assessed to date. With respect to Samoa's endemics, 4 of its 9 endemic bird species, none of 6 endemic insects, 1 of 2 endemic mollusks and both endemic flowering plants are threatened (i.e. critically endangered, endangered or vulnerable) – representing 37% of endemic species assessed to date[7]. Invasive Alien Species (IAS), of which 386 are currently listed on the Global Register of Introduced and Invasive Species for Samoa[8], are an additional component of biodiversity but in small islands they are often considered to be among the greatest threats to native species, especially endemics<sup>7</sup>.
6. Much has been done to protect this natural heritage, beginning in 1978 when Samoa became the first Pacific Island nation to create a national park, O Le Pupu-Pu'e (5,019 ha) on Upolu Island. This was followed by four more national parks from 2000 onwards - Lake Lanoto'o (470 ha) on Upolu Island; and Mauga o Salafai (4,050 ha), Lata (2,160 ha) and Asau/Falelima (1,350 ha) on Savaii Island - and thirteen botanical reserves established between 1999 and

2007[9]. Both O Le Pupu-Pu'e and Lata national parks are wetlands of international importance, respectively designated under the Ramsar Convention in 2016 and 2005. Protection of marine biodiversity progressed rapidly during this period, with the designation of 6 Marine Protected Areas in 1999 and 59 Community-based Fishery Reserves between 1996 and 2007; and the total marine protected areas network amounted to 12,011,437 hectares<sup>12</sup>. The present extent of protected areas is not accurately known, as there are gaps and inconsistencies in the records, but an estimated total of 78,248 ha of land and sea are under protection (71,739 ha of land and 6509 ha of marine areas excluding 106 Fisheries Marine Reserves)[10]. This amounts to 24% of terrestrial Samoa (including inland waters) and less than 0.05% of its Exclusive Economic Zone (132,306 sq. km).

7. Trailing alongside the development of Samoa's protected areas network has been the identification and delineation of Key Biodiversity Areas (KBAs) in Samoa, beginning in 2008 with an ecological gap analysis by Conservation International (CI) in collaboration with MNRE's Division of Environment & Conservation (DEC). This was funded by GEF[11] and built on earlier work initiated in 2003 for the entire Polynesia-Micronesia Region that resulted in the identification of 162 KBAs, of which 6 relate to Samoa. A total of 8 terrestrial and 7 marine KBAs were identified during the gap analysis process and conservation targets were established for all native ecosystems in line with achieving the conservation targets in Samoa's 2001 Biodiversity Strategy and Action Plan. The 8 terrestrial KBAs cover a total of 940 km<sup>2</sup> or about 33% of the total land area of Samoa including representation of 12 of the 13 native terrestrial vegetation communities in the country. The 7 marine KBAs cover some 173 km<sup>2</sup> or 23% of Samoa's inshore reef area<sup>7</sup>.

8. By 2010, 6 of the 8 terrestrial KBAs and 3 of the 7 marine KBAs had been completely or partially designated as conservation areas by government or by local village communities and 2 additional KBAs have small community-based fisheries sites within their boundaries. However, the effective management of these sites is highly variable, and many needs improved management to adequately safeguard their component biodiversity. The remaining KBAs are targets for the expansion of the PA network<sup>15</sup>. Three poorly known terrestrial KBAs (Savai Central Rainforest, Falealupo Peninsular Coastal Forest and Uafato-Tiavea Coastal Rainforest) were subject to rapid biodiversity surveys[12] under the ongoing GEF-5 project (2013-2020), *Strengthening Multi-Sectoral Management of Critical Landscapes* (SMSMCL), to inform their management plans, as part of a much larger integrated approach that has been breaking new ground with respect to demonstrating how multiple sectors can be engaged in sustainable management at landscape scales. Thus, the GEF-5 SMSCL project paves the way for this proposed GEF-7 project to apply the experience and lessons learned from the sustainable management of landscapes to entire catchments, potential repositories of ecological integrity.

## 9. Threats

**Invasive Alien Species:** Samoa's natural environment has been exposed to introduction of new species from the very beginning of its existence. All of what now constitutes native flora and fauna were once introduced through natural pathways. Other species were introduced through human-made pathways initially by the Samoans, and later by the spread of global migration and now trade. There has been many introduced species into Samoa, some of these have not caused many problems within the natural environment while others have become invasive. Additionally, some of the native species due to changes in the environment have become invasive. The impacts of invasive species have been extensive and costly financially, ecologically and culturally. Impacts range from adversely affecting the productivity and subsequent economic output of primary industry such as agriculture, forestry and fisheries, as well as threatening the integrity and biodiversity of natural ecosystems, including vital ecosystem processes. Some examples of the invasive species and their impact on Samoa include: *Merremia peltata* (fue lautetele) although a native species, this vine has spread and become abundant and problematic in many areas due to forest disturbance. A notoriously aggressive vine species is widespread and causing significant damage around Samoa. Perhaps 50% of the remaining lowland native forest is now dominated by *Merremia* vines. Although the economic costs have not been quantified, the impacts of the vine via the rapid colonisation of disturbed sites, inhibiting the growth of crops and the regeneration of native vegetation (including secondary forest growth) following forestry operations and other disturbance events, is clearly visible and affecting the natural regeneration of forests. *Acanthaster planci* (Crown-of-Thorns starfish) a marine invasive during outbreaks usually associated with varying environmental conditions, research shows a high rate of degradation of coral reefs from this starfish. *Albizia chinensis* (tamaligi uliuli, tamaligi ena'ena Chinese Albizia, silk tree) and *Falcateria moluccana* (tamaligi paepae, Molucca Albizia) were

introduced as nitrogen-fixing trees. These species are widespread and have now for the most part, dominated forests ecosystems, especially in the uplands. Two rubber trees, *Castilla elastica* (pulu mamoe, Panama rubber tree) and *Funtumia elastica* (pulu vao, African rubber tree), were introduced as trials for a commercial rubber industry sometimes between 1920 and 1930 from South America, and Africa respectively. *Cordia alliodora* (kotia, Ecuador laurel, salmwood) was introduced to Samoa as a forestry tree. It is spreading where it is present in Samoa and will, over time, undoubtedly become a major component of Samoa's forests. Myna species (*Acridotheres tristis*, *A. fuscus*) introduced as a biological control for cattle lice has become a pest not only for native birds but also in open areas and human settlements. *Capra hircus* (Feral goat) some of the goats that escape for the farms in Savaii have made it into the forest and can cause extensive impact to the forest. *Spathodea campanulata* (African tulip tree) is common as an ornamental tree. *Anoplolepis gracilipes* (yellow crazy ant) a notorious invasive species is now prevalent in Samoa. *Phytophthora colocasiae* (Taro leaf blight) not only devastated Samoa's staple food source, but also decimated farmers' incomes from local and overseas markets. Taro production in Samoa dropped by over 95% (Chan, 1995), and the export value fell from \$US 3.2 million in 1993 to only \$US 53,000 one year later (IPGRI, 2002). *Rattus* (Isumu) introduced during the time of the Polynesian migration and the other varieties most likely were introduced during the early European settlements. Rats are a pest and along with cats can be attributed to the possible extinction of the Puna, the only known bird extinction in Samoa. *Achatina fulica* (African snail) is a recent accidental introduction but has spread widely around the country despite several eradication and control programs in the late 1990's. *Hyptis pectinata* (vao mini, mint weed) was accidentally introduced in the 1990's most possibly as part of the cattle shipment but has since spread around the country despite eradication work coordinated by the Ministry of Agriculture and Fisheries (MAF). The potential of new and emerging invasive species loom over Samoa with the frequent movement of people and cargoes between countries is of major concerns. High risk species like reptiles, amphibians, mammals and birds will potentially and continue to have serious impacts on Samoa's environment, agricultural production and hinder the long-term sustainability of rural communities. The main threats for invasive species being accidentally introduced into Samoa comes from neighboring countries like American Samoa, Fiji, New Zealand, Australia, Hawaii, and Tokelau. It can be via air and seaports. Cooperation and coordination on the borders of entry therefore becomes more critical than ever to avoid any new and emerging high-risk species from entering the country. This biosecurity concern forms the basis for the NISSAP, and more particular the establishment of the Samoa Invasive Species Emergency Response Plan (SISERP), however, the implementation of planned actions has not been up to the task due to various constraining issues related to poor access to scientific data and information, lack of financial and human resources including insufficient capacity, poor enforcement and compliance and lack of coordination between relevant ministries, institutions, organizations, and communities at the national level[13].

- **Pollution:** Land-based pollution from increased economic activities has resulted in eutrophication and hypoxia of marine life as has excess sediment as a result of soil erosion. Eutrophication and hypoxia affects all key functions of marine life, adding a very strong stressor to the lagoon environment, which directly depends on sunlight and oxygen. Excess sediment in lagoons is most severe around river mouths and can be seasonally critical (e.g. during the rainy season). Pollution exacerbates marine invasive infestations and can result in over-abundant native species that can take advantage of simplified ecosystems such as the crown-of-thorns starfish which as adults feed primarily on coral and is capable of reducing coral abundance up to 90%. These interactions reduce resilience, with considerable costs to the economy. Another form of pollution is excessive use of pesticides, a response to increasing pest incidences referred to above, which can have human health impacts and ecological consequence such as resistance and a loss of natural enemies causing increased vulnerability to further pest outbreaks.

- **Land degradation and over-exploitation of natural resources:** Pressures of development and population on land resources range from the demands for space to build buildings, public infrastructures and establish equipment, to the alteration of land resources. Examples of these pressures include the clearance and cultivation of lands for agriculture; the extraction of forest resources for forest products; the use of catchments for water supply and hydro powers; the taking and alternation or landscaping of areas to build roads, infrastructures and lines of public utilities (water, electricity & phone); the alteration of lands mined for sand, rock and aggregate for construction; the contamination of agricultural lands long exposed to agro-chemical use; and the effects of severe natural events such as erosion, flooding and landslide on land areas that are vulnerable to these phenomena. The analysis of the local communities' responses to the questions on land degradation activities performed during the development of the Samoa's Aligned National Action Programme to Combat Land Degradation and Mitigate the

Effects of Drought 2015 – 2020 (NAP) has identified deforestation in its various forms as the main land degradation activity. Next to it is the use of agrochemicals that has been raised as one of the most critical land degrading activity for priority consideration. Free ranging or roaming livestock and the mining of rock and aggregate or quarries were raised as emerging key threats to land resources that require due and urgent attention. Next to quarries are sand mining and the spread of invasive species, the former as a critical cause of coastline erosion and the latter as impacting on deforested and cultivated lands. Samoa's Environment Outlook 2012 and the State of the Environment 2013 report have assessed the quality and conditions of the country's terrestrial or land based ecosystems as progressing from critical levels of degradation and vulnerability in the coastline and lowland areas to a better and hopeful outlook in the upland and ridge or cloud forests of both of its two large islands of Upolu and Savai'i. Concerns were particularly raised in these assessments with the decline in the quality of the ecosystems affected in the low-lying coastal areas and the developed lowlands that are progressing towards the midslope and upland ecosystems, which need urgent attention and action now, especially for the preservation of the remaining unique upland and cloud forest ecosystems. This trend is progressing both upwards into the midslopes and uplands and also outward along the coastline. Catchments also are affected as settlements have and are progressing close to and along riverbanks[14].

• **Climate change and its variability** Projected climate change scenarios cited by the Australian Commonwealth Scientific and Industrial Research Organization (CSIRO) suggests that Samoa is expected to have: i) more frequent and extreme rainfall events; ii) more frequent and longer drought events; iii) increased air and water temperatures; iv) sea level rise; and v) more frequent extreme wind events. An extreme daily rainfall of 400 mm; currently a one-in-60-year event will likely become a one-in 40-year event by 2050. Similarly, an extreme six-hourly rainfall of 200 mm; that is, currently a one-in-30-year event will likely become a one-in-20-year event by 2050. Further, the CSIRO model projected an 8% increase in the wind speed for a 50-year storm by 2059. The increase in frequency and severity of cyclones expected from climate change can potentially set back Samoa by decades in terms of its development agenda and is expected to impact biodiversity (e.g. habitats damaged by intense and increasingly frequent storms, higher temperatures resulting in coral bleaching, prolonged droughts increasing risks of forest fires), agriculture and fisheries (increased frequency and intensity of tropical cyclones and damage to coral, all of which impact on food production systems and local livelihoods), and tourism (degradation or loss of beaches, pristine forests, coral reefs, infrastructure and scenic villages). Also, it is believed that climate change will increase IAS impacts because invasive species are often highly adaptable generalists that are able to take advantage or tolerate change and disturbance. For example, sea level rise may create gaps in low lying coastal and wetland vegetation, which can be occupied by IAS; increased forest fires may leave gaps in native vegetation; sea water temperature rise may cause coral die off and leave gaps in marine ecosystems; and climate change may change tolerance levels for pathogens[15].

