United Nations Development Programme
Country: Samoa
PROJECT DOCUMENT

Project Title: ***Economy-wide integration of climate change adaptation and disaster risk management to reduce climate vulnerability of communities in Samoa***

UNDAF Outcome:
Outcome 1.1. By 2017 the most vulnerable communities across the PICTs are more resilient and select government agencies, civil society organizations and communities have enhanced capacity to apply integrated approaches to environmental management, climate change adaptation/mitigation, and disaster risk management.

UNDP Strategic Plan Outcome:
Outcome 5. Countries are able to reduce the likelihood of conflict, and lower the risk of natural disasters, including from climate change.

UNDAF Results Matrix:
Output 3.1.2. Strengthened national capacity to develop and upgrade the national environmental policy and the implementation of relevant gender and climate change policy responses.

Output 3.2.2. Strengthened capacity support for community disaster risk reduction and school-based DRM.

Output 3.2.4. Strengthened government and UN planning and coordination of humanitarian responses, including post disaster employment and livelihood options for women and men.

Output 3.2.7. Improve monitoring of climate change through centralised collection of data.

Implementing Agency: United Nations Development Programme (UNDP)

Executing Agency/Implementing Entity: Ministry of Natural Resources and Environment (MNRE)

Responsible Parties: Ministry of Finance, Ministry of Women, Communities and Social Development; Land Transport Authority

Brief Description

The predicted effects of climate change on Samoa include: i) increased frequency and severity of extreme rainfall events; ii) increased frequency and duration of droughts; iii) rising sea levels; and iv) increased frequency of extreme wind events such as gusts and cyclones. The problem that the proposed LDCF project seeks to address is that **climate change is expected to result in losses to lives, livelihoods and assets for local communities in Samoa**. Cyclone Evan – which struck Samoa in December 2012 – resulted in at least five deaths, displacement of 7,500 people and damage to over 2,000 houses. Losses to livelihoods (e.g. crops), damage to road infrastructure and disruption of water and electricity supplies also occurred. The Post-Disaster Needs Assessment (PDNA) estimated the costs of reconstruction at US$200 million with a further US$70 million required for human capital.

The solution to the above-mentioned problem is to adopt an economy-wide approach to climate change adaptation in Samoa. This will allow for increased integration of climate change adaptation and disaster risk management into national development planning and programming across all sectors. In addition, the climate resilience of local communities – including their physical assets and livelihoods – must be strengthened. Barriers to climate change adaptation in Samoa include: i) fragmentation of efforts on climate change adaptation; ii) focus on "project-by-project" approaches rather than "programmatic" approaches; iii) limited capacity at the local level for climate change adaptation; iv) inherent vulnerabilities of communities, their assets and their livelihoods; and v) weak monitoring and evaluation of past and on-going projects.

The project will contribute to overcoming these barriers by: i) strengthening institutional capacity within the government; ii) enhancing inter-ministerial coordination of climate change adaptation; iii) promoting the inclusion of climate change concerns into development strategies across all sectors; iv) climate-proofing of communities' physical assets; v) introducing more climate-resilient livelihoods options; and vi) sharing lessons learned and best practice on climate change adaptation across the Pacific region. The Implementing Entity is the Ministry of Natural Resources and the Environment. Responsible parties include the Ministry of Finance, Ministry of Women, Communities and Social Development, the Land Transport Authority and the UNDP.

Programme Period:	72 Months		Total resources required	102,322,936
Atlas Award ID:	00079044		Total allocated resources:	102,322,936
Project ID:	00089160			
PIMS #	5264		GEF	12,322,936
Start date:	August 2014			
End Date	July 2019		In-kind contributions	90,000,000
Management Arrangements	NIM			
PAC Meeting Date	15 August 2014 (Tentative date			

Agreed by (Government):

Date/Month/Year

Agreed by (Implementing Partner):

Date/Month/Year

Agreed by (UNDP):

Date/Month/Year

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List of Acronyms

AMAT	Adaptation Monitoring and Assessment Tool
CBOs	Community-based Organisations
CCA	Climate Change Adaptation
CPAP	Country Programme Action Plan
CPEIR	Climate Public Expenditure and Institutional Review
CRICU	Climate Resilience Investment Coordination Unit
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSOs	Civil Society Organisations
DRM	Disaster Risk Management
ENSO	El Niño Southern Oscillation
EPPD	Economic Policy and Planning Division
GDP	Gross Domestic Production
GEF	Global Environment Facility
GoS	Government of Samoa
ICCRAHS	Integrating Climate Change Risks in the Agriculture and Health Sectors in Samoa
INC	Initial National Communication
IWMP	Integrated Watershed Management Plan
LDCF	Least Developed Countries Fund
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MNRE	Ministry of Natural Resources and Environment
MoF	Ministry of Finance
MOH	Ministry of Health
MWCSD	Ministry of Women, Community and Social Development
NAPA	National Adaptation Program of Action
NBSAP	National Biodiversity Strategy and Action Plan
NCCCT	National Climate Change Country Team
NGO	Non-governmental Organisation
NIM	National Implementation Modality
NRP	National Recovery Plan
PER	Public Expenditure Review
PDNA	Post-Disaster Needs Assessment
PPCR	Pilot Program for Climate Resilience
SBAA	Standard Basic Assistance Agreement
SCCF	Special Climate Change Fund
SDS	Strategy for the Development of Samoa
SIDS	Small Island Developing State
SNC	Second National Communication
SOF	Source Of Funds
SPC	Secretariat of Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
SPTO	South Pacific Tourism Organisation
SWA	Samoa Water Authority
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VDRMP	Village Disaster Risk Management Plan

1. Situation analysis

1. The Independent State of Samoa (hereafter Samoa) is a small island developing state (SIDS) located in the Polynesian region of the South Pacific. In 2012, Gross Domestic Product (GDP) was estimated to be US$683.7 million[1] with a growth rate of 1.2%[2]. The economy of Samoa relies strongly on agriculture, fisheries, development aid and remittances. The service sector – notably tourism – contributes 25% of the GDP[3]. While agriculture only contributes ~10% of the GDP, the agricultural sector employs ~68% of the labour force[4] – mostly in subsistence agriculture.

2. Samoa has achieved mixed success in achieving its Millennium Development Goals (MDG) relating to reducing extreme poverty[5]. Of particular concern is the increase in hardship and poverty between 2002 and 2008. Further economic growth is at risk from the effects of natural disasters. For example, a tsunami in 2009 caused at least 135 deaths, 3,500 people to be displaced and ~$150 million in damages[6]. Samoa also experiences frequent tropical cyclones that threaten the achievement of socio-economic and development goals (see Section 1.1).

1.1. Climate change – induced problem

1.1.1 Climate Change Scenarios and Climate Variability

3. Samoa has a tropical climate with a rainy season from November to April, and a dry season from May to October[7]. Average temperatures vary little with a typical daily range of 24–32°C. Severe tropical cyclones tend to occur in the period from December to February[8]. The islands are also affected by dry spells that coincide with the El Niño Southern Oscillation (ENSO).

4. Climate change in Samoa is expected to lead to: 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 60-year event – will likely become a 40-year event by 2050. Similarly, an extreme six-hourly rainfall of 200 mm – that is currently a 30-year event – will likely become a 20-year event by 2050. Furthermore, the CSIRO model projected an 8% increase in the wind speed for a 50-year storm by 2059[9].

5. Observations[10] and modelling[11] have shown that climate change is likely to result in increased peak wind speeds, precipitation and flooding associated with severe cyclones. The overall intensity of cyclones is predicted to increase by 2–11% by 2100. Moreover, cyclones are expected to increase in frequency. A review of historical climate trends indicates that the frequency of tropical cyclones in the Southwest Pacific has increased[12]. This trend is expected to continue as a result of climate change[13].

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[1] WB.2014. *Samoa*. http://data.worldbank.org/country/samoa. Accessed on 10 March 2014.
[2] Asian Development Bank. 2012. *Asian Development Bank & Samoa: Fact Sheet*. http://www.adb.org/sites/default/files/pub/2013/SAM.pdf. Accessed on 10 March 2014.
[3] Central Intelligence Agency (CIA). 2014. *The World Factbook*.https://www.cia.gov/library/publications/the-world-factbook/geos/ws.html.
[4] Samoa Bureau of Statistics. 2009. *Agriculture Census Analytical Report 2009.*
[5] Pacific Islands Forum Secretariat. 2012. *Pacific Regional MDGs Tracking Report.*
[6] United Nations Office for the Coordination of Humanitarian Affairs. 2009. *Samoa/Tonga: Tsunami*. Situation Report #5.
[7] Government of Samoa (GoS). 2006. *Samoa's National Disaster Management Plan*.
[8] WB. 2010. *Economics of Adaptation to Climate Change: Samoa*. Washington, USA.
[9] GoS. 2013. *Strategic Programme for Climate Resilience*.
[10] Emanuel, K. 2005. Increasing destructiveness of tropical cyclones over the past 30 years. *Nature* 436: 686–688.
[11] Knutson, T. R. *et al.* 2010. Tropical cyclones and climate change. *Nature Geoscience* 3: 157–163.
[12] WB. 2006. *Not if but when: Adapting to natural hazards in the Pacific Islands region*. East Asia and Pacific Region

1.1.2 Climate variability impacts and vulnerabilities

6. While Samoa is vulnerable to a range of natural disasters – including earthquakes and tsunamis – cyclones are of particular concern. Cyclones Ofa (1990) and Val (1991) rank second and third on the list of most damaging cyclones in the South Pacific region during the last 50 years[14]. Damages caused by these two cyclones in Samoa were estimated to total between US$440 million and US$605 million[15,16]. This damage included: i) destruction of buildings and infrastructure; ii) beaching of the ferry that operates between Samoa and American Samoa; iii) disruption of communications; iv) reduction of agricultural production; and v) losses to livelihoods.

7. Cyclone Evan (2012) caused at least five deaths, temporary displacement of ~7,500 people and damage to ~2,000 houses. The cyclone also resulted in disruption of electricity distribution, communications and provision of drinking water[17]. Strong winds destroyed buildings, roads and crops. According to the Post-Disaster Needs Assessment (PDNA) undertaken by the Government of Samoa (GoS) with the assistance of the World Bank, the damage was estimated at US$204 million.

8. Climate change is expected to affect all development sectors in Samoa. Some of the expected effects of climate change include: i) damage to infrastructure; ii) reduction of water quality and availability; iii) reduced productivity of agriculture and fisheries; iv) greater food and health insecurity; and v) increased poverty. The losses caused by climate-induced natural disasters illustrate the need for a coordinated response that protects the lives and livelihoods of affected communities.

9. Samoa's vulnerability to climate change and natural disasters is the result of multiple environmental, institutional and socio-economic factors. These root causes of climate vulnerability include:
   - **Climate and topography.** Samoa is vulnerable to a number of climate-related natural disasters because of its tropical climate. Severe tropical cyclones are common during the wet season. Samoa's vulnerability to flooding during storms and intense rainfall events is exacerbated by the country's steep and mountainous topography.
   - **Poor coordination of climate change initiatives.** GoS is restricted in its capacity to plan for and coordinate climate change adaptation and disaster risk management (DRM) interventions. While Samoa receives considerable aid for climate change adaptation, there is limited coordination between the institutions responsible for managing these resources. In addition, there is little application of a programmatic approach to adaptation as climate change is not considered to be an overall development issue. Consequently, climate change finance is not used as efficiently as it could be.
   - **Limited availability of climate change information.** At present, there is no national system to monitor and evaluate the long-term effects of climate change and the success of adaptation and DRM interventions.
   - **Inadequate integrated planning.** The urban infrastructure and community settlements in Samoa are particularly vulnerable to sea-level rise and cyclones. This is largely a result of concentrated development in coastal areas without integrated planning to manage the risks posed by climate-induced natural disasters. The situation also reflect s the inability of technical

Policy Note. Washington, USA.
[13] Second National Communication. 2009.
[14] WB. 2010. *Economics of Adaptation to Climate Change: Samoa*. Washington, USA.
[15] National Adaptation Programme of Action Task Team. 2005. *National Adaptation Programme of Action: Samoa*.
[16] WB. 2010. Economics of Adaptation to Climate Change: Samoa. WB, Washington, D.C.
[17] GoS. 2013. *Post-Disaster Needs Assessment.*

institutions to provide the science behind the climate change phenomena and to do so in a user-friendly manner that could be easily understood by all

- **Reduced resilience of degraded ecosystems.** Inappropriate environmental management practices have degraded natural ecosystems in Samoa. These practices include deforestation, agricultural expansion into vulnerable areas, channelling of rivers, and coastal development. Degraded ecosystems are less able to buffer against the effects of disasters.
- **Small economy with limited diversification.** As a small island developing state, the economy of Samoa has limited diversification and is inherently small. This is partly attributable to limited foreign investment, little human capacity in specialist areas and isolation from foreign markets[18]. As a result, the economy has little resilience against the effects of climate-induced natural disasters.
- **Vulnerable infrastructure.** The National Building Code has not been revised or updated since its promulgation in 1992. As a consequence, some infrastructure in Samoa might not always be constructed according to international best practices that include climate-resilient designs. Furthermore, infrastructure to supply electricity, water and sanitation are vulnerable to climate-induced natural hazards. This is evidenced by the disruption to these services in the aftermath of Cyclone Evan. Roads, bridges and ports were also damaged by the cyclone.
- **Limited human resources.** Samoa suffers from a shortage of individuals with technical capacities in relevant fields including engineering, construction, agriculture and forestry. There is at present no formal human resource development plan to determine where the skills gaps are and to address these. This means that government institutions do not have sufficient staff with technical expertise to address climate change concerns adequately.