10. **The barriers that need to be addressed** in order to effectively and sustainably manage catchments in ways that conserve native biodiversity and safeguard food production systems and water supplies from unsustainable land use practices and the introduction, establishment and spread of IAS are:

(i) **Limited capacity and tools for managing IAS pathways in priority biodiversity areas, and to integrate IAS issues into multiple key sectors.** In the case of IAS, their identification, modes of introduction and spread, biodiversity and socio-economic impacts (including loss of revenue) and their management in terms of reporting, monitoring and eradication/control measures need to be understood by those who manage ecosystems for their services, be it conservation, production or a range of purposes. IAS management has rarely taken an integrated approach in which IAS considerations are embedded into the management of other anthropogenic pressures, such as land degradation, fragmentation and pollution, that render a system vulnerable to IAS and compound their impact. Currently the major guidance document for IAS management in Samoa is the National Invasive Species Strategy and Action Plan (NISSAP 2019-2024) developed based on Target 9 of the NBSAP which states: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment. Before the development of this new policy, much of the work in the past has been predominantly on pest control programmes implemented by MNRE and MAF. Notably, the NISAP 2008-2011 had limited success in producing several outcomes that have contributed to advancing actions for the management of invasive species<sup>21</sup>. These include the preparation of the Samoa Invasive Species Emergency Response Plan (SISERP) and undertaking awareness and eradication campaigns on priority invasive species and site-led projects. However, IAS considerations are yet to be incorporated in the Environment Management and Conservation Bill draft. IAS

management still being driven by sectoral imperatives. Awareness and understanding about IAS at all levels and sectors is still suboptimal. There is no coordinated national system where data from all institutions /organizations converge in a standardized manner; nor any web-based tools where decision makers, resource managers, and other stakeholders can access and download information on IAS. The absence of a specific unit or a fulltime staff to coordinate and facilitate administrative and implementation, coupled with the lack of technical capabilities and the unavailability of sound data for decision making are some of the challenges facing the operationalization and implementation of the NISSAP.

**(ii) Limited demonstrated experience in holistic integrated catchment management involving multiple sectors to safeguard natural resources.** Administrative boundaries reflect tenure and political decisions made over the course of human history, but ecosystems know not boundaries other than the catchment(s) of which they are a dynamic ever changing and evolving part. Management of natural resources, perhaps inevitably, becomes locked into administrative systems of governance and ownership, which are often at variance with on-the-ground reality, particularly if the administrative boundary becomes a fence or wall rather than simply a stake in the ground. Thus, the challenge is making a paradigm shift from the present community integrated planning and management that is bounded by the respective district to a more holistic catchment perspective that is aligned with the natural ecosystems and production systems. This requires a more strategic approach that is embraced in a vision of the catchment's values and ecosystem services (including production systems) shared by its stakeholders. Aligned with that strategic framework are the CIM Plans, which reflect the aspirations of the communities and their respective districts. Significant experience has been gained in sustainable management at land/seascape scales and from ridge to reef, as for example with the ongoing GEF SMSMCL project. Moreover, the CIM Plan initiative<sup>[16]</sup> that has engaged with all 41 districts and communities throughout the entire country represents a wealth of knowledge and experience gained and lessons learned. These strengths, coupled with strong community engagement and support, provide a robust platform from which to launch this catchment-oriented enhancement to what has been achieved to date.

With regard to IAS in areas of high biodiversity, programs for IAS management have taken place in Samoa (i.e. Mt Vaea Reserve, Aleipata Islands, Malololelei Reserve, Biodiversity Park, Uafato; Falealupo Aleipata and Safata MPA; and, Palolo Deep Marine Reserve), but these have been implemented on an ad hoc basis and not all the results and lessons learned have been systematized. The range of invasive species, the population levels of some and the variety of ways they compete with native and endemic species make single approaches or isolated individual campaigns insufficient to hold back the growing threat posed to areas of high biodiversity. Integrated IAS systems that combine the prevention of new introductions from productive areas, and spread within PAs or KBAs, as well as the control of populations and the mitigation of the impact of existing ones are required. Currently essential information necessary to prioritize IAS management and focus scarce resources has not been collected, including studies to identify priority invasive species / ecosystems for IAS management and detailed criteria for risk assessments of pathways for IAS introductions. In many cases, natural areas lack inspection regulations and associated protocols to control IAS introductions (e.g. IAS imported for productive activities; tourism activities; accidental introductions from shipping, etc.), and local residents and tourists alike are largely unaware of the threats posed by IAS and do not know best practices to avoid introductions. PAs have limited authority in managing IAS in surrounding productive landscapes. In many cases, the most cost-effective approach to IAS is early detection and response; however, the necessary early response systems, technical capacities, and support and involvement of local communities are not yet in place to support such actions in high biodiversity areas.

**(iii) Weak public and institutional awareness of the threats posed by IAS and of appropriate prevention, control and management measures.** Despite recent MNRE and MAF led awareness-raising efforts, the general public lack awareness of IAS threats, species and the impacts and damage that they can cause to ecosystems, agricultural landscapes, genetic diversity, economies and livelihoods. There is some awareness and understanding about IAS among the general practitioners, but more focused outreach is needed across all sectors of the government, private enterprises and civil society. At the national level, for example, there is little or no publicity about IAS of priority concern in ports of entry/exit, hotels and guest houses, and educational establishments, providing information on species identification, biodiversity and socio-economic impacts, modes of spread or transfer and contact details for reporting sightings and flouting of enforcement regulations. Outreach among schools and communities is almost non-existent and biosecurity does not feature in the school curriculum. EIAs do not systematically incorporate assessments of IAS risk, partly due to inadequate information on native and non-native alternatives to recommended (potentially

invasive) plants to be used for purposes such as landscaping, agroforestry and erosion control. Invasive species distributions in Samoa have not been systematically assessed nor has the vulnerability of different climatic zones to different biological invaders; knowledge which is becoming increasingly important in the light of climate change. Raising awareness and understanding about IAS will be crucial in securing public and political support for many of the interventions proposed for this project.

#### 1a.2. Baseline scenario and any associated baseline projects:

11. Much of the baseline scenario with regard to biodiversity, its conservation status and sustainable management has been captured in the context described above. Key legal and policy instruments that provide the framework for protecting, conserving and sustainably using Samoa's biodiversity and other natural resources within a catchment management context include the following:

*The Lands, Surveys and Environment Act 1989*, which consolidated *The Land Ordinance 1959* and provided for environmental conservation and the establishment of National Parks and other forms of protected areas<sup>[17]</sup>, also creates a new Division of Environment and Conservation to be responsible for such matters. This Act was repealed and updated by the *Environmental Management Bill 2013*, which is the principal legislation defining the powers and functions of MNRE whose primary purposes is to "... protect and manage the environment and to promote sustainable development, and to facilitate compliance with Samoa's international environmental obligations, and for related purposes". The Bill introduces the principle of the precautionary principle and expands the functions of the Ministry to include sections of bioprospecting and biosafety.

The *Protection of Wildlife Regulation 2004* protects 'flying endemic species' from trapping, shooting, killing or otherwise destroying and prescribes penalties for non-compliance. Endemic species are flying foxes, pigeon, crimson crown fruit doves, wattled honey eater and cardinal honey eater. The *Marine Wildlife Protection Regulation 2009* elaborates on the *Lands, Surveys and Environment Act 1989* with respect to protection of marine mammals (whales and dolphins), turtles and sharks. It stipulates a license to regulate eco-tourism operations, based on whales, dolphins and turtle watching, with penalties for non-compliance.

*The Forest Management Act 2011* provides for the sustainable management of Samoa's forestry resources, development of plantation and farm agro-forestry, and the implementation of international forestry-related agreements. The Minister may impose specific protection measures on any species of tree or forest resource.

The *Planning & Urban Management Act 2004* and *PUMA (EIA) Regulation 2010* ensure that biodiversity values are assessed thoroughly, as part of the environmental impact assessment process for all for development applications, with appropriate mitigation measures required or non-approval if there are significant adverse impacts and threats of biodiversity loss.

The *Waters Resources Act 2004* includes protection of downstream biodiversity values from water diversion or abstraction schemes for development purposes by requiring the determination of a minimum environmental flow, as part of a Water Resources Management Plan.

The *Quarantine (Biosecurity) Act 2005* consolidates the law relating to importation of regulated articles and associated biosecurity risk, and the control of pests and diseases of animals, plants and the wider environment. It is of particular importance in protecting Samoa's environment against the accidental introduction of alien species capable of threatening and or damaging sensitive ecosystems, habitats or species of high conservation value.

The *Fisheries Act 1998* provides for the conservation, management and development of Samoan fisheries, licensing and control of foreign fishing, and other matters such as promoting marine scientific research.

There are numerous Sector Plans under *Samoa's Strategy for Sustainable Development (2016/2017 – 2022/23)* National , such as the National Environment and Development Sector Plan (2017 – 2021) Sector policies and plans include:



- National Policy on the Conservation of Biological Diversity;
- Samoa National Invasive Species Action Plan 2008-2011;
- Samoa's National Biodiversity Strategy and Action Plan (2015-2020)
- Samoa's State of Environment (SOE) Report 2013
- National Waste Management Strategy (2019-2023)

12. Particularly relevant to the catchment approach are the provisions for EIAs, the minimum environmental flow requirement in the case of water abstraction or diversion schemes and the potential to apply the precautionary principle, all of which contribute to the safeguard measures promoted by this project.

13. There were activities identified in the NISAP 2008-2011, and the GEF-PAS project (GEF ID 3819) supported a number of invasive species work on the ground for: Mt Vaea Parks and Reserve, O le Pupu Pu'e National Park, Aleipata Islands within the Marine Protected Area, Myna Bird Control Operation, Monitoring Survey for two introduced seaweeds and the Crown of Thorns (COTs), Water Lettuce Consultation, and the COTs Control Operation and removal. This project also financed a readiness response for the likelihood of an extreme emergency event due to an accidental arrival of a deadly IAS in the form of the Samoa Invasive Species Emergency Response Plan (SISERP) 2019-2024.

14. Since the adoption of the NBSAP, 4 pieces of biodiversity legislation have been enacted and 9 biodiversity-related policies and national strategies have been approved (e.g. Biodiversity Conservation Policy, Land Use Policy, National Water Resources Management Strategy, National Water Resources Policy, Forest Reserve Conservation Policy). At the sectoral level, biodiversity mainstreaming is advanced in legislation and policies related to forestry, water resources, fisheries, urban planning, as well as tourism and education (which both highlight the importance of biodiversity and environmental sustainability in their Master Plans). In addition to efforts being taken in sectoral planning, biodiversity integration at the projects and activities level is also noteworthy.

15. The Ministry of Agriculture and Fisheries (MAF) leads a highly successful village-based fisheries and marine reserves program that supports communities in the rehabilitation of depleted inshore areas while encouraging sustainable fisheries management (an aquaculture development initiative uses introduced tilapia, giant clams and *Trochus*). The Forestry Division now operates under the integrative umbrella of the Ministry of Natural Resources and Environment (MNRE), with links to other MNRE divisions dealing with land, water resources and biodiversity conservation now significantly facilitated.

16. Cross-sectoral integration is well advanced in certain areas, including environmental impact assessments (EIA Regulation, 2007), land management and climate change adaptation. Samoa is also promoting biodiversity-related dialogue through the establishment of inter-agency and multi-stakeholder mechanisms, such as the Cabinet Development Committee, and various ad hoc committees on specific projects that discuss biodiversity conservation related issues within the broader context of national development. Moreover, the restructuring of the old Department of Lands, Surveys and Environment into a single ministry (MNRE) now consolidates the planning and management of land, water, forestry, national parks and reserves, energy, meteorology, environmental protection and urban planning under one agency.

17. Samoa has developed several tools to generate and compile information on biodiversity data and trends (e.g. GIS-based data management system that generates mapping data and information on the extent of forests and protected areas coverage, within the framework of the MNRE-Forestry SAMFRIS Project). The MAF (Fisheries) supports the monitoring of inshore fisheries for the existing network of village-based fisheries reserves under its village-level monitoring activities.

### 1a.3. Proposed alternative scenario with a brief description of expected outcomes and components of the project:

18. Given the above historical context, with conservation efforts beginning in the late 1970s, followed by the more rigorous KBA approach to ensuring key ecotypes and species are represented in the protected areas network and more recent enhancements to apply conservation and sustainable management principles across multiple sectors at landscape scales and from ridge to reef, **the long-term solution** proposed by the project is to ensure that selected catchments are effectively managed for biodiversity, soil and water conservation, and food security whilst ensuring that IAS risks are minimized and integrated across sectors, applied within a holistic framework that embraces the fundamental role of ecological integrity, and delivered primarily through the empowerment of local administrations and communities to maximize ownership and long-term sustainability. The project seeks to achieve this solution to improve management and conservation of forest, agricultural, coastal and marine ecosystems using a Ridge to Reef approach for which the building blocks are already in place – a comprehensive set of Community Integrated Management (CIM) Plans to which district authorities and communities have signed up.

19. The project objective is: **To equip and empower local communities to safeguard Samoa's indigenous species, natural ecosystems and food production systems from Invasive Alien Species (IAS) and unsustainable land use practices.** CIM Plans are the outcome of a partnership between the Government of Samoa and the villages within the plan. Such plans are organized by district and cover the entire country from ridge to reef<sup>43</sup>. The project's objective is to provide a 'catchment lens' to these plans that transcends administrative and village boundaries to ensure that ridge to reef connectivity is maintained, strengthened and/or restored throughout the catchment to safeguard biodiversity and other natural resources from competing interests from invasive species, unsustainable land use practices (i.e. sediment from soil erosion and agricultural runoff) and the rising intensity and frequency of natural events that can increasingly be attributed to climate change.