10. In summary, the socio-economic development of Samoa is at risk from climate-induced natural disasters such as cyclones. This situation is exacerbated by inherent vulnerabilities related to *inter alia* the country's geographical position, small population and limited technical and institutional capacity. Without an economy-wide strategy to integrate climate change adaptation into development planning, Samoa will remain vulnerable to the expected effects of climate change. This will undermine GoS' capacity to deliver social and economic benefits to vulnerable communities. For this reason, a multi-sectoral and proactive approach is needed to reduce the risks posed by climate-induced natural disasters to Samoan communities. Following a programmatic approach to climate change is in line with the sector-wide approach adopted by the GoS in 2008 to promote sectoral planning and programming.

1.2. Long-term solution and barriers to achieving the solution

1.2.1 Long-term solutions

11. The long-term solution that the proposed Least Developed Countries Fund (LDCF) project will contribute to is an economy-wide approach to integration of climate change adaptation and disaster risk management into national development planning and programming that will improve the climate resilience of communities' physical assets and livelihoods in Samoa.

12. **Preferred response 1.** *Enhanced institutional capacity for coordinating climate change adaptation.* National-level capacity for integration of climate change adaptation and DRM into development strategies across all sectors would be strengthened. This would enable governmental and other institutions to coordinate and implement climate change adaptation and DRM policies and programmes. All institutions would have a full understanding of climate change effects, the risks posed by natural disasters, appropriate response interventions and the linkages between climate change adaptation and DRM.

13. **Preferred response 2.***Improved monitoring and evaluation of adaptation and DRM interventions.* A comprehensive monitoring and evaluation (M&E) system would enable the costs and benefits of

[18] UNDP. *Country Programme Action Plan for Samoa (2008–2012)*.

interventions to be tracked and measured to inform prioritisation of climate change programming. Organisational structures and communication protocols within the government would be strengthened to support collaboration and exchange of information across different sectors. Institutions would be able to systematically capture the results from ongoing climate change adaptation and DRM interventions. Information would be collated into a centralised platform for dissemination to relevant institutions, organisations and individuals at national and local levels. Analysis of information generated by climate change adaptation and DRM initiatives would support prioritisation of budget allocations and specific interventions that increase resilience to climate-induced natural disasters.

14. **Preferred response 3.** *Improved climate resilience of infrastructure and community assets.* This response would include the climate-proofing of infrastructure – e.g. roads, bridges, ports – and community assets such as houses and community centres. This climate-proofing would entail application of the 'build back better' principle whereby post-disaster reconstruction replaces vulnerable infrastructure with more climate-resilient designs[19]. 'Build back better' would follow the most cost-effective approaches to climate-proofing reconstruction activities following the recommendations of the PDNA and the National Recovery Plan (NRP). This would include promoting the transfer of the best available adaptation technology. In addition, communities would be trained in reconstruction skills related to reducing the risks posed by climate-induced natural disasters.

15. **Preferred response 4.** *Improved climate resilience of community livelihoods.* The long-term solution would also include the diversification of Samoa's economy and communities' livelihood activities. Increased access to more resilient and diversified livelihood opportunities would build the capacity of vulnerable communities to respond to climate-induced natural disasters. This would promote community-level adaptation to climate change in the short-, medium- and long-term. The long-term solution would support alternative livelihood options for the labour force currently engaged in agriculture, while simultaneously increasing the productivity and efficiency of the sector. The approach to developing alternative livelihood options would include interventions to increase entrepreneurial skills and facilitate the development of small and medium enterprises (SME's). Furthermore, the long-term solution would build priority-specialised skills in the Samoan workforce to encourage foreign investments in the limited industrial and service sectors.

16. **Preferred response 5.** *Enhanced capacity of communities to respond to disasters.* This response would see communities mobilised to prepare and manage the risks posed by climate-induced natural disasters more effectively. Communities would be able to assess climate risks and respond in a timely manner. This would be achieved through the existence of a disaster plan for each village that clearly outlines roles, responsibilities, contingency plans and other disaster responses. In addition, communities would have access to post-disaster relief mechanisms that would enable them to recover quickly from the effects of climate-induced natural disasters.

17. **Preferred response 6.** *Sustainable management of natural resources.* The long-term solution would also include the restoration of degraded ecosystems to increase their resilience to climate change. Restored and intact ecosystems would provide a buffering service to communities, thereby reducing the risks posed by climate-induced natural disasters. Sustainable management of natural resources would include *inter alia*: i) protection of watersheds to reduce the risk of flooding; and ii) reforestation and protection of forests to reduce run-off and soil erosion.

18. The long-term solution would yield positive and measurable outcomes that would inform best practices that can be shared across the Pacific region. In addition, these best practices would be able to be replicated in other SIDS and used to increase the amount and efficiency of investments into climate change adaptation and DRM in Samoa.

[19] Gupta *et al*. 2010. *Build back better for next time*. European Union and United Nations International Strategy for Disaster Reduction – Regional Office for Asia and Pacific.

19. Achieving the long-term solution through a full suite of preferred responses may not be feasible because of economic and capacity constraints. However – by identifying barriers to implementing these responses – the proposed LDCF project will facilitate the implementation of the necessary interventions to contribute toward achieving the preferred responses in the long term.

1.2.2 Barriers to Achieving Long-term Solution

20. At present, there is limited knowledge and capacity for implementing integrated climate change adaptation and DRM interventions in Samoa. These capacity limitations hinder effective planning and successful implementation at national and local levels. Barriers underlying the capacity limitations are described below.

Persistent organisational weaknesses

21. Sectoral ministries and government institutions have limited experience in coordinating, planning and implementing multi-sectoral, integrated approaches to resolving pressing key development issues. This results in gaps within the current managerial and administrative skill sets required to oversee and supervise interventions at national and local levels. Existing approaches to address climate change and DRM remain largely *ad hoc* and fragmented. Consequently, the existing approaches do not result in on-the-ground benefits being sustained in the long-term. Fragmented approaches to climate change adaptation and DRM also result in duplication of interventions, high transaction costs and limited capacity to monitor, evaluate and respond to risks at a strategic and programmatic level.