**Component 1: Enhancing institutional and technical capacity in safeguarding indigenous species, natural ecosystems and production systems from IAS** concerns the operationalization of the National Invasive Species Strategy and Action Plan (NISSAP) 2019-2024<sup>[18]</sup> <sup>[19]</sup> with a specific focus on building understanding and technical capacity within the relevant sectors of government, private enterprises and communities to safeguard the natural ecosystems and food production systems from IAS. The Outcome of Component 1 is strengthened institutional and technical capacity to monitor and address the impacts of IAS and unsustainable land use practices on terrestrial and aquatic ecosystems and food production systems. To ensure the sustainability of the project outcomes, Output 1.1 will support the establishment of a multi-sectorial institutional framework to implement the NISSAP. A national ISU will be established within the Division of Environment and Conservation (DEC) of MNRE as the leading body for implementation of the NISSAP. The existing SNITT will formalize its work to function as an advisory body to the government to support decision making and efficient deployment of resources. Policy gaps will be addressed through supporting the finalization of the Environment Management and Conservation Bill with the incorporation for Invasive Species Management and establishment of SNITT; existing sectoral laws and regulations relevant to IAS will be reviewed to detect gaps and inconsistencies and a proposal will be made for revised and harmonized laws and regulations. A modular safeguards training programme on IAS and agro-environmental farming will focus on the sustainable management of catchments and its design will be based on: a review of the respective CIM Plans to assess community and district priorities; an assessment of (technical) capacity needs among the relevant sectors having interests vested in land use and catchment management, such as MNRE (e.g. Climate Change, Environment & Conservation, Forestry, Land Management, PAs staff, Water Resources), MAF (e.g. Crops, Quarantine Services), MWTI (Planning & Urban Management), MFR (Customs Services), MPMC (Immigration), MWCS, MESC (e.g. University of South Pacific), NGOs (e.g. Conservation International, Samoa Conservation Society, SUNGO) and other relevant regional or national projects (i.e. GEF ID 9410 *Strengthening national and regional capacities to reduce the impact of Invasive Alien Species on globally significant biodiversity in the Pacific*); and a review of existing training courses and scope for them being tailored. The project will support training of primary stakeholders (e.g. farmers, fishing communities, women's groups and youth) and build local capacity within the target catchments to the extent that each community or communities' group has at least one male and female member fully accredited as an IAS/best agricultural practices 'Practitioner'. Output 1.2 will develop a suite of decision-making tools aimed at informing cost effective management decision to address IAS threats in key landscapes and key sectors (i.e. agriculture and tourism). One of the first steps in that direction will be to establish a national IAS information system that will link different new and existing information sources, providing detailed information on species taxonomy and biology, places and pathways of introduction, ecosystem impacts under current climate scenarios and data on dispersion under different climate change

scenarios. The information system once established will ultimately allow for comprehensive diagnosis of IAS, projections of new or expanded invasions, improved priority setting for interventions (including demonstrations in component 2), informed decision-making on sectoral policies and investments, and easy access to information for decision makers and other users. It is proposed that an IAS monitoring network be piloted with the relevant sectors. The key role of the project will be to catalyze and facilitate the development and institutionalization of this network by the responsible sectors and other authorities; and to ensure mechanisms are developed for collating monitoring results and making them readily accessible to all catchment stakeholders, via the IAS information system and other platforms. To complement the decision-making tools and information resources, the project will develop and implement sectorial guidance and regulations to strengthen the control of main pathways of IAS to vulnerable areas (refer to Output 2.2). Output 1.3 provides for equipment in support of IAS safeguards work particularly in key air and sea entry points. Quarantine services will be expanded, officers deployed, adequately informed and equipped to identify IAS and, as necessary, fumigate incoming goods or quarantine living plants and animals. Officers will have ready access to the IAS Information System, through their mobiles and/or other means. IAS Extension Service, comprising cadres of IAS certified practitioners operationalized at catchment level to advise and support landowners, farmers, fisherfolk and members of the public in IAS identification and management. Such information will be publicly available via the new IAS Information System (refer to Output 1.2), for which a mobile application is proposed to enable members of the public, as well as relevant government and private sectors, to better inform themselves, as well as provide a reporting facility to assist national and state governments in monitoring the status and distribution of IAS. Both the IAS Information System and mobile application will benefit from other GEF investments: the former from the Biosecurity Information System to be developed to support identification, screening, monitoring and reporting of IAS and biosecurity data in FSM (GEF Project ID 9917); and the latter from the Samoa Mobile System for Monitoring Critical Landscapes, developed in 2018 and now operational and licensed for 5 years to gather field data (including GPS facility) for mapping boundaries and spot locations from project sites (SMSMCL GEF Project ID: 4550). Output 1.4 will identify and develop optimal, evidence-based finance plans and finance solutions for IAS Management as part of a national effort to ensure financial sustainability of environmental efforts in Samoa through the creation of a national green/environmental fund. Given Government's hesitation to move directly towards cost recovery for IAS security at entry/exit ports, this output will explore opportunities more widely, such as: budgetary coordination between sectors to ensure coherent investments and actions, cost-recovery schemes and options for income generation to recover costs of IAS management. This output will generate the technical inputs needed to ensure that part of this new green/environmental fund will be ear-marked for IAS security and safeguards, including emergency responses.

**Component 2: Demonstrating integrated management of catchments from ridge to reef to safeguard indigenous species, natural ecosystems and food production systems from IAS and unsustainable land use practices** provides the opportunity to demonstrate how catchments can be sustainably managed by community members in a holistic and integrated manner across the full spectrum of stakeholders, while focusing specifically on safeguarding the natural functioning of ecosystems within catchments and food production systems from IAS and unsustainable land use practices. The outcome of Component 2 is sustainable management of catchments as holistic, integrated entities established and demonstrated in respect of safeguarding indigenous species, natural ecosystems and food production systems from IAS and unsustainable land use practices. Outcome 2(a) utilizes the inputs generated in output 1.2 and the CIM Plans[20] as a basis for prioritizing safeguard inputs to catchment management; further developing and implementing priority IAS action plans for each selected catchment; improving biodiversity conservation and ecosystem resilience to IAS by reintroduction of key threatened plant and analogue species during restoration efforts; introducing SLM and SFM compatible land-use by farming households involving the adoption of best agricultural practices and integrated organic and local innovations. Regarding the latter, it is pertinent and reassuring to note that communities in concert with MAF are increasingly adopting more organic farming practices, including use of organic rather than chemical fertilizers and biological controls rather than herbicides and pesticides, all of which is complimentary to the safeguarding natural ecosystems and supporting reef and marine biodiversity conservation efforts. Given the community-based nature of many of the potential interventions under this outcome, a low value grant programme, will be established under this to which community members/groups may apply. The modalities of this programme in terms of how it will be operationalized will be framed during the PPG. Under outcome 2(b) activities will be undertaken to ensure that IAS considerations are systematically incorporated into the management of selected PAs, into

adjacent areas that function as buffer zones and locations with PA expansion potential, and into the selected catchments as a whole to ensure that the land is effectively managed for biodiversity, soil and water conservation whilst ensuring a IAS risks are minimized. Activities to ensure that sufficient capacity is built, both in individuals, organizations and groups for whom IAS is a core concern, and in those whose action influence IAS risks.

**Component 3: Gender mainstreaming and knowledge management** will address the challenges described under 'barrier iii' and complement the other components and support the development and implementation of a gender strategy and action plan to ensure that women and youth are empowered to become active agents, participants and beneficiaries of the project interventions. Another key aspect of this component is that it will put in place a system for collecting, packaging and sharing information and knowledge about the practices promoted by the project, the processes involved in these, and the short and medium-term results from implementation of the project activities. This knowledge and information will be shared with district and community level authorities to further guide future programming around similar issues and widely disseminated to the rest of the district and catchment. By the end of the project, it is expected that local land users and other key decision-making stakeholders within in the target catchments, will be better skilled and more knowledgeable on practical solutions to monitor and address impacts of IAS and unsustainable land use practices on biodiversity and food and water security challenges they are faced with, and how to tackle them at farm and landscape levels.

#### 1a.4. Alignment with GEF focal area and/or Impact Program strategies:

20. The project's multi-sectoral, catchment approach to safeguarding biodiversity and food production systems from invasive species, and unsustainable land use practices aligns well with the goal of the GEF-7 Biodiversity Focal Area strategy: *to maintain globally significant biodiversity in landscapes and seascapes*; particularly to its objective 2: *Address direct drivers to protect habitats and species*.

21. More specifically, the project will contribute to two programmes within the Biodiversity focal area as summarized below.

<b>BD-1-1</b>	<p><b><i>Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors</i></b></p> <p>The project will provide an opportunity to demonstrate how catchments can be sustainably managed in a holistic and integrated manner across the full spectrum of stakeholders (i.e. agriculture, fisheries and tourism), while focusing specifically on safeguarding the natural functioning of terrestrial, aquatic and marine systems as well as food production systems.</p>
<b>BD-2-6</b>	<p><b><i>Address direct drivers to protect habitats and species through the prevention, control and management of Invasive Alien Species</i></b></p> <p>Quarantine Services will be properly equipped, and their technical capacity enhanced to reduce the risks of IAS being introduced to Samoa; alongside accredited training and guidance provided to community members to empower them in safeguarding their productive and natural systems from IAS. Safeguard measures will be demonstrated in nine target catchments to protect and rehabilitate biodiversity and food production systems from IAS, as well as from unsustainable land use practices. Successful IAS control measures will also be extended to other priority sites.</p>

22. With respect to the UN 2030 Agenda for Sustainable Development, the project is particularly well aligned with Sustainable Development Goals 2, 14 and 15, while also contributing to Goal 5 by default of mainstreaming gender equality across its interventions:

- **Goal 2:** End hunger, achieve food security and improved nutrition and promote sustainable agriculture;
- **Goal 5:** Achieve gender equality and empower all women and girls;
- **Goal 14:** Conserve and sustainably use the oceans, seas and marine resources for sustainable development;
- **Goal 15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

#### 1a.5. Incremental/additional cost reasoning and expected contributions from the baseline, GEFTF, LDCF, SCCF, and co-financing:

23. This GEF investment is very timely with respect to Samoa's present state of development. As documented in Section 6 (Coordination), in 2016-2018, World Bank and AF-UNDP<sup>19</sup> supported the review, updating and transformation of Coastal Infrastructure Management Plans for each of the country's 41 districts into Community Integrated Management (CIM) Plans. These updated CIM Plans tick many boxes, such as community ownership of their own development planning, resilience, response to climate change (adaptation and mitigation) and to extreme weather events, and they include vulnerable ecosystems. Government is specifically interested in support from GEF-7 to help implement these CIM Plans, providing the GEF with a timely opportunity to invest in mainstreaming biodiversity considerations (including ecosystems) into the CIM Plans initiative to safeguard the functioning of ecosystems and, as appropriate, restore their ecological integrity and connectivity from ridge to reef.

24. **The GEF investment** will maximize this opportunity by introducing a catchment approach that will mainstream biodiversity considerations in the overall vision for CIM Plan implementation. It will also remove systemic and institutional barriers to mainstreaming IAS prevention, control and management at the national, and local levels, backed by incentives for community-based natural resource management to make sustainable land and forest management compatible with effective biodiversity and ecosystem management. The support of the operationalization of the NISSAP and in general terms, the integration of IAS considerations into key sectors (i.e. agriculture, fisheries and tourism) will help to improve the management effectiveness of PAs, prevent species extinctions, sustainably conserve globally significant biodiversity, and protect and improve ecosystem function in Samoa; thereby strengthening the national economy and local livelihoods, and generating global environmental benefits. Specific priority IAS as well as target species, habitats and ecosystems that will benefit from project interventions within the catchments will be identified during the PPG.

25. **Without the GEF investment**, it is likely that CIM Plan implementation will be piecemeal, contained within district boundaries and their administrative systems and governed by community tenure regimes, all of which can deny or at least dilute accountability and responsibilities towards the wider biogeographic context that is embraced by catchments and within which everything is interconnected, including community livelihoods and health. The barriers and insufficient capacity for integrating IAS concerns into all management actions that affect the interdependent terrestrial, coastal and marine ecosystems means that a business-as-usual scenario would promote continued weakness in terms of coordination and integration of IAS concerns among the various sectors and stakeholders that manage or influence terrestrial, coastal and marine resources and ecosystems. Opportunities for synergies will also be constrained by the absence of coordinating mechanisms at the catchment level, which also has implications in terms of potential economic and social benefits foregone. As a result, IAS risks to key ecosystem services such as biodiversity conservation, climate change adaptation and mitigation, and watershed services will continue to be widespread in areas ranging from upland forests and agricultural landscapes to coastal landscapes and out to coral reefs and other inshore marine habitats, with significant impacts including biodiversity loss, sedimentation, pollution and nutrient overloads flowing from terrestrial to coastal to marine ecosystems.

#### 1a.6. Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF):

26. The project will contribute to safeguarding globally significant biodiversity and its ecosystem goods and services, including the security of food production systems. First and foremost is the fundamental value of piloting a catchment management approach because once mainstreamed it could transform sustainable management of native biodiversity and production systems from ridge to reef – a relatively contained system.

27. The nine target catchments, comprising approximately 71,574 ha<sup>[21]</sup> or about 19% of Samoa's total land area, will benefit from holistic, integrated sustainable management from ridge to reef that is characteristic of a catchment approach to safeguarding the integrity and functioning of ecosystems and production systems; and, if successful, this should be sufficient incentive to mainstream such an approach across 100% of catchments. Direct global benefits from targeting these nine catchments include:

- Some 15,533 ha of terrestrial KBAs will be safeguarded on Savai'i<sup>[22]</sup>.
- Some 5,292 ha of coastal marine KBAs (Vautupua, Vaisigano and Apolima) about the target catchments and, therefore, will benefit from their improved management practices and safeguards.