22. Complementary skill sets and strategic advantages of institutions from different sectors are seldom capitalised upon. Poor coordination between these institutions and other stakeholders restrict opportunities for collaboration and sharing of information. For example, the Ministry of Natural Resources and Environment (MNRE) has strong technical knowledge on climate change adaptation and DRM while the Ministry of Women, Communities and Social Development (MWCSD) and Non-Governmental Organisations (NGOs) are experienced in engagement with communities. However, strategic partnerships between different ministries are seldom developed. In addition, efforts to engage with NGOs and Civil Society Organisations (CSOs) have been challenged by the existence of communication barriers between ministries, NGOs and CSOs. As such, leveraging the strengths of different stakeholders to manage climate change adaptation and disaster risks collaboratively has yet to be achieved. In the past, key ministries have focused on a projectised approach that has led to ministries being protective of resources and being slow to adopt the sector-wide approach.

Limited national-level capacity to implement, manage and enforce adaptation interventions

23. There is limited capacity within government institutions to implement and enforce existing policies, laws and regulations for climate change adaptation and DRM. For example, the application of the "build back better" principle for reconstruction of infrastructure damaged by Cyclone Evan is constrained by limited execution capacity by LTA as well as in the construction sector. There is a shortage of skills in artisanal and construction-related trades such as masonry, carpentry and electrical engineering. In addition, communities do not have access to the required financial, logistic and technical support to adopt a "build back better" approach in the post-disaster reconstruction of buildings and infrastructure. As a consequence, reconstruction of damaged infrastructure and buildings – as well as new construction projects – does not take place according to the latest information on climate-resilient building designs.

Inadequate monitoring and evaluation

24. Effective planning and management of climate change adaptation and DRM initiatives are hindered by information gaps in existing assessments of climate and disaster risks. For example, there are limited baseline data on historical effects of climate change. Accurate and consistent baseline data are required to support planning and development of policies to respond effectively to climate and natural disaster risks. Moreover, there are currently no comprehensive and

spatially explicit assessments of Samoa's expected vulnerability to climate-induced natural disasters under changing climate scenarios. Furthermore, there is a need to identify and collate all relevant information and ongoing activities that are contributing to resilience building so that this can be used to inform ongoing development planning following Samoa's sector-wide approach.

Short-term and top-down approach to implementation

25. There is limited engagement with communities to inform planning and implementation of climate change adaptation and DRM initiatives. This is the case for both government programmes as well as donor-funded projects. While ministries cooperate to deliver community programmes, design of adaptation projects is frequently determined by time and funding constraints as well as the need for project deliverables that meet the requirements of funding agencies. This affects community engagement and capacity building which requires long-term support. Consequently, there is limited building of sustainable partnerships and institutions – as well as ineffective engagement with communities – to foster lasting behaviour change for climate change adaptation.

26. The prevalence of top-down processes in government-led climate change projects is a barrier to the establishment of collaborative partnerships. This hinders development of local capacity to adapt and respond to climate change and climate-induced natural disasters. This problem is exacerbated by the misconception that the local stakeholders have insufficient technical knowledge to be effective participants. Projects are consequently implemented using a top-down approach with a result that local stakeholders resist projects that have not garnered community support during all phases of project development and implementation. While there is a need to build communities' knowledge base on climate change adaptation, there is likewise a need to develop skills in facilitation and participatory engagement within government institutions to foster local participation. This will allow development programming to build on the strengths of community participation in order to support sustainable and climate-resilient development processes.

Limited community-level capacity for climate change adaptation

27. As described previously, top-down approaches lead to poor engagement of communities in adaptation initiatives. The capacity of communities to adapt to climate change is further constrained by various institutional and societal factors. Firstly, community-level knowledge concerning climate change adaptation and DRM is limited. While national-level information is repeatedly disseminated to communities, the same individuals are usually targeted by these initiatives. Important information on climate change adaptation and DRM remains in the hands of a few community members. Consequently, the benefits of capacity building are limited to those individuals who are targeted.

28. Coupled to the above, there is a need for improved availability of easily-understood information related to climate change adaptation and DRM. It is difficult for abstract concepts such as "resilience" and "adaptation" to be translated into Samoan. There is consequently a need for translation of abstract concepts and technical knowledge on climate change into more user-friendly information. This will build the capacity of communities to adapt autonomously to climate change. It will also enhance collaboration between donors, implementers and communities to support effective cross-sectoral adaptation.

29. Furthermore, there has been limited uptake of diversified livelihood options in Samoan communities. This is in part owing to limited resources for investing in alternative livelihoods. For example, selling of handicrafts provides an alternative to agriculture that is likely to provide a sustainable income. However, there are start-up costs such as purchasing of equipment and raw materials. Without access to financing, communities are unable to adopt climate-resilient practices that require upfront investment. This is exacerbated by limited management skills and financial literacy that threaten long-term sustainability and viability of entrepreneurial initiatives. Consequently, awareness and training on livelihood diversification does not result in concrete changes in practices.

Little private sector involvement

30. Most climate change adaptation and DRM initiatives are implemented through GoS. To date, there has been little involvement of the private sector in climate change adaptation and DRM. The private sector suffered a large proportion of the total losses caused by Cyclone Evan with Tourism, Manufacturing and Commerce comprising ~20% of the total damage and loss[20]. While the private sector is vulnerable to the effects of climate change, there are few mechanisms in place for guiding investment into enhancing the climate resilience of this sector. In particular, there are few opportunities to address the needs of entrepreneurs who are at risk from climate-induced natural disasters.

2. Strategy

2.1. Country ownership: country eligibility and country drivenness

31. In line with the LDCF eligibility criteria[21], Samoa has ratified the United Nation Framework Convention on Climate Change (UNFCCC). At the time of Council approval of the LDCF grant (in 2013), Samoa was classified as a Least Developed Country. Samoa has submitted its First and Second National Communications to inform the country's policy, legal and institutional frameworks for adaptation to climate change. Under the UNFCCC, Samoa has committed to: i) adopting and implementing policies and interventions for climate change adaptation; and ii) managing existing risks through improved preparedness for and response to climate-induced natural disasters. The project proposed here will contribute towards achieving these goals and consequently meets LDCF requirements.

32. The proposed LDCF project has been developed in a country-driven approach in full alignment with Samoa's National Adaptation Programme of Action (NAPA). Specifically, the project responds to NAPA priorities 1, 5 and 7 as described below and in alignment other development partner programmes.