28. Other global benefits include:

- 5,618 ha of terrestrial and 6,152 ha of marine protected areas will be under improved IAS management includes
- The investment will directly benefit an estimated 26,610 community members (48.7% female, 51.3% male), distributed across 60 villages and representing about 14% of Samoa's population.
- US\$ 20 million of leveraged co-financing and invested in this catchment management approach to IAS management and SLM.
- Improved management of priority invasive species, specific priority species for each site will be determined during the PPG.
- Raising awareness and understanding about safeguards, particularly IAS (equally biggest threat, with climate change, to biodiversity in PICTs), and increased technical capacity within relevant government sectors and communities to implement control measures. The latter will be based on community members becoming accredited as 'Practitioners' in IAS management, organic farming, biological control of pests and other applied technologies.

#### 1a.7. Innovation, sustainability and potential for scaling up:

29. **Innovation** is inherent in the catchment approach, which builds on two decades of engagement by national government with communities: initially to address hazards in coastal areas and then 15 years later to widen the scope and cover entire districts under partnership agreements directly with the communities. Thus, the catchment approach will benefit greatly from existing high levels of ownership of the CIM Plans, which will be crucial as the project seeks to develop innovative catchment-level coordination mechanisms and platforms. Once an effective coordination mechanism has been established, it will then be possible to innovate an appropriate catchment level monitoring system as previously mentioned.

30. Other opportunities for innovation include the establishment of a cadre of community-based practitioners trained in a variety of semi-technical topics to build capacity within communities. There may also be an opportunity to link the IAS management at the community level with the new biomass plant that is being constructed with GEF-6 funds for electricity generation. It is anticipated that the plant will be fed with a mixture of wood from IAS and it may prove feasible to add diseased coconut palm trees to the mix of wood supplies.

31. **Sustainability** has been incorporated into the design of project by ensuring that provisions are made to institutionalize key initiatives before the project ends. The main examples include: the modular safeguards training programme; coordination mechanisms and platforms established for catchment management; and the coordinated monitoring of catchment condition by the responsible sector agencies in a transparent and accountable manner.

Provisions should be reviewed and strengthened as necessary during the PPG. Further consideration of exploring cost recovery mechanisms for the provisioning of Quarantine Services is also merited, given that some countries in the Pacific and elsewhere have successfully applied the 'user pays' principle.

**Potential for up-scaling** post-project is high given that the government has a significant challenge in technically and financially supporting communities with the implementation of their CIM Plans. Assuming that the catchment approach can be readily applied in practice, once it has been demonstrated to be effective there are likely to be calls for its mainstreaming before the project ends. This should be anticipated to ensure that policies gaps are filled, coordination mechanisms are institutionalized, and capacity is in place to support and enhance such mainstreaming.

[1] A total population of 187,820 was recorded for the last census in 2011, distributed across 362 villages. Average household size is 7.

[2] Samoa's National Biodiversity Strategy & Action Plan, 2015-2020.

[3] Mittermeier, R.A., Robles Gil, P., Hoffmann, M., Pilgrim, J., Brooks, T., Mittermeier, C.G., Lamoreux, J. and Fonseca, G.A.B. 2004. *Hotspots Revisited*. Mexico City, Mexico: CEMEX.

[4] Conservation International – Pacific Islands Programme, Ministry of Natural Resources and Environment, Secretariat of the Pacific Regional Environment Programme. 2010 *Priority Sites for Conservation in Samoa: Key Biodiversity Areas*. Apia, Samoa. 32pp.

[5] NOAA -Coral Reef Conservation Program. 2018 Coral reef condition: A status report for American Samoa.

[6] James Atherton, 2008. Impacts of Invasive Species in Samoa: World Biodiversity Day; Conservation International Pacific Islands, Samoa.

[7] BirdLife International, IUCN and UNEP World Conservation Monitoring Centre, 2019. IBAT Country Profile for Samoa, Version 2019/1. Available at: <http://conservation.ibat-alliance.org>.

[8] Source: [https://www.gbif.org/species/search?dataset\\_key=e4942a44-e352-4113-8a49-f91a97281b1d&origin=SOURCE&advanced=1](https://www.gbif.org/species/search?dataset_key=e4942a44-e352-4113-8a49-f91a97281b1d&origin=SOURCE&advanced=1)

[9] Samoa – Country Profile. <https://www.cbd.int/countries/profile/default.shtml?country=ws> (accessed 7 August 2019)

[10] The protected area network currently comprises 6 national parks, 19 terrestrial reserves, 1- community conservations areas, 22 water catchment areas and 109 fisheries reserves (78 with bye-laws in place) but most are not active, and few are legally gazetted (Source: Samoa's Sixth National Report to the CBD, April 2019)

[11] Funding was provided by GEF under the Programme of Work for Protected Areas (POWPA).

[12] Ministry of Natural Resources and Environment, Conservation International Pacific Islands Programme. 2017. *Rapid Biodiversity Assessment of Key Biodiversity Areas: Falealupo Peninsula Coastal Rainforest, Central Savaii Rainforest, and Uafato-Tiavea Coastal Rainforest, Samoa*. Apia, Samoa. 285pp.

[13] Ministry of Natural Resources and Environment, 2019. *National Invasive Species Strategy and Action Plan 2019-2024 (NISSAP)*

[14] Ministry of Natural Resources and Environment. 2015. *Samoa's Aligned National Action Programme to Combat Land Degradation and Mitigate the Effects of Drought 2015 – 2020*

[15] Ministry of Finance, MNRE, GCF. 2017. ProDoc *Integrated Flood Management to Enhance Climate Resilience of the Vaisigano River Catchment in Samoa*

[16] Refer to Section 1.a.5 for further details of the CIM Plan initiative, which was initiated by the World Bank in 2000-2007, and subsequently converted from what were originally Coastal Infrastructure Management Plans into Community Integrated Management Plans in 2016-2018 by World Bank and AF-UNDP. A more detailed explanation of how CIM Plans evolved is provided in Section 6 (paragraphs 42-44).

[17] Prior to this Act, national parks and reserves were established under *The National Parks and Reserves Act 1974* for the benefit of the people of Samoa.

[18] Potential synergies with the Invasive Alien Species Management Plan 2016-2020 developed for the Aleipata Islands should also be identified

[19] This NISSAP (2019-2024) potentially addresses Target 9 of Samoa's National Biodiversity Strategy and Action Plan (2015-2020), albeit unlikely within the 2020 timeframe: "By 2020, IAS and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

[20] Planning and Urban Management Agency (PUMA) was very closely involved in the development of the CIM Plans and their technical support will be invaluable in the elaboration of a vision for each catchment and in the application of that vision on the ground and in coastal waters, taking into account land tenure, planning, development and EIA constraints and procedures. MNRE's Land Management Division, with its role in Land Use Policy, is also a key player.

[21] These and other estimates of environmental benefits need to be checked during the PPG because some of the datasets used to generate them are incomplete or require further clarification. However, estimates err on being conservative and the extent of some benefits may be higher but currently cannot be quantified. This applies particularly to protected areas for which a comprehensive spatial layer of their boundaries is lacking.

[22] The extent of protected areas within these catchments is not readily quantifiable because only a small proportion has been spatially mapped. National parks are the major exception and they account for a total area of 5,618 ha within six of the nine target catchments, most of which lies within the Central Savai'i Rainforest KBA. Thus, national parks contribute little additional global value to what is already captured by terrestrial KBAs within the target catchments.



**1b. Project Map and Coordinates**

Please provide geo-referenced information and map where the project interventions will take place.

1. The proposed project target sites in the two main islands of Samoa, Upolu and Savai'i is provided in **Annex A**.

## 2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

1. Key stakeholders are identified below. A stakeholder engagement plan will be developed during the PPG.

Stakeholder	Roles and Responsibilities	Involvement in the Project
<b>Executing Agency</b> Ministry of Natural Resources & Environment (MNRE) <ul style="list-style-type: none"> <li>Division of Environment &amp; Conservation (DEC)</li> <li>Forestry Division</li> <li>Global Environment Facility/ Climate Change Division</li> <li>Land Management Division</li> <li>SPA/Technical Services Division</li> <li>Water Resources Division</li> <li>Disaster Management Office</li> </ul>	<b>MNRE</b> is responsible for the effective management of natural landscapes. It is the executing agency for all United Nations Multilateral Environment Agreements (MEAs), including UNFCCC, UNCBD and UNCCD. All of the following Divisions are relevant to this project: <ul style="list-style-type: none"> <li><b>DEC</b> currently focuses its conservation mandate on national parks, waste, chemical and hazardous waste, terrestrial and marine conservation. It is the Focal point for CBD; and Synergy with UNCCD.</li> <li><b>Forestry Services</b> comprises three sections: Management, Policy &amp; Planning, and Research &amp; Development Services. It is experienced in reforestation and watershed management activities.</li> <li><b>Land Management</b> is responsible for policy development on sustainable development of land and land-based resources. Its Land Registry Section holds all records of land ownership in Samoa and administers public and customary land leases. It is also responsible for the issuing of sand mining and reclamation permits; and utilization of government lands in the central urban area. It is also the Focal Unit for UNCCD.</li> <li><b>Technical Services</b> comprises Survey, Survey Quality Assurance, and Mapping.</li> </ul>	MNRE <ul style="list-style-type: none"> <li><b>DEC</b> will take the lead for the control of invasive species in the target catchments where they plan to pilot some new techniques specific to the <i>Merremia</i> vine. (Note that CRB controls will be left to MAF's Crops Division.)</li> <li>The Division will also support work on protected areas, waste and chemicals (including their registration and monitoring thereafter).</li> <li><b>Forestry Services</b> will support restoration/rehabilitation work, for example the rehabilitation of at least 10 0 ha of mangrove.</li> <li><b>Land Management</b> will contribute to analyses and spatial mapping of land tenure at catchment levels to enhance the understanding of stakeholders and inform planning options and decisions.</li> <li><b>Technical Services</b>, their capacity providing, will play a major role in developing spatial maps for the target catchments and developing/providing a web-based GIS platform that is accessible to all stakeholders from the target catchments. Any gaps in staffing capacity will be identified and addressed.</li> </ul>

	<ul style="list-style-type: none"> <li>· <b>Technical Services</b> comprises Survey, Survey Quality Assurance and National Mapping sections. Digital satellite and aerial imagery is available from Mapping.</li> <li>· <b>Water Resources</b> has Hydrology, Regulatory and Watershed Management sections.</li> <li>· <b>GEF and Climate Change Division</b> provides oversight and quality assurance of GEF and Climate Change projects</li> <li>· <b>The DMO</b> is the statutory body responsible for ensuring the ongoing coordination, development and implementation of disaster risk management programmes and activities in Samoa.</li> </ul>	<p>y will need to be filled by consultants.</p> <ul style="list-style-type: none"> <li>· <b>Water Resources</b> and its <b>Watershed Management Section</b> will be key to supporting development of a monitoring system for catchment condition.</li> <li>· GEF and Climate Change Division will host the project management unit and oversee the implementation of the project.</li> <li>· The DMO will be key in events of emergency with IAS</li> </ul>
<p><b>Implementing Partner</b></p> <p>Ministry of Agriculture &amp; Fisheries (MAF)</p> <ul style="list-style-type: none"> <li>· Crops Division</li> <li>· Samoa Quarantine Services (SQS)</li> </ul>	<ul style="list-style-type: none"> <li>· The <b>Crops Division's</b> role is to undertake research to improve food production and security and crops sustainability. Its three main sections cover Research, Development and Advisory (outreach, especially farmers).</li> <li>· <b>SQS's</b> mandate, as determined by the 2005 Biosecurity Act, is to prevent or control the introduction and spread of pests and diseases that could cause significant damage to human beings, animals, plants and other aspects of the environment or economy.</li> </ul> <p>It is also responsible for assisting exporters of primary produce with access to markets and government-to-government certification of such products.</p> <p>The Registrar of Pesticides ensures that only registered pesticides are available for use in Samoa, hence all imported pesticides must be registered.</p> <p><b>SQS</b> operates a twenty-four-hour, seven-days-a-week service, maintaining a presence at key points of entry of biosecurity risk goods - airports, seaports, cargo depots and the mail centre at Apia.</p> <p>SQS works in tandem with other border inspection agencies (Immigration, Customs and Health) for a holistic government approach to border security.</p>	<ul style="list-style-type: none"> <li>· The <b>Crops Division</b> will lead on the IAS and IS elements of the project relating to food production systems. Most of its work will focus on controlling CRB (an IAS) infestation under both Outcomes 3a and 3b, which focuses on the control of CRB. It may also be involved in IS-related agricultural activities under these Outcomes. The Crops Division will also contribute to the design and delivery of the training modules on environmental safeguards in agricultural production systems (Outcome 1).</li> <li>· <b>SQS</b> is the agency responsible for the prevention of IAS from entering/leaving Samoa. It will lead on all aspects of biosecurity, collaborating closely with other border security agencies in enhancing their awareness and knowledge about IAS. It will also work closely with the Crops Division, notably with respect to expanding the monitoring of pesticides and herbicides from the current register to tracking the entire life cycle (i.e. use and disposal).</li> </ul>
Ministry of Finance (MoF)	MoF is the lead governmental financial agency The mandated functions of the Ministry of Finance can be summarized as to provide policy and strategic advice, as well as financial services to the Government in order to achieve su	MoF role is to promote accountability and transparency in service delivery to the community through establishment and implementation of sound financial management systems, standards, policies and proc