- **Securing Community Water Resources.** The project will support the integration of climate change adaptation into water management strategies and sectoral plans. In addition, the project will revise watershed management plans that will protect water resources and safeguard critical infrastructure.
- **Agriculture & Food Security Sustainability.** The project will support the diversification of agricultural production with a focus on strengthening agricultural value chains. This will contribute to more climate-resilient livelihoods.
- **Implement Coastal Infrastructure Management Plans for Highly Vulnerable Districts.** The project will implement post-cyclone reconstruction according to "build back better" standards. Furthermore, the project will update and implement management plans that will protect critical infrastructure against the expected effects of climate-induced natural disasters.

33. The proposed LDCF project is also aligned with United Nations Development Assistance Framework (UNDAF) for the Pacific Region 2013-2017. Specifically, it contributes towards achieving **UNDAF Outcome 1.1: Improved resilience of PICTs, with particular focus on communities, through integrated implementation of sustainable environmental management, climate change adaptation/mitigation and disaster risk management**.

34. Samoa has generally made good progress towards achieving its MDG targets. However, there remain some goals that have yet to be attained. The proposed LDCF project will contribute towards three of these, as detailed below.

[20] GoS. 2013. *Post-disaster Needs Assessment.*
[21] Updated Operational Guidelines for the Least Developed Countries Fund. GEF/LDCF.SCCF.13/04. Available at: http://www.thegef.org/gef/sites/thegef.org/files/documents/Updated%20Operational%20Guidelines%20LDCF%20Oct.16.pdf.

- **Target 1.A Halve, between 1990 and 2015, the proportion of people whose income is below the basic needs poverty line**. Samoans still experience significant hardship and income inequality[22]. The project will contribute towards this MDG by promoting climate-resilient livelihood options. The project will also strengthen value chains for agricultural produce and handicrafts that will improve sustainability of income streams.
- **Target 1.B Achieve full and productive employment and decent work for all, including women and young people.** There are presently few options for employment in Samoa. The project will contribute towards this MDG by providing employment opportunities for reconstruction of critical infrastructure. There will be a particular focus on providing opportunities for women and young people to be involved in reconstruction activities. In addition, the project will support micro-enterprises with a particular focus on improving access to self-employment opportunities for women and youth.
- **Target 7.C Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.** The project will contribute towards this MDG by constructing community assets following the "build back better" approach. Specific assets to be constructed include *inter alia* water provision and sanitation infrastructure. The project will also promote sustainability of water resources through the implementation of integrated watershed management plans in alignment with other projects funded by development partners.

35. The proposed LDCF project is aligned with the current Strategy for the Development of Samoa (SDS, 2012–2016). The SDS outlines national development policies and identifies priority development areas towards achieving Samoa's socio-economic well-being and meeting the MDG targets. The project is aligned with several SDS priority areas.
    - **Priority Area 1: Economic Sector**. The project will promote climate-resilient livelihood options and strengthen value chains for agricultural produce and handicrafts. This is aligned with Key Outcome 3 ("Re-invigorate agriculture") and Key Outcome 5 ("Enabling environment for business development").
    - **Priority Area 2: Social Sector.** The project will implement community-based disaster risk management plans and build community-level capacity for climate change adaptation and DRM. This is aligned with Key Outcome 8.2 ("Community Development").
    - **Priority Area 3: Infrastructure Sector**. The project will reconstruct critical infrastructure damaged by Cyclone Evan. This is aligned with Key Outcome 9 ("Sustainable Access to Safe Drinking Water and Basic Sanitation") and Key Outcome 10 ("Efficient, Safe and Sustainable Transport System and Networks").
    - **Priority Area 4: The Environment**. The project will support climate change adaptation and DRM across all development sectors. This is aligned with Key Outcome 14 ("Climate and Disaster Resilience").

36. The proposed LDCF project is aligned with the recommendations of the GoS' Climate Public Expenditure and Institutional Review (CPEIR), conducted with the support of UNDP. The CPEIR details national priorities related to inclusion of climate change adaptation and DRM into planning processes and budget allocations. In addition, the project design was informed by the Post-Disaster Needs Assessment and the National Recovery Plan. These documents detail national priorities for recovery from the damages and losses incurred by Cyclone Evan. The project will implement priority activities from these plans with a focus on enhancing the climate resilience of all interventions. The proposed LDCF project is also aligned with the Community Disaster and Climate Risk Management methodology developed by GoS. This methodology has been integrated into Samoa's National Disaster Risk Management Plan.

2.2. Project rationale and policy conformity

[22] Pacific Islands Forum Secretariat. 2012. *Pacific Regional MDGs Tracking Report.*

37. The **project objective** is to establish an efficient mechanism for the integration of adaptation and disaster risk management into national development planning and programming and enhancing the resilience of communities' physical assets and livelihoods across Samoa, to climate change. LDCF funds will be used to support MNRE and the Ministry of Finance (MoF) to realise the preferred situation by: i) strategically integrating climate change adaptation and DRM into national policy frameworks and development planning through an economy-wide approach; ii) enhancing resilience of communities as first responders of climate change-induced hazards; and iii) developing and implementing a monitoring and evaluation system as well as a knowledge management strategy.

38. The primary **goal of the project** is to increase the economy-wide resilience of Samoa to climate-related hazards and disasters. This goal is aligned with a number of important policies and strategies that govern Samoa's national development and its approach to climate change adaptation and DRM.

Consistency with LDCF objectives and priorities

39. The proposed LDCF project is consistent with LDCF objectives CCA-1 "Reduce vulnerability to the adverse impacts of climate change", CCA-2 "Increase adaptive capacity to respond to the impacts of climate change" and CCA-3 "Promote transfer and adoption of adaptation technologies". Specific contributions to these objectives are described below.
    - Outcome 1.1 will support mainstreaming of climate change adaptation into policies, strategies and budgeting processes. This is aligned with LDCF Objective CCA-1, Outcome 1.1: "Mainstreamed adaptation in broader development frameworks".
    - Outcome 2.1 will support reconstruction of infrastructure according to "build back better" standards. This is aligned with LDCF Objective CCA-1, Outcome 1.2: "Reduced vulnerability in development sectors".
    - Outcome 2.1 will support the diversifying of livelihood strategies to build the climate resilience of community livelihoods. This is aligned with LDCF Objective CCA-1, Outcome 1.3: "Diversified and strengthened livelihoods and sources of income".
    - Outcome 2.2 will support the development and implementation of Village Disaster Risk Management Plans for 100 communities. This is aligned with LDCF Objective CCA-2, Outcome 2.2: "Strengthened adaptive capacity to reduce risks to climate-induced economic losses".
    - Outcome 2.1 will support the uptake of household-level technology for enhancing access to more secure livelihoods. This is aligned with LDCF Objective CCA-3, Outcome 3.1: "Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas".

40. Through the implementation of priority interventions identified in the NAPA, the project is consistent with the ninth Conference of Parties (COP-9) and also satisfies criteria outlined in UNFCCC Decision 7/CP.7 and GEF/C.28/18.

41. Samoa is participating in the Pilot Program for Climate Resilience (PPCR). PPCR activities undertaken to date included preparation of the Climate Resilience Investment Programme (CRIP, 2011). The CRIP outlines a broad-based strategy for achieving climate resilience at the national level in the medium- to long-term, building on Samoa's SDS and NAPA as well as other policy and planning instruments. The main challenges identified by the CRIP include floods, storm events (with associated strong winds and high seas), coral bleaching and drought. The proposed LDCF project is aligned with the CRIP's priority areas of intervention including *inter alia* transport infrastructure, agriculture, flood protection, civic engagement and participation.

42. The project meets the following LDCF requirements in terms of implementation and design:
    - **Sustainability.** The project will integrate climate change adaptation into national policy frameworks and sectoral development planning. This will include specific budgetary allocations by government for climate change adaptation as part of recurrent expenditure. In

addition, the project will strengthen coordination of climate change adaptation and DRM between key ministries. The results of the LDCF financed interventions will also strengthen Samoa's institutional and technical capacities which in turn will enable the Government to secure additional climate finance from a variety of sources. These interventions will strengthen the capacity of national institutions and communities to sustain climate change adaptation related interventions in the medium- to long-term.

- **Replicability.** The project will implement a knowledge management strategy. This will allow activities, results and lessons learned to be systematically documented. This documentation will contribute to a robust planning framework that will inform design and implementation of future interventions for climate change adaptation and DRM, both within Samoa as well as across the broader Pacific region.
- **Monitoring and Evaluation.** The project design includes a monitoring and evaluation (M&E) framework. This framework will strengthen institutional coordination and provide a mechanism for reporting on the effectiveness of the interventions. It will be used to measure the indicators of progress towards the project objective. In addition, it will facilitate the documentation and dissemination of lessons learned during project implementation. The M&E frameworks includes evidence-based tracking of the interventions focused on promoting diversified livelihoods under Outcome 2.1 (see Section 5 and Annex 15). This will follow an experimental design approach that will compare the Difference-in-Differences between project beneficiaries and a control group to measure the direct impacts of the project on the target population.
- **Stakeholder involvement.** The project design has been informed by extensive stakeholder consultation. Relevant stakeholders include representatives of various ministries as well as private sector organisations, NGOs and community-based organisations (see Annexes 3, 4, 5, 6 and 10 for details on the consultations held). The stakeholders' involvement in the project is clearly defined and these stakeholders will be actively engaged during project implementation.
- **Multi-disciplinary approach.** The project will integrate climate change adaptation into sectoral planning in an economy-wide approach. By the end of the project, all fourteen sector plans will include explicit reference to climate change with budget allocations for supporting sector-specific climate change adaptation and DRM. This will facilitate a harmonised approach to climate change adaptation across all sectors and by stakeholders.
- **Complementary approach.** The project will build on various ongoing initiatives and programmes in Samoa. These initiatives include ongoing revisions of policy and plans, disaster and emergency preparedness activities at the national and local levels, post-disaster reconstruction activities, ongoing climate change adaptation projects and initiatives by donor agencies and development partners. The project will strengthen coordination of climate change activities that will facilitate collaborative partnerships between all stakeholders involved in climate change adaptation and DRM.

43. The proposed LDCF project has been prepared in line with guidance provided by GEF and the LDCF Trust Fund. The project follows guidance from the 'Strategy on Adaptation to Climate Change for the Least Developed Countries Fund and Special Climate Change Fund" and the guidance paper "Accessing resources under the Least Developed Countries Fund". The project design is also aligned with the expected interventions articulated in the LDCF programming paper and decision 5/CP.9. As the effects of climate change fall disproportionately upon the poor, the links between climate change adaptation and poverty reduction are explicitly addressed within the project design[23].

2.3. Design principles and strategic considerations

44. GoS continues to coordinate national policy-making and planning for development across all sectors. MoF has overall responsibility for coordinating this integrated approach. A central principle to this involves inclusion of climate change adaptation and DRM, GoS is changing towards an economy-wide response to climate change in line with its overall move to a sector

[23] In accordance with GEF/C.28/18, 1(b), 29.

wide approach to development planning. For example, the recommendations encapsulated in the CPEIR Readiness Plan provide a framework for a green development path for Samoa.

45. At the national level, the proposed LDCF project will enable strategic integration of climate change adaptation and DRM in national policy frameworks and sectoral development across all sectors. The direct consequence of this approach will be: i) enhanced capacity to integrate climate change adaptation and DRM into development planning; ii) stronger institutional coordination of climate change adaptation and DRM initiatives; and iii) dedicated allocation of funding for recurrent expenditure on climate change adaptation and DRM in government budgeting processes. By following an economy-wide approach to adaptation, the GoS will be better able to address national priorities for sustainable development in a climate-resilient manner. This will benefit the people of Samoa in the short-, medium- and long-term as they will be less impacted by the effects of climate change owing to climate-resilient service planning and service provision in critical sectors such as water, sanitation, agriculture and health.

46. The proposed LDCF project will implement prioritised "build back better" activities outlined in the National Recovery Plan (NRP). Critical infrastructure damaged by Cyclone Evan will be rebuilt following climate-resilient approaches. In addition, community and economic assets will benefit from improved watershed management including the construction of flood protection infrastructure. Consequently, these assets will be less vulnerable to climate-induced natural disasters. The NRP is contributing US$62 million towards the proposed LDCF project as parallel investment co-financing.

47. The project has been designed to build on the recommendations of the Post-Disaster Needs Assessment (PDNA) regarding land-use management. At present, the population of Apia is growing as a result of urban migration. As such, it is imperative that the vulnerability of people and infrastructure in Apia to climate-induced natural disasters is reduced. For example, development along the Vaisigano River is vulnerable to flooding as a result of extreme precipitation events and coastal inundation. DRM in such areas will require integrated development planning and land-use zoning that takes climate risks into account. Activities under the proposed LDCF project include integrated watershed management planning, construction of protective infrastructure and climate-proofing of vulnerable community assets following the "build back better" approach. The USAID-funded project ADAPT Asia-Pacific[24] provided technical assistance to the preparatory phase of this project by supporting the inclusion of a climate-resilient infrastructure specialist in the project design team. The results of multiple consultations with Government officials and other stakeholders by this infrastructure specialist led directly to the design of Outputs 2.1.1 and 2.1.2 under Outcome 2.1. In addition, the specialist produced two reports (Annexes 6 and 8).