	<p>sustainable, long-term economic outcomes and fiscal viability towards the advancement of the national vision to 'achieve quality of life for all Samoan citizens'.</p>	<p>edures.</p>
<p>Ministry of Works, Transport &amp; Infrastructure (MWTI)</p> <p>· Planning and Urban Management Agency (PUMA)</p>	<p>Established under the PUMA Act 2004, the Agency is responsible for ensuring sustainable use, development and management of land in Samoa. The PUMA Act provides the mandate for the approval and consent on all development activities in Samoa.</p>	<p><b>PUMA</b> was closely involved in CIM Plan development. Their experience and technical assistance will be invaluable in applying a catchment approach to these implementing Plans. The Agency is keen to be involved in the project.</p>
<p>Customs Services, Ministry for Customs and Revenue (MCR)</p> <p>Samoa Immigration, Ministry of the Prime Minister &amp; Cabinet (MPMC)</p>	<p><b>Samoa Customs</b> works closely with other government and international enforcement agencies to detect and deter unlawful movement of goods and people across the border. The task of intercepting illegal drugs and firearms at all ports of entry has been greatly improved due to the enforcement and implementation of standard operating procedures and tools such as the mobile x-ray machine, detector dogs, and other technologies.</p> <p>The introduction of the Automated Systems for Customs Data World version also known as the ASYCUDA WORLD, capitalizes on the web technology to connect with its customers anywhere locally and abroad. Customs have now made available all external Standard Operating Procedures.</p> <p><b>Samoa Immigration</b> is responsible for border security, which includes attending to any aircraft or vessel that arrives at or departs from any regulated port.</p>	<p>Both <b>Customs</b> and <b>Immigration</b> will have a vested interest in contributing to the design of parts of the training programme, particularly the IAS modules, as their staff will benefit from such training modules.</p>
<p>Cabinet Development Committee (CDC), Ministry for Finance</p>	<p><b>CDC</b> is the principal advisory body to Cabinet. Part of its role is to ensure that Government ministries and agencies adopt a common approach to project planning and programming proposals, based on its <i>Manual on Project Planning and Programming</i>. The manual also identifies the roles and responsibilities of agencies involved in various stages of the project cycle and provides guidelines on how project planning is integrated into the budget cycle. Its ultimate aim is to promote an efficient use of scarce resources in achieving national development objectives presented in the Strategy for the Development of Samoa.</p>	<p>CDC can play a vital role in mainstreaming the project's holistic, integrated catchment approach to the sustainable management of land and coastal waters from ridge to reef.</p> <p>The Committee comprises Cabinet Ministers and Government CEOs, as well as the Environment, Land and PUMA boards that play pivotal roles in facilitating the promotion and recognition of environmental issues, including SLM.</p>
<p>Ministry of Women, Community &amp; Social Development (MWCSO)</p>	<p>The <b>Ministry of Women Communities and Social Development (MWCSO)</b> has the overall mandate to support local dev</p>	<p>It is anticipated that <b>MWCSO</b> will be invaluable at district and community levels, given their mission and ex</p>

ocial Development (MWCSD)	ent (MWCSD) has the overall mandate to support local development through local government, and to provide vital link between GoS and communities. The MESC develops and implements education curricula in Samoa, including on issues of environmental management, conservation, and sustainable land management. The Local Government has the primary mandate to plan and implement local development activities. Government in Samoa is three tiered with the central government, eleven political districts or tūmālō, 286 villages (fono) and 26 urban authorities. Districts are governed from the district capital villages according to their own constitutions based on traditional laws and regulations. The capital of Apia consists of 45 villages joined into the country's Capital District. The rural and urban village authorities operate as a single tier, with each village having its own committee.	rict and community levels, given their mission and experience in reaching out to communities and empowering them.
Ministry of Education, Sports & Culture (MESC)	<p>The Ministry of Education, Sports and Culture (MESC) is mandated to carry out its duties and functions under the:</p> <p>Education Act 2009</p> <p>Teachers Act 2016</p> <p>Ministry of Youth, Sports and Cultural Affairs Act 1993</p> <p>the Ministry has developed a vision that reflects all areas pertaining to its work:</p> <p>"A quality holistic education system that recognizes and realizes the spiritual, cultural, Intellectual and physical potential of all participants, enabling them to make fulfilling life choices."</p> <p>To achieve the Government and Ministry's vision, a mission statement has been adopted that illustrates the importance of education, sports and culture to the individual, the nation and embraces the idea of personal development.</p> <p>"Promote quality and sustainable development In all aspects of Education, Sports and Culture to provide choices for everyone"</p>	MESC works closely with MNRE on awareness programmes for schools and incorporating key environmental topics into the national educational programmes

University of South Pacific	<b>USP</b> has a small biological control laboratory and is researching indigenous biocontrol agents for the likes of CRB and other IAS. Recently received a grant from the University to establish a molecular lab for identification purposes.	<b>USP</b> has a MoU with MAF and there are potential synergies for them to be collaborating on IAS. Keen to work with the project.
District Administrations	<b>District Administrations</b> have been closely involved in the development of CIM Plans, which contain both district and community actions.	Cooperation and support from <b>District Administrations</b> will be pivotal to determining an effective coordination mechanism for realizing the catchment approach.
Local communities (farmers engaged in agriculture, fishers, plantation workers)	<b>Communities</b> are the primary stakeholders for most aspects of the project, as they will benefit directly from its investments.	It is particularly important that local <b>communities</b> own the project with regard to their respective catchments. It is anticipated that many interventions in the target catchments will be community-based.
Secretariat of the Pacific Regional Environment Programme (SPREP)	<b>SPREP</b> is a regional organization established by Governments and Administrations of the Pacific, charged with protecting and managing the environment and natural resources of the Pacific. Its head office is in Apia, Samoa	SPREP's is currently implementing a regional invasive species project: Pacific Regional Invasive Species Management Support Service (PRISMSS), with which there are potential synergies, particularly with respect to capacity building.
National and international NGOs	These include <b>Samoa Umbrella for NGOs</b> (SUNGO) is a network of Non- Government organizations (NGO's) and Trusts established in 1997 to provide alternative development options and assistance to community groups in Samoa. It has also provided input for government policy and planning processes on issues impacting quality of life for the people of Samoa.	SUNGO will be valuable in terms of complementarity of projects and programmes with the proposed project.
Civil Society Support Programme (CSSP)	A programme with the Ministry of Finance overseen as a steering committee composed of key development partners, government and Samoa Civil Society. Its primary mission is to deliver sustainable social and economic benefits to the people of Samoa through strengthened civil society organizations (CSOs) by granting project co-financing directed toward small, informal enterprises and NGO's	CSSP will be valuable in terms of complementarity of projects and programmes with the proposed project.
Scientific Research Organisation in Samoa (SROS)	The inception of SROS in 2006 was based on the realization that adding value to the development of primary produce for export will overcome some of the trade challenges being experienced and contribute towards increased economic benefits	SROS has International certification of technical services through International Accreditation New Zealand (IANZ) that provide industry and public stakeholders local access to accredited tests. Accredited testing is needed to answer increasing demands to meet quality

	benefits.	needed to answer increasing demands to meet quality standards and obtain product specifications required for accessing overseas markets as in the case for this project test will be required
Samoa Conservation Society (SCS)	<p>A local non-governmental organization dedicated to promoting the conservation of Samoa's biological diversity and natural heritage.</p> <p><b>SCS</b> works collaboratively with communities, the Government and partners to raise awareness on the state of Samoa's environment and the species within. <b>SCS</b> further works with schools and youth groups to educate them on the natural heritage that we are blessed with, and actions that can help in species and habitat recovery.</p>	Samoa's biological diversity and natural heritage are constantly being threatened by invasive species, over harvesting and over exploitation, habitat degradation, pollution and climate change. SCS could work with proposed project to assist with overcoming some of these challenges through undertaking research, projects and initiatives and partnering with the various organizations in Samoa and abroad.

### 3. Gender Equality and Women's Empowerment

**Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).**

Samoa was the first Pacific Island Country (PIC) to ratify the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) in 1992; it has since aligned its policies to the Pacific Leaders Gender Equality Declaration (PLGED) and Revised Pacific Platform for the Advancement of Women. In 2015, the Government of Samoa committed itself to the Sustainable Development Goals, including Goal 5: achieve gender equality and empower all women and girls. The National Policy for Gender Equality (2016-2020), which is closely aligned with the priority areas and strategies of the Community Sector Plan (2016-2021)<sup>[1]</sup>, provides the framework for this delivering this commitment under the mandate of the Ministry of Women, Community & Social Development, a key stakeholder in this project.

2. Thus, the policies and governance structures for achieving gender equality, promoting the role of women in leadership and decision-making, providing equal opportunities for women in employment and including gender in resilience and disaster preparedness are well established. This project, which seeks to align its interventions with priorities identified in the CIM Plans at district and community levels, will work closely with communities in the target catchments, empowering women in the community and promoting gender equality in accord with the community's norms and traditions.

3. To better inform how gender can be mainstreamed across the full range of project interventions, a full gender analysis will be undertaken during project preparation to determine the different roles of women and men in biodiversity conservation, natural resources management, food production (i.e. farming) and waste management. Results of the analysis will be used to develop a more responsive gender mainstreaming action plan and assigning of a UNDP gender marker. Gender disaggregated indicators will provide the basis for monitoring and evaluation of the project's impact on promoting gender equity and empowerment of women and youth. Gender disaggregated indicators will be part of the Project Results Framework. Furthermore, additional data will be collected such as: (i) total number of male and female full-time project staff; (ii) total number of male and female Project Board members; and (iii) number of jobs created by the project that are held by women and men. The project design will ensure that financial and human resources are set aside for to mainstream gender during project implementation and to monitor the effectiveness of this mainstreaming. Both during design and implementation, the project will ensure equal opportunities for women and men to participate in training, small grant applications and decision-making. Steps will be taken to ensure that women's needs are addressed in management arrangements set up by the community, including women's active participation in community meetings and platforms involving project activities.

During project implementation, the role of women in decision-making relating to access to traditional knowledge associated with genetic resources will be carefully documented and analyzed for greater understanding on the dynamics of gender and power, as related to natural resources decisions in a specific community setting. Findings will inform guidance on catchment management, an output from the targeted catchments. Women will have increased knowledge and skills and through this increased knowledge, income and skills, women and other vulnerable groups will be empowered to make significant contributions to the village development initiatives to reduce risks identified in the project and be in a stronger position to become change agents within their communities.

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[1] This is one of 14 sector plans that contributes to Government's achievement of the Samoa Sustainable Development Strategy.

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes**



closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or

generating socio-economic benefits or services for women.

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

#### 4. Private sector engagement

Will there be private sector engagement in the project?

Yes

**Please briefly explain the rationale behind your answer.**

1. The private sector (i.e. agrobusiness, tourism operators and fish folk) will participate in project design to scope their participation in project implementation and to enable identification of IAS risks inherent in current private sector activities, levels of awareness and opportunities to reduce threats through the project.

## 5. Risks

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Risk	Rating	Mitigation Strategy
Indigenous peoples and local communities do not fully commit to project's objective.	Low	This is unlikely as the project will be contributing to the implementation of plans previously developed by the local communities (i.e. CIM Plans). Moreover, the stakeholder engagement plan developed during the PPG should ensure that local communities, indigenous people and other stakeholders are fully signed up to the proposed project interventions, with any outstanding issues resolved during the design, planning and inception phases of the project.
Threats and risks associated with IAS are likely to increase in response to climate change and increasing travel of people and traded goods.	Medium	<p>Climate change may raise the threat of IAS by increasing the frequency/severity of fires, floods, etc., thereby decreasing ecosystem resilience and creating more favorable conditions for the establishment and spread of IAS. Similarly, the risk of IAS being introduced to previously colonized islands or parts of Samoa increases as people travel and/or trade more widely. Government is currently understaffed with respect to securing its borders from a biosecurity perspective and currently not ready to explore sustainable financing mechanisms such as recovering the costs of its Quarantine Services from 'user pays' mechanisms as this could destabilize its local and international trade.</p> <p>The project will contribute to reducing the impacts of IAS through its largely community-based safeguard measures applied to catchments; and the threat of IAS being introduced from overseas or from one Samoan island to another will be addressed to some extent by heightened public awareness and improvements in technical capacity and equipment of border security officials (Quarantine, Customs, Port Authority). However, this may only be sufficient to counter rising levels of threat, rather than reduce the threat, on account of insufficient numbers of trained persons in place to biosecure ports of entry/exit and police coastal waters.</p>
Environmental impacts arising from IS interventions.	Medium	IS interventions involving biocides and pesticides introduce risks to the environment, including animal and plant life, as well as human health, either directly such as through inhalation, food consumption and physical contact or more in

		<p>directly such as via contamination of water supplies.</p> <p>Government is moving away from the use of pesticides, as in the case of CRB for which pheromones are used to attract and trap CRBs that are then infected with viral pathogens. Organic farming is promoted by MAF, to which the project will contribute. It will also work with MAF to strengthen guidance and best practices in the chemical control of IS, as well as review policy and regulations, and introduce monitoring the use of insecticides and herbicides over their full life cycle, from manufacture/import to retail, application and disposal.</p>
Failure to halt/minimize threats from IAS, agricultural runoff and land/forest degradation may unintentionally restrict access to natural resources and/or affect the traditional use and livelihoods of local communities.	Medium	<p>While a catchment framework to safeguard indigenous species, natural ecosystems and food production systems from invasive species and pollutants in Samoa is important for the national economy, it is especially critical for the local farmer who depends on their land and produce for the family's livelihood and well-being.</p> <p>Failure of a farmer, regardless of gender, to safeguard the land/forests/mangroves from degradation, pollution or IAS infestation, risks loss of part or all of their livelihood, which in practice could result in economic displacement and affect those residing at the household (women and children) more than those working away from home (more often the men).</p> <p>To manage this risk a stakeholder engagement assessment will be conducted, and a comprehensive stakeholder engagement plan incorporated into the project design</p>
Competing mandates and poor coordination between government agencies/line ministries may disrupt project activities	Medium	Proper coordination between government agencies enhances and sustains project progress that is aligned with ministries priorities. The MNRE GEF & Climate Change Unit will ensure proper coordination and management of stakeholders.
Limited human resources in government ministries and agencies delay project activities	Medium	Government is committed to allocate human resources from government agencies to ensure successful implementation of project activities.