48. This flood protection and watershed management will provide benefits to at least 12,000 people living within the Greater Apia area. Direct benefits from these interventions include: i) reduced risk of damage to public and private infrastructure/assets; ii) reduced possibility of loss of life; and iii) enhanced land value in flood-prone areas. Indirect benefits include: i) reduced losses in income/sales; ii) reduced costs of clean-ups, maintenance and repairs; iii) reduced costs of relief and response efforts; and iv) reduced possibility of health hazards. In addition to these 12,000 direct beneficiaries, the general population of Samoa will benefit from the safeguarding of critical

[24] The USAID Climate Change Adaptation Project Preparation Facility for Asia and the Pacific (USAID Adapt Asia-Pacific) is a project of the USAID Regional Development Mission for Asia that works with nations in the Asia-Pacific region to improve their access to the existing pool of financing for climate change adaptation interventions. The project is designed to share information and best practices about climate fund requirements and to support governments to both build the capacity necessary and actually access the adaptation funds that are presently available, both internationally and from other sources such as domestic budgets and the private sector. To complement the project's knowledge management, training and project preparation efforts, USAID Adapt Asia-Pacific also organizes an annual forum, providing a space for countries in the region to network and engage in dialogue on issues related to accessing climate change adaptation financing. USAID Adapt Asia-Pacific promotes regional networking as well as gender and other social equity issues. (For more information, visit: www.adaptasiapacific.org).

economic assets in Apia. For example, protection of the Apia Harbour as well as critical road and bridge infrastructure in the Apia area will benefit livelihoods across both Upolu and Savai'i as there will be more reliable access to markets for agricultural and trade goods. Furthermore, protection of the Alaoa Dam will improve the reliability of the water and electricity supply, particularly during emergency periods when these are in high demand.

49. The proposed LDCF project will build on the recommendations of the PDNA to support livelihoods, particularly those related to agriculture. The project will promote diversified livelihoods related to agricultural and manufacturing value chains to develop resilient micro-businesses. Diversified livelihoods will improve household-level income, which will in turn promote savings and can be expected to catalyse larger investments into activities that result in improved ability to respond to and recover from climate-induced natural disasters. This will enhance the capacity of households and individuals to respond to climate-induced natural disasters and strengthen their ability to cope with and adapt to the expected effects of climate change in the short-, medium- and long-term.

50. A total of 300 beneficiaries will receive support for agricultural livelihoods and a further 300 beneficiaries will receive support for handicraft livelihoods. This support will result in households being capacitated to add value to their products and thus receive a greater share of the profits on those products. Participants in project activities are expected to have higher levels of income that will allow them to increase savings and/or further invest in productive assets. This will strengthen their capacity to recover autonomously from eventual climate shocks as well as invest in health care, education, nutrition and other social outcomes.

51. The project has been designed with a strong focus on gender considerations[25].The results of multiple consultations with Government officials, NGOs, CSOs and other stakeholders informed the design of Outputs 2.1.3 under Outcome 2.1 as well as Output 2.2.1 under Outcome 2.2 (see Annex 5). In fact, ADAPT Asia-Pacific also provided technical assistance to the preparatory phase of this project by supporting the inclusion of a gender specialist in the project design team. Consultations were carried out specifically to ensure that these outputs put women, youth and other vulnerable groups, at the front of the decision-making process and implementation. In addition, ensured overall alignment of project activities with the specific needs of women and other vulnerable groups. For example, reconstruction of houses and other infrastructure can provide opportunities for women to be involved in skills development and gainful employment. The implementation of village-based DRM plans will cater specifically for the needs of women in disaster preparedness and response. Diversification of livelihoods will focus on gender-sensitive agriculture and handicraft opportunities. Finally, the knowledge management and M&E framework will identify successes and gaps in providing benefits for women.

52. The interventions planned under the proposed LDCF project are also aligned with the National Adaptation Plan (NAP) process established under the United Nations Convention on Climate Change (UNFCCC) as a way to facilitate medium- to long-term adaptation planning in developing countries. The project will contribute towards enabling a national mechanism under which GoS can develop its NAP process. This is especially important in the context of Samoa, as the GoS has recognized the need to advance efforts to better absorb current and future climate finance for its many pressing priorities. Table 1 provides an outline of the contributions that the project will make towards various steps of Least Developed Countries Expert Group guidelines to inform the development of the NAP process.

Table 1. Relationship between proposed LDCF project activities and the steps of the NAP process, including indicative NAP outputs[26].

[25] The USAID-funded project ADAPT Asia-Pacific provided additional technical assistance by making available the services of a gender and social issues specialist in the UNDP-led project design team.
[26] Based on: LDC Expert Group. 2012. *The National Adaptation Plan Process: A brief overview.*

Step	Indicative NAP output	Related LDCF project activity
Stocktaking: Identifying available information on climate change impacts, vulnerability and adaptation and assessing gaps and needs of the enabling environment for the NAP process.	Report on adaptation activities. Synthesis report on climate information.	Conduct updated stocktaking of all current and planned climate change adaptation projects, plans, reports and assessments.
	Geospatial database in support of the NAP process. Knowledge-base of observed climate impacts, vulnerabilities and potential interventions.	Establish a national climate and disaster risk database that is centralised and accessible to all Ministries.
Integrating climate change adaptation into national and subnational development and sectoral planning	Sectoral and subnational plans or strategies	Integrate medium and long-term climate change risks and opportunities into sector plans. Develop concrete recommendations to align the next Strategy for the Development of Samoa (2017-2021) with the draft National Climate Change Adaptation Strategy and recommendations for sector plans.
Promoting coordination and synergy at the regional level and with other multilateral environmental agreements	Matrix of potential synergies	Develop and pilot plan for systematised uploading and monitoring of data and information generated in Samoa on international platforms.

53. Finally, this LDCF project is aligned with the larger, regional programme, currently under implementation by UNDP, UNEP, and FAO titled "Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods". The LDCF-financed initiative is fully aligned with the overall "Ridge-to-Reef" strategy to strengthen physical assets of communities through adaptation measures that follow a comprehensive upstream-to-downstream approach. Downstream activities will be conducted in full coordination with upstream assessments and activities, so as to proceed in a holistic and proactive action to reduce vulnerabilities in the future and avoid an "ad-hoc" response to the effects of climate change in Samoa. Further, it is expected that lessons, case studies, and best practices will be shared between the regional programme and GoS during the projects' lifetime, which will promote regional cooperation and knowledge sharing to support replication and sustainability of the project's interventions.