## 6. Coordination

**Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.**

1. The project will be executed by MNRE and its implementing partner, MAF, under the oversight of UNDP (GEF Agency). All three bodies will be represented on the project's Steering Committee (Project Board) to which the National Project Director (NPD), appointed by MNRE, will report regularly. The NPD will head up a Project Implementation Unit (PIU), located within MNRE and staffed by a Project Manager, Technical Coordinator and Project Assistant (all full-time). PIU will be supported by government's sector coordinators, notably those for MNRE and MAF, and delivery of outputs in the target catchments will be facilitated by Catchment Coordinators working with the respective districts, communities and national government agencies. Catchment coordination requires more in-depth consideration during the PPG.
2. Biodiversity conservation, land degradation and climate change adaptation and mitigation are crosscutting issues that have benefitted from GEF financed projects and other initiatives this millennium, enabling Samoa to meet some of its obligations under CBD, UNFCCC and UNCCD. Initial support focused on building capacity: for example, the GEF-3 Medium Size Project *Capacity Building for Sustainable Land Management in Samoa* (PIMS 3403 implemented 2008-2012) was closely aligned to the National Biodiversity Strategy and Action Plan (NBSAP) completed in 2001, the 2005 *National Adaptation Programme of Action* (NAPA) and the 2008-2011 *National Invasive Alien Species Implementation Action Plan* (NISAP), recently updated by the 2019-2024 *National Invasive Species Strategy & Action Plan* (NISSAP). Similarly, the complementary GEF-3 *National Capacity Needs Self-Assessment for Global Environment Management* (NCSA) project (PIMS 2551, implemented 2004-2008) supports CBD, CC and UNCCD interests, while focusing more specifically on capacity development to address Samoa's UNCCD obligations. The GEF-5 project, *Capacity for implementing Rio Conventions in Samoa* (PIMS 4933, implemented 2014-2018), provided further institutional capacity support by mainstreaming these three Rio conventions into national development plans and strengthening inter-ministerial cooperation and, as necessary, legislative and regulatory instruments. Meanwhile, the ongoing GEF-5 Full Size Project, *Strengthening Multi-sectoral Management of Critical Landscapes* (SMSMCL) *in Samoa* (PIMS 4536, 2014-2019) is the first community-based attempt to integrate sustainable management across production systems at landscape scales, reducing land degradation and carbon emissions, while promoting restoration and conservation of ecosystems to secure biodiversity and sustain local livelihoods.
3. Concomitantly, the World Bank *Samoa Infrastructure Asset Management Project* (SIAMP) has developed Coastal Infrastructure Management Plans for the country's 41 districts (2001-2007) that identify the levels of vulnerability to coastal hazards and map projected erosion and flood-prone zones, as well as watershed management riparian buffers. These have since been reviewed and updated (2016-2018), in close consultation with communities, and aligned with the 2015 *Community Integrated Management* (CIM) *Strategy* and the 2016/17-2019/20 *Strategy for the Development of Samoa* (SDS) to provide climate change adaptation interventions for implementation at district and village levels.
4. These *Community Integrated Management* (CIM) *Plans* provide a ready-made mechanism, supported by the respective districts and local communities, through which many of this project's outputs can be delivered. Moreover, the project's catchment approach will provide a holistic focus for generating synergies and enhancing integration among the dichotomy of interventions identified in the CIM Plans.
5. It is anticipated that the project's Implementing Partners (MNRE and MAF) will work closely with the Planning and Urban Management Agency (PUMA), which was closely involved in the development of the CIM Plans, and apply the hazard zones, riverine buffers and 'safe' areas to the target catchments for sustainable land use and management purposes.

6. A further opportunity for close collaboration is with SPREP in connection with their Pacific Regional Invasive Species Management Support Service (PRISMSS), supported by the GEF-6 project 9410: *Strengthening national and regional capacities to reduce the impact of Invasive Alien Species on globally significant biodiversity in the Pacific*. Preliminary information has been exchanged to date, including details of a 5-week training course in IS programme management, with a view to following up during the PPG. Potential synergies include the modular training programme and managing IS data.
7. During PIF consultations, the Ministry of Natural Resources and Environment (MNRE), Executing Partner and lead government agency for this project as well as the Operational Focal Point (OFP) for GEF, requested UNDP to provide direct project support services associated with procurement of goods and services, contract administration and travel arrangements. These services will be provided in conformity with both GEF and UNDP regulations, rules, policies and procedures. The government shall retain overall responsibility and ownership for the nationally executed project through its designated institution as mentioned above. This request is based on the findings and recommendations of a recent Harmonized Approach to Cash Transfer (HACT) capacity assessment of MNRE<sup>[1]</sup>.
8. In Samoa, the Ministry of Finance (MoF) acts as a centralized recipient for all donor funding to any governmental entity acting as IP. All external funds are received in a bank account managed by the MoF Finance Division and distributed to the project's Execution Partners as necessary. This is a complex lengthy bureaucratic procedure. Additionally, the government procurement system is a manual system, which also results in time consuming processes that have caused considerable project implementation delays in the past.
9. These issues have been managed through direct payment modalities arranged with IAs, particularly when funds are needed urgently and when the MoF's financial transactions close at mid-year for the new budget cycle as well as at the end of calendar year for government holidays.
10. In addition to the above, MNRE considers that having the limited number of government officials focus on, and benefit from, the substantive aspects of project implementation [rather than on the administrative aspects] is strategic and aligned with the true spirit of the capacities the country aspires to develop through GEF support and the achievement of global environmental benefits.

With this backdrop, and after assessing available options for the provision the project support services required for project implementation, the Chief Executive Officer of the Ministry of Natural Resources and Environment as well as the GEF OFP determined that the comparative advantage of procurement via UNDP systems is the more cost-effective alternative in the country and their preferred option for this project.<sup>[2]</sup>

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<sup>[1]</sup> HACT assessment identified several aspects of concern in the executing partner's programme, financial and operation management policies, procedures, systems and internal controls, including: delay implementation of project activities due to strict and time-consuming procurement procedures for higher value contracts; limitations to the computerized system common to all government departments which does not facilitate UN reporting; weaknesses in assets and inventory management; insufficient availability of financial data to project teams; inadequate back up system in the absence of staff; poor contract management procedures; and, the need to reinforce internal audit procedures, among other issues.

<sup>[2]</sup> If required, a full assessment of potential third-party project support services providers will be done during PPG.

## 7. Consistency with National Priorities

### Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

1. The project is aligned with the following national strategies and plans that link directly to global conventions and related initiatives:

- *National Adaptation Programme of Action (NAPA)*, 2005: The project will contribute directly to four of the nine priority climate change adaptation areas of activity, namely: securing community water resources (ranked as 1); reforestation, rehabilitation and community forestry fire prevention (2); agriculture and food security sustainability (5); and establishing conservation programmes in highly vulnerable marine and terrestrial areas of communities. (8).

- *Samoa's Aligned National Action Programme To Combat Land Degradation And Mitigate The Effects Of Drought 2015 – 2020* is based on its 2006 NAP but many of the small-scale demonstrations have been up-scaled and it also compliments the NAPA programme and NBSAP, while contributing uniquely to the three types of land ownership prevailing in Samoa (customary, freehold and state). It also brings into focus the importance of soil quality, with which this project resonates well (recycling of organic waste). The project aligns well with: Strategic Objective 2 – to improve the conditions of priority affected landscapes and ecosystems, including agricultural lands, catchments and key biodiversity areas; and SO3 – to increase global benefits through improving the preservation of unique species and ecosystems. Particularly illuminating is the feedback from extensive nationwide consultations on existing SLM policies adopted by communities, of which six were ranked highest: bans on agrochemicals, forest logging, free-ranging livestock and illegal waste dumping; land protection/ conservation regulations; and enforcement of agrochemical use regulations. Included in the 13 SLM methodologies most practiced were: replanting forests, composting, nitrogen fixing species, waste management, organic farming, fencing in livestock, environmental compliance, agro-forestry and agrochemical controls, all of which align well with the sustainable catchment management approach to be adopted by this project.

- Samoa's *National Biodiversity Strategy and Action Plan 2015-2020* (NBSAP) is aligned with the Global Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets, with clear linkages to the National Environment Sector Plan (2013-2016) and Strategy for the Development of Samoa (2016/17-2019/20). The five Strategic Goals of the National Biodiversity Action Plan are largely embedded within the framework of this project: addressing the underlying causes of biodiversity loss; reduction of pressures on biodiversity and promotion of sustainable use; safeguarding ecosystems and their species and genes; enhancing the benefits of ecosystem services to all; and enhancing implementation through participatory planning, knowledge management and capacity building.

- *National Capacity Self-Assessment (NCSA)* under UNCBD, UNFCCC, UNCCD: see Section 6.

2. Other national initiatives to which the project is aligned include:

- The *Strategy for the Sustainable Development of Samoa 2016/17-2019/20* comprises four priority areas (economic, social, community and environmental) for improvement and 14 Key Outcomes, of which the following relate closely to the project: agriculture output increased (KO2); participation of private sector development enhanced (KO5); a healthy Samoa and well-being promoted (KO6); quality ... training improved (KO7); environmental resilience improved (KO13); climate and disaster resilience increased (KO14).

- *National Environment Sector Plan 2017-2021* for which the overarching goal is: environmental sustainability, climate and disaster resilience. End of Sector Plan Outcomes in which the project will invest are: sustainable management of freshwater resources (1.1), forests (1.2) and, including spatial information for their sustainable development, lands (1.3); sound management of chemicals (2.2); integration of climate change across all sectors (3.1); and sector governance and cross-sectoral coordination (4.1). Much of this investment arises from the project's catchment approach that by default necessitates multi-sector coordination across all government levels of administration with the direct involvement of local communities.
- *Agriculture Sector Plan 2016-2020* for which the overarching goal is: to increase food, nutrition and income security. Of the four End of Sector Plan Outcomes, the project's investments in the management of IAS and other environmental safeguards will contribute significantly to: sector coordination improved and investment in food security and inclusive commercial agriculture/fisheries production systems increased (ESPO1); and sustainable agricultural and fisheries resource management practices in place and climate resilience and disaster relief efforts strengthened (ESPO4).
- *National Invasive Species Strategy and Action Plan (NISSAP) 2019-2024*, previously referred to in respect of Output 1.1<sup>0</sup>, is an updated version of the original 2008-2011 National Invasive Species Action Plan and developed in alignment with the 2015-2020 NBSAP and the Aichi Biodiversity Target 9 that is specific to invasive species: "By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment." Of the nine strategies identified in the NISSAP<sup>[1]</sup>, generating support, i.e. awareness (1), building capacity (2), biosecurity (7) and management of established invasives (8) are key areas of investment for this project with respect to: promoting greater responsibility among those who travel and trade across international borders and between islands, accredited training in IAS, strengthening biosecurity at ports of entry/exit, safeguarding nine target catchments from IAS.
- The *National Waste Management Strategy 2019-2023* addresses Solid and Chemical & hazardous waste. Of the eight Priority Areas, this project will: promote the 3Rs (reduce, reuse, recycle) within target catchment communities (part of PA-A: *enhance environmental awareness of the public*).

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[1] The strategy for the NISSAP framework is based on SPREP's 2009 *Guidelines for invasive species management in the Pacific*.



## 8. Knowledge Management

**Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.**

1. Despite the fact that component 3 will directly address knowledge and its management, KM is conceived as a key-crosscutting element of this project that will be addressed in all components. Key knowledge products will be identified in MNRE's Environmental Communications Framework and the project's IAS Communications Strategy, along with their means of access and sharing among key stakeholders. Knowledge will be distributed and shared using the new National IAS Information System as well as existing platforms to the extent possible. These will include national web-based platforms, for example MNRE and MAF, regional websites, for example SPREP and the Pacific Community (SPC) and thematic websites, for example the Pacific Invasives Learning Network (PILN) within SPREP and the Pacific Invasive Species Initiative (PII) in the case of IS.
2. Given the project's catchments approach and their comprehensive coverage by CIM Plans (with implementation guidelines) that are readily accessible via MNRE's website[1], as well as SPREP's[2], the project proposes to use these platforms for hosting catchment management guidelines that will include spatial layers held in a linked web-based GIS. This will enable stakeholders to visually appreciate existing land use patterns, IAS distribution, protected areas and other spatial features relevant to sustainable management at catchment levels. MNRE's Spatial Information Agency – Technical Service Division has the capacity to lead this spatial mapping of catchments and this opportunity should be revisited during the PPG.

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[1] <https://www.mnre.gov.ws/publications/#environmentweek> (refer to drop down menu for Puma Publications)

[2] <https://samoa-data.sprep.org/dataset/community-integrated-management-plans>

### Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Ulu Mr. Bismarck Crawley	Chief Executive Officer & GEF Operational Focal Point for Samoa	The Ministry of Natural Resources and Environment	11/12/2019
Ulu Mr. Bismarck Crawley	Chief Executive Officer & GEF Operational Focal Point for Samoa	The Ministry of Natural Resources and Environment	11/12/2019

## ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

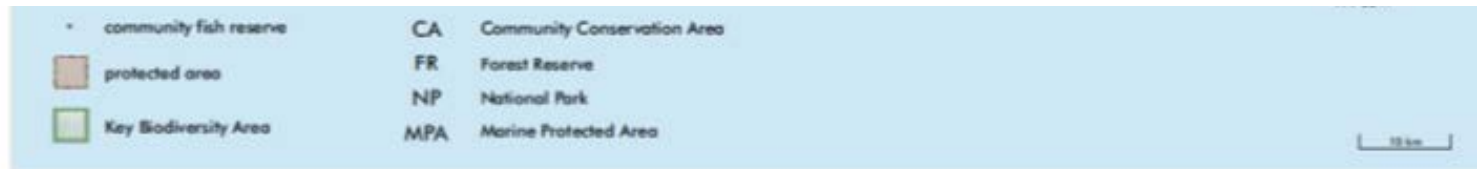
### Annex A

#### PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES

(when possible)

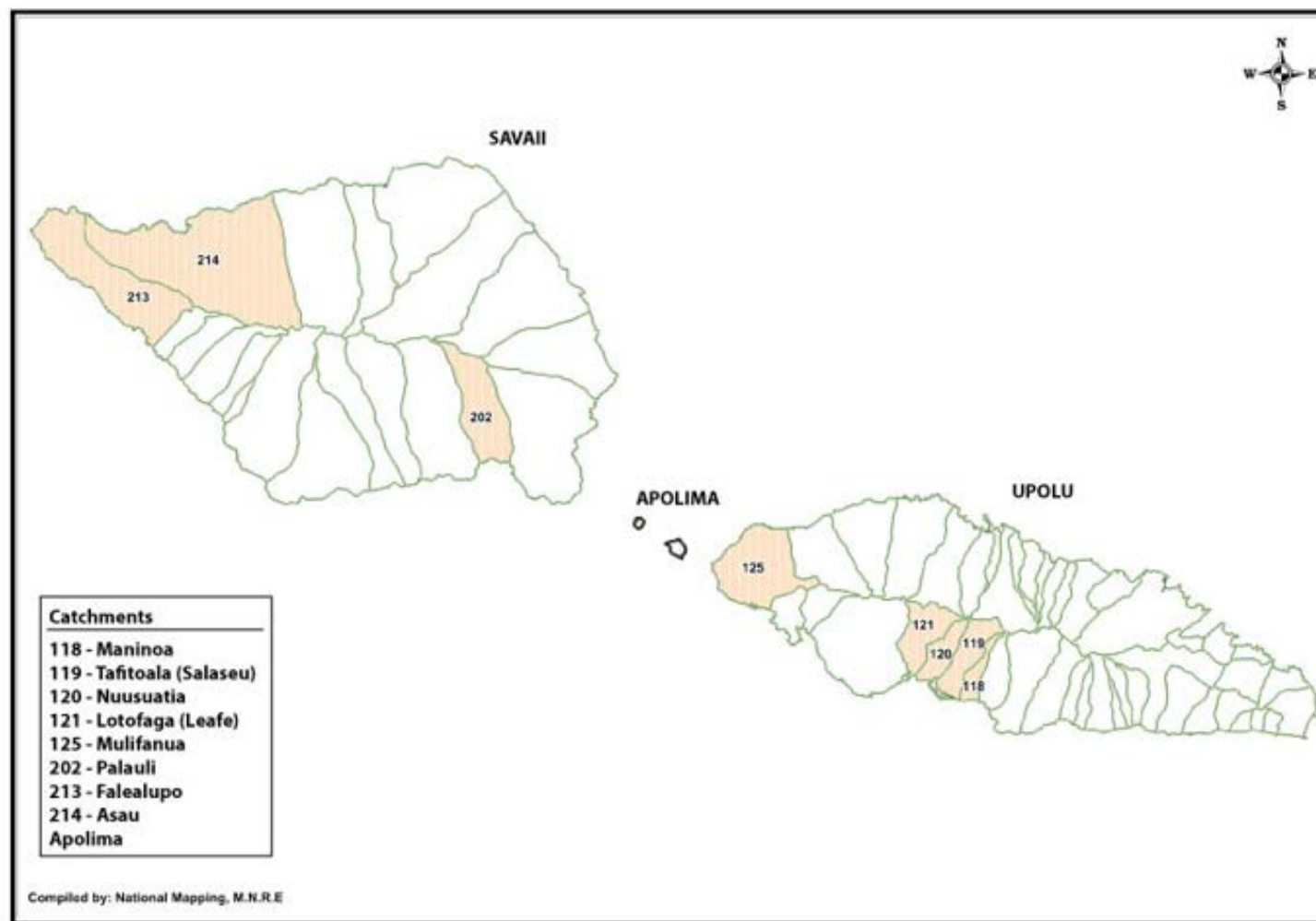
Map 1: Protected Areas and Key Biodiversity Areas of Samoa





Source: Conservation International – Pacific Islands Programme, Ministry of Natural Resources and Environment, Secretariat of the Pacific Regional Environment Programme. 2010 Priority Sites for Conservation in Samoa: Key Biodiversity Areas. Samoa. 32pp.

Map 2 Location of the 9 target catchments



## Annex B

## GEF 7 Core Indicator Worksheet

Core Indicator 1	Terrestrial protected areas created or under improved management for conservation and sustainable use					(Hectares)	
		Hectares (1.1+1.2)					
		Expected			Achieved		
		PIF stage	Endorsement	MTR	TE		
		5,618					
Indicator 1.1	Terrestrial protected areas newly created						
Name of Protected Area	WDPA* ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		Sum					
Indicator 1.2	Terrestrial protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score (Scale 1-3)			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
Asau-Falelima NP	N/A	II National Park	2,496	NA			
Mauga Sala fai NP	N/A	II National Park	1,784	NA			
Lake Lamo	N/A	II National Park	123	NA			

	<i>t'oo</i>						
	<i>Coastal Conservation Area</i>	<i>N/A</i>	V protected landscape/seascape	<i>1,215</i>	NA		
		Sum		<i>5,618</i>			
Core Indicator 2	Marine protected areas created or under improved management for conservation and sustainable use						(Hectares)
				Hectares (2.1+2.2)			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
				<i>6,152</i>			
Indicator 2.1	Marine protected areas newly created						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
			<i>0</i>				
		Sum					
Indicator 2.2	Marine protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares	METT Score (Scale 1-3)			
				Expected		Achieved	
				PIF stage	Endorsement	MTR	TE
<i>Community Fishery</i>	<i>N/A</i>	VI PA with sustainable use	<i>181</i>	NA			

Fish Reserves		se or natural resources					
Safata Marine Protected Area	N/A	VI PA with sustainable use of natural resources	5,971	NA			
		Sum	6,152				
Core Indicator 3	Area of land restored						(Hectares)
		Hectares (3.1+3.2+3.3+3.4)					
		Expected				Achieved	
		PIF stage		Endorsement		MTR	TE
Indicator 3.1	Area of degraded agricultural land restored						
			Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Indicator 3.2	Area of forest and forest land restored						
			Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Indicator 3.3	Area of natural grass and shrublands restored						
			Hectares				



			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, <b>mangroves</b> ) restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 4	Area of landscapes under improved practices (hectares; excluding protected areas)					(Hectares)
			Hectares (4.1+4.2+4.3+4.4)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			59,804			
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
			59,804			
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification:			Hectares			
			Expected		Achieved	

			PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 5	Area of marine habitat under improved practices to benefit biodiversity					(Hectares)
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification:			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
			Number			

			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
<b>Core Indicator 6</b>	<b>Greenhouse gas emission mitigated</b>					<b>(Tons)</b>
			Tons (6.1+6.2)			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)					
	Expected CO2e (indirect)					
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector					
			Tons			
			Entered		Entered	
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)					
	Expected CO2e (indirect)					
	Anticipated Year					
Indicator 6.2	Emissions avoided					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)					
	Expected CO2e (indirect)					

		Anticipated year				
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 6.4	Increase in installed renewable energy capacity per technology					
			Capacity (MW)			
		Technology	Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 7	Number of shared water ecosystems (fresh or marine) under new or improved cooperative management					(Number)
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) for formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					

		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	Globally over-exploited fisheries Moved to more sustainable levels					(Tons)
			Metric Tons			
			PIF stage	Endorsement	MTR	TE
Core Indicator 9	Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products					(Tons)
			Metric Tons (9.1+9.2+9.3)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) and POPs containing materials and products removed or disposed					
POPs type			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE

Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 10	Reduction, avoidance of emissions of POPs to air from point and non-point sources					(Grams)
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE

Indicator 1 0.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 1 0.3	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment					(Number)
			Expected		Number Achieved	
			PIF stage	Endorsement	MTR	TE
		Female	13,096			
		Male	13,514			
		Total	26,610			

\* WDPA (World Database on Protected Areas)

## Annex C

## Project Taxonomy Worksheet

Level 1	Level 2	Level 3	Level 4
<input checked="" type="checkbox"/> Influencing models			
	<input type="checkbox"/> Transform policy and regulatory environments		
	<input checked="" type="checkbox"/> Strengthen institutional capacity and decision-making		
	<input checked="" type="checkbox"/> Convene multi-stakeholder alliances		
	<input checked="" type="checkbox"/> Demonstrate innovative approaches		
	<input type="checkbox"/> Deploy innovative financial instruments		
<input checked="" type="checkbox"/> Stakeholders			
	<input checked="" type="checkbox"/> Indigenous Peoples		
	<input checked="" type="checkbox"/> Private Sector		
		<input type="checkbox"/> Capital providers	
		<input type="checkbox"/> Financial intermediaries and market facilitators	
		<input type="checkbox"/> Large corporations	
		<input checked="" type="checkbox"/> SMEs	
		<input checked="" type="checkbox"/> Individuals/Entrepreneurs	
		<input type="checkbox"/> Non-Grant Pilot	
		<input type="checkbox"/> Project Reflow	
	<input checked="" type="checkbox"/> Beneficiaries		
	<input checked="" type="checkbox"/> Local Communities		
	<input checked="" type="checkbox"/> Civil Society		
		<input checked="" type="checkbox"/> Community Based Organization	
		<input checked="" type="checkbox"/> Non-Governmental Organization	
		<input checked="" type="checkbox"/> Academia	
		<input type="checkbox"/> Trade Unions and Workers Unions	
	<input checked="" type="checkbox"/> Type of Engagement		
		<input checked="" type="checkbox"/> Information Dissemination	
		<input checked="" type="checkbox"/> Partnership	
		<input checked="" type="checkbox"/> Consultation	
		<input checked="" type="checkbox"/> Participation	
	<input checked="" type="checkbox"/> Communications		
		<input checked="" type="checkbox"/> Awareness Raising	
		<input checked="" type="checkbox"/> Education	
		<input checked="" type="checkbox"/> Public Campaigns	
		<input checked="" type="checkbox"/> Behavior Change	
<input checked="" type="checkbox"/> Capacity, Knowledge and Research			
	<input type="checkbox"/> Enabling Activities		



	<input checked="" type="checkbox"/> Capacity Development		
	<input checked="" type="checkbox"/> Knowledge Generation and Exchange		
	<input type="checkbox"/> Targeted Research		
	<input checked="" type="checkbox"/> Learning		
		<input checked="" type="checkbox"/> Theory of Change	
		<input checked="" type="checkbox"/> Adaptive Management	
		<input checked="" type="checkbox"/> Indicators to Measure Change	
	<input checked="" type="checkbox"/> Innovation		
	<input checked="" type="checkbox"/> Knowledge and Learning		
		<input checked="" type="checkbox"/> Knowledge Management	
		<input checked="" type="checkbox"/> Innovation	
		<input checked="" type="checkbox"/> Capacity Development	
		<input checked="" type="checkbox"/> Learning	

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	<input checked="" type="checkbox"/> Stakeholder Engagement Plan		
<input checked="" type="checkbox"/> Gender Equality			
	<input checked="" type="checkbox"/> Gender Mainstreaming		
		<input checked="" type="checkbox"/> Beneficiaries	
		<input checked="" type="checkbox"/> Women groups	
		<input checked="" type="checkbox"/> Sex-disaggregated indicators	
		<input type="checkbox"/> Gender-sensitive indicators	
	<input checked="" type="checkbox"/> Gender results areas		
		<input checked="" type="checkbox"/> Access and control over natural resources	
		<input checked="" type="checkbox"/> Participation and leadership	
		<input type="checkbox"/> Access to benefits and services	
		<input checked="" type="checkbox"/> Capacity development	
		<input checked="" type="checkbox"/> Awareness raising	
		<input checked="" type="checkbox"/> Knowledge generation	
<input checked="" type="checkbox"/> Focal Areas/Theme			
	<input type="checkbox"/> Integrated Programs		
		<input type="checkbox"/> Commodity Supply Chains ( <sup>13</sup> Good Growth Partnership)	
			<input type="checkbox"/> Sustainable Commodities Development

			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Financial Screening Tools
			<input type="checkbox"/> High Conservation Value Forests
			<input type="checkbox"/> High Carbon Stocks Forests
			<input type="checkbox"/> Soybean Supply Chain
			<input type="checkbox"/> Oil Palm Supply Chain
			<input type="checkbox"/> Beef Supply Chain
			<input type="checkbox"/> Smallholder Farmers
			<input type="checkbox"/> Adaptive Management
		<input type="checkbox"/> Food Security in Sub-Saharan Africa	
			<input type="checkbox"/> Resilience (climate and shocks)
			<input type="checkbox"/> Sustainable Production Systems
			<input type="checkbox"/> Agroecosystems
			<input type="checkbox"/> Land and Soil Health
			<input type="checkbox"/> Diversified Farming
			<input type="checkbox"/> Integrated Land and Water Management
			<input type="checkbox"/> Smallholder Farming
			<input type="checkbox"/> Small and Medium Enterprises
			<input type="checkbox"/> Crop Genetic Diversity
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Gender Dimensions
			<input type="checkbox"/> Multi-stakeholder Platforms
		<input type="checkbox"/> Food Systems, Land Use and Restoration	
			<input type="checkbox"/> Sustainable Food Systems
			<input type="checkbox"/> Landscape Restoration
			<input type="checkbox"/> Sustainable Commodity Production
			<input type="checkbox"/> Comprehensive Land Use Planning
			<input type="checkbox"/> Integrated Landscapes
			<input type="checkbox"/> Food Value Chains
			<input type="checkbox"/> Deforestation-free Sourcing
			<input type="checkbox"/> Smallholder Farmers
		<input type="checkbox"/> Sustainable Cities	
			<input type="checkbox"/> Integrated urban planning
			<input type="checkbox"/> Urban sustainability framework
			<input type="checkbox"/> Transport and Mobility
			<input type="checkbox"/> Buildings
			<input type="checkbox"/> Municipal waste management
			<input type="checkbox"/> Green space
			<input type="checkbox"/> Urban Biodiversity

			<input type="checkbox"/> Urban Food Systems
			<input type="checkbox"/> Energy efficiency
			<input type="checkbox"/> Municipal Financing
			<input type="checkbox"/> Global Platform for Sustainable Cities
			<input type="checkbox"/> Urban Resilience
	<input checked="" type="checkbox"/> Biodiversity		
		<input checked="" type="checkbox"/> Protected Areas and Landscapes	
			<input checked="" type="checkbox"/> Terrestrial Protected Areas
			<input checked="" type="checkbox"/> Coastal and Marine Protected Areas
			<input checked="" type="checkbox"/> Productive Landscapes
			<input type="checkbox"/> Productive Seascapes
			<input checked="" type="checkbox"/> Community Based Natural Resource Management
		<input type="checkbox"/> Mainstreaming	
			<input type="checkbox"/> Extractive Industries (oil, gas, mining)
			<input type="checkbox"/> Forestry (Including HCVF and REDD+)
			<input type="checkbox"/> Tourism
			<input type="checkbox"/> Agriculture & agrobiodiversity
			<input type="checkbox"/> Fisheries
			<input type="checkbox"/> Infrastructure
			<input type="checkbox"/> Certification (National Standards)
			<input type="checkbox"/> Certification (International Standards)
		<input checked="" type="checkbox"/> Species	
			<input type="checkbox"/> Illegal Wildlife Trade
			<input type="checkbox"/> Threatened Species
			<input type="checkbox"/> Wildlife for Sustainable Development
			<input type="checkbox"/> Crop Wild Relatives
			<input type="checkbox"/> Plant Genetic Resources
			<input type="checkbox"/> Animal Genetic Resources
			<input type="checkbox"/> Livestock Wild Relatives
			<input checked="" type="checkbox"/> Invasive Alien Species (IAS)
		<input checked="" type="checkbox"/> Biomes	
			<input checked="" type="checkbox"/> Mangroves
			<input type="checkbox"/> Coral Reefs

			<input type="checkbox"/> Sea Grasses
			<input type="checkbox"/> Wetlands
			<input checked="" type="checkbox"/> Rivers
			<input type="checkbox"/> Lakes
			<input checked="" type="checkbox"/> Tropical Rain Forests
			<input type="checkbox"/> Tropical Dry Forests
			<input type="checkbox"/> Temperate Forests
			<input type="checkbox"/> Grasslands
			<input type="checkbox"/> Paramo
			<input type="checkbox"/> Desert
		<input type="checkbox"/> Financial and Accounting	
			<input type="checkbox"/> Payment for Ecosystem Services
			<input type="checkbox"/> Natural Capital Assessment and Accounting
			<input type="checkbox"/> Conservation Trust Funds
			<input type="checkbox"/> Conservation Finance
		<input type="checkbox"/> Supplementary Protocol to the CBD	
			<input type="checkbox"/> Biosafety
			<input type="checkbox"/> Access to Genetic Resources Benefit Sharing
	<input type="checkbox"/> Forests		
		<input type="checkbox"/> Forest and Landscape Restoration	
			<input type="checkbox"/> REDD/REDD+
		<input type="checkbox"/> Forest	
			<input type="checkbox"/> Amazon

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			<input type="checkbox"/> Congo
			<input type="checkbox"/> Drylands
	<input checked="" type="checkbox"/> Land Degradation		
		<input checked="" type="checkbox"/> Sustainable Land Management	
			<input checked="" type="checkbox"/> Restoration and Rehabilitation of Degraded Lands
			<input checked="" type="checkbox"/> Ecosystem Approach
			<input type="checkbox"/> Integrated and Cross-sectoral approach
			<input checked="" type="checkbox"/> Community-Based NRM

			<input checked="" type="checkbox"/> Sustainable Livelihoods
			<input type="checkbox"/> Income Generating Activities
			<input checked="" type="checkbox"/> Sustainable Agriculture
			<input type="checkbox"/> Sustainable Pasture Management
			<input type="checkbox"/> Sustainable Forest/Woodland Management
			<input checked="" type="checkbox"/> Improved Soil and Water Management Techniques
			<input type="checkbox"/> Sustainable Fire Management
			<input type="checkbox"/> Drought Mitigation/Early Warning
		<input type="checkbox"/> Land Degradation Neutrality	
			<input type="checkbox"/> Land Productivity
			<input type="checkbox"/> Land Cover and Land cover change
			<input type="checkbox"/> Carbon stocks above or below ground
		<input checked="" type="checkbox"/> Food Security	
	<input type="checkbox"/> International Waters		
		<input type="checkbox"/> Ship	
		<input type="checkbox"/> Coastal	
		<input type="checkbox"/> Freshwater	
			<input type="checkbox"/> Aquifer
			<input type="checkbox"/> River Basin
			<input type="checkbox"/> Lake Basin
		<input type="checkbox"/> Learning	
		<input type="checkbox"/> Fisheries	
		<input type="checkbox"/> Persistent toxic substances	
		<input type="checkbox"/> SIDS : Small Island Dev States	
		<input type="checkbox"/> Targeted Research	
		<input type="checkbox"/> Pollution	
			<input type="checkbox"/> Persistent toxic substances
			<input type="checkbox"/> Plastics
			<input type="checkbox"/> Nutrient pollution from all sectors except wastewater
			<input type="checkbox"/> Nutrient pollution from Wastewater
		<input type="checkbox"/> Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		<input type="checkbox"/> Strategic Action Plan Implementation	
		<input type="checkbox"/> Areas Beyond National Jurisdiction	
		<input type="checkbox"/> Large Marine Ecosystems	
		<input type="checkbox"/> Private Sector	
		<input type="checkbox"/> Aquaculture	
		<input type="checkbox"/> Marine Protected Area	
		<input type="checkbox"/> Biomes	
			<input type="checkbox"/> Mangrove

		<input type="checkbox"/> Coral Reefs
		<input type="checkbox"/> Seagrasses
		<input type="checkbox"/> Polar Ecosystems
		<input type="checkbox"/> Constructed Wetlands
	<input type="checkbox"/> Chemicals and Waste	
		<input type="checkbox"/> Mercury
		<input type="checkbox"/> Artisanal and Small Scale Gold Mining
		<input type="checkbox"/> Coal Fired Power Plants
		<input type="checkbox"/> Coal Fired Industrial Boilers

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	<input type="checkbox"/> Cement	
	<input type="checkbox"/> Non-Ferrous Metals Production	
	<input type="checkbox"/> Ozone	
	<input type="checkbox"/> Persistent Organic Pollutants	
	<input type="checkbox"/> Unintentional Persistent Organic Pollutants	
	<input type="checkbox"/> Sound Management of chemicals and Waste	
	<input type="checkbox"/> Waste Management	
		<input type="checkbox"/> Hazardous Waste Management
		<input type="checkbox"/> Industrial Waste
		<input type="checkbox"/> e-Waste
	<input type="checkbox"/> Emissions	
	<input type="checkbox"/> Disposal	
	<input type="checkbox"/> New Persistent Organic Pollutants	
	<input type="checkbox"/> Polychlorinated Biphenyls	
	<input type="checkbox"/> Plastics	
	<input type="checkbox"/> Eco-Efficiency	
	<input type="checkbox"/> Pesticides	
	<input type="checkbox"/> DDT - Vector Management	
	<input type="checkbox"/> DDT - Other	
	<input type="checkbox"/> Industrial Emissions	
	<input type="checkbox"/> Open Burning	
	<input type="checkbox"/> Best Available Technology / Best Environmental Practices	

		<input type="checkbox"/> Green Chemistry	
	<input checked="" type="checkbox"/> Climate Change		
		<input type="checkbox"/> Climate Change Adaptation	
			<input type="checkbox"/> Climate Finance
			<input type="checkbox"/> Least Developed Countries
			<input type="checkbox"/> Small Island Developing States
			<input type="checkbox"/> Disaster Risk Management
			<input type="checkbox"/> Sea-level rise
			<input type="checkbox"/> Climate Resilience
			<input type="checkbox"/> Climate Information
			<input type="checkbox"/> Ecosystem-based Adaptation
			<input type="checkbox"/> Adaptation Tech Transfer
			<input type="checkbox"/> National Adaptation Programme of Action
			<input type="checkbox"/> National Adaptation Plan
			<input type="checkbox"/> Mainstreaming Adaptation
			<input type="checkbox"/> Private Sector
			<input type="checkbox"/> Innovation
			<input type="checkbox"/> Complementarity
			<input type="checkbox"/> Community-based Adaptation
			<input type="checkbox"/> Livelihoods
		<input type="checkbox"/> Climate Change Mitigation	
			<input type="checkbox"/> Agriculture, Forestry, and other Land Use
			<input type="checkbox"/> Energy Efficiency
			<input type="checkbox"/> Sustainable Urban Systems and Transport
			<input type="checkbox"/> Technology Transfer
			<input type="checkbox"/> Renewable Energy
			<input type="checkbox"/> Financing
			<input type="checkbox"/> Enabling Activities
		<input type="checkbox"/> Technology Transfer	
			<input type="checkbox"/> Poznan Strategic Programme on Technology Transfer
			<input type="checkbox"/> Climate Technology Centre & Network (CTCN)
			<input type="checkbox"/> Endogenous technology
			<input type="checkbox"/> Technology Needs Assessment
			<input type="checkbox"/> Adaptation Tech Transfer

5/5/2020 11:00 AM - 11:00 AM (GMT+05:30) - 11:00 AM (GMT+05:30)

		<input type="checkbox"/> United Nations Framework on Climate Change	
			<input type="checkbox"/> Nationally Determined Contribution
		<input checked="" type="checkbox"/> Climate Finance (Rio Markers)	<input type="checkbox"/> Paris Agreement <input checked="" type="checkbox"/> Sustainable Development Goals <input checked="" type="checkbox"/> Climate Change Mitigation 1 <input type="checkbox"/> Climate Change Mitigation 2 <input type="checkbox"/> Climate Change Adaptation 1 <input type="checkbox"/> Climate Change Adaptation 2





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## Annex D

### Notes on core indicators value estimation

The final selection of catchments included in this project reflect some or all of the following criteria:

- a. Scope for demonstrating Ridge2Reef connectivity and sustainable land management at landscape/seascapes scales
- b. 10-20 villages (4,000 - 4,500 people) per catchment (not too small, not too many)

- c. Key Biodiversity Areas represented
- d. Protected Areas represented, notably national parks
- e. Building on what has been done by other projects, such as ICCRIFS, SMSMCL, GEF-PAs, SPC R2R etc.
- f. Catchments reflecting a range of threats from erosion risks and potential watershed development
- g. Willingness/readiness of communities to engage with project.

	Selected Catchments (ha)									
	Upolu Island						Savai'i Island			
	1	2	3	4	5	6	7	8	9	
Landcover types	Mulifanua	Apolima Island	Lea'le	Nurusuasia	Ta'itotoala	Maninonoa	Falealupo	Pala'auli	Asa'u	TOTAL
B - Barren Land	4.15	13.07		0.79	0.00	0.00	11.07	0.00	1,777.00	1,806.08
BU - Built Up Area	390.30	2.75	48.10	27.50	71.56	43.77	273.50	99.90	346.00	1,308.38
FC - Closed Forest	0.00						0.00	0.00	0.00	0.00

The selected catchments were subjected to a GIS analysis of the different land cover types, using the 2013 Forest Cover map for Samoa, in order to determine those likely to benefit from improved SLM practices resulting from project safeguard interventions (e.g. IAS management, improved land use practices, reduced erosion and, therefore, pollution of water from sediment). KBA and protected area spatial layers (limited to national parks) were also included in the GIS analysis in order to assess the global benefits to these designations.

Please note that the current values for the Core Indicators are approximate only and will need to be refined during the PPG to address the following shortcomings:

- Some data are missing, for example spatial data for many protected area boundaries other than national parks are not available. MNRE is currently establishing a Protected Area (Technical) Advisory Committee that is tasked with producing a comprehensive GIS of PAs, among other priorities.
- The catchment analysis for land cover classes needs to be checked as currently summation of these classes for two of the nine target catchments does not tally with the published total areas of these catchments.
- MAF will be operating beyond the 5 target catchments but the locations have yet to be mapped and taken into statistical consideration with respect to the Core Indicators and global benefits of this project.
- There is ambiguity about the level of protection afforded to Community Fish Reserves and their sizes.

Thus, given the absence of some data and ambiguities concerning other data, the values provided for the Core Indicators are deliberately conservative and, where there is uncertainty, minimum estimates have been used.