Complementarity with the Pilot Programme for Climate Resilience and the Adaptation Fund project

54. The LDCF-financed project has been designed to align and complement with the World Bank/Asia Development Bank-supported Pilot Programme for Climate Resilience (PPCR) and the Adaptation Fund-supported project titled "Enhancing resilience of coastal communities of Samoa to climate change" (hereafter referred to as the AF project). These projects will review Coastal Infrastructure Management (CIM) Plans in a total of 41 districts[27]. The updated plans will be known as Community Integrated Management, or"CIM-2" Plans and will incorporate the multitude of existing plans – e.g. Village Sustainable Development Plans, Village Disaster Risk Management Plans and Watershed Management Plans – into comprehensive local-level planning frameworks for each district. Based on the CIM-2 Plans, both the PPCR and the AF project will implement prioritised interventions that are informed by communities' development needs as described below.

55. The PPCR will demonstrate investments into climate-resilient infrastructure. The West Coast Road linking Apia to Faleolo International Road will be rehabilitated to reduce its vulnerability to

[27]The AF project and the PPCR will review CIM Plans in 25 districts and 16 districts respectively.

flooding and coastal inundation. The PPCR will support technical assistance for design and construction of the road infrastructure. Building on this, the PPCR will also prepare a vulnerability assessment and improvement programme detailing climate-resilient options for Samoa's entire road network.

56. In addition, the PPCR will implement prioritised interventions from the CIM-2 Plans in 16 districts. Current CIM plans include risk management options that mainly comprise the construction of seawalls and other "hard" infrastructure interventions that focus on protection of community assets. The revised CIM-2 Plans will include measures for enhancing the climate resilience of ecosystems to secure the provision of ecosystem goods and services such as erosion control and storm protection. These activities will build on practices such as rehabilitation of mangroves and coastal marshes, which have proven effective for reducing climate risks in Samoa. These "soft" interventions will be designed to complement the investments in "hard" infrastructure in an approach that has proven to be more cost-effective and sustainable than implementing either of these approaches in isolation[28].

57. The AF project follows a similar approach to the PPCR, but operates in different districts. CIM Plans will be reviewed and updated in 25 districts to develop CIM-2 Plans. On the basis of these revisions, the AF project will implement prioritised investments into climate resilience in these 25 districts. This will follow the same approach as the PPCR to ensure complementarity. In addition, the AF project will implement the following measures for building climate resilience:
- climate-proofing of coastal roads in at least 10 districts;
- shoreline protection in at least 10 districts;
- enhanced water supply in least 5 districts; and
- flood protection in at least 5 districts.

58. The LDCF project will complement the above-mentioned projects by adopting a "Ridge-to-Reef" approach in designing and implementing a coordinated response for the protection of communities' physical assets under Outcome 2.1 (as described in Section 2.4 of this document). This approach refers to the integrated planning of downstream and upstream adaptation interventions on land and water management and coastal and inland biodiversity and ecosystems, ensuring full consideration of the impacts that such interventions may have on the social, economic and ecological systems that comprise a ridge-to-reef geographic coverage, as a whole. At the policy level, the GoS intends to address the barrier of a fragmented policy and programmatic approach, by putting in place an enabling framework that will guide interventions on climate change adaptation and DRM and make this a priority of 'economic and social concern'. This will be coordinated to ensure no overlap between the three projects, while at the same time maximising the efficient use of project resources.

59. To reduce the risks of climate-induced hazards posed to the communities living in Apia, the LDCF project will develop an integrated watershed management plan (WMP) for the Greater Apia area. The WMP will follow the "Ridge-to-Reef" principle with an integrated approach to building climate resilience and protecting community livelihoods/assets. The LDCF project will build on the LIDAR mapping to be undertaken as part of the PPCR as well as a hydrological mapping exercise that is currently being undertaken for the Vaisigano River.

60. On the basis of the integrated WMP, the LDCF project will develop flood protection infrastructure for the Vaisigano River. This aspect of the project will build on the work conducted by the PPCR within three districts in the Greater Apia area by implementing recommendations from the PPCR's CIM-2 Plans within the integrated WMP framework. The PPCR will not support design and

[28]Rao N.S., Carruthers T.J.B., Anderson P., Sivo L., Saxby T., Durbin, T., Jungblut V., Hills T., Chape S. 2013. An economic analysis of ecosystem-based adaptation and engineering options for climate change adaptation in Lami Town, Republic of the Fiji Islands. A technical report by the Secretariat of the Pacific Regional Environment Programme. Apia, Samoa.

implementation of large-scale flood protection infrastructure because the scope of these CIM-2 Plans is not sufficient to include the development of a comprehensive and integrated WMP nor for the implementation of interventions on the scale required to reduce the vulnerability of these communities within these districts. The LDCF project will therefore use the recommendations from the CIM-2 Plans to identify priorities for implementation.

Comparative Advantage of UNDP

61. UNDP's comparative advantage for the proposed LDCF project includes considerable support to GoS on climate change adaptation and DRM in coastal areas. UNDP has initiated several flagship development programmes, including the: i) Private Sector Support Facility; ii) MDG Acceleration Project; iii) Community-Centred Sustainable Development Programme; iv) Tsunami Early Recovery Project; and v) the Tourism Tsunami Rebuilding Programme. These initiatives all supported disaster-preparedness and -response activities in the tourism sector.

62. UNDP assisted GoS with the formulation of its NAPA. UNDP also supported the implementation of projects to address NAPA priorities in a cohesive and programmatic framework. This includes UNDP-supported adaptation projects underway in the agriculture, health, coastal management and forestry sectors. The proposed LDCF project will build on UNDP's experience in implementing these adaptation projects using a cross-sectoral approach. This will enhance cost-effectiveness and enable cross-sharing of lessons learned between projects.

63. UNDP has supported GoS to access large amounts of development funding, including more than US$20 million in recent years. Projects related to climate change include:
- Integrating Climate Change Risks into the Agriculture and Health Sectors in Samoa (LDCF);
- Integration of Climate Change Risk and Resilience into Forestry Management (LDCF);
- Pacific Adaptation to Climate Change (LDCF);
- Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project;
- Enhancing resilience of coastal communities of Samoa to climate change (Adaptation Fund);
- Strengthening Multi-Sectoral Management of Critical Landscapes (GEF); and
- Enhancing the Resilience of Tourism Reliant Communities to Climate Change Risks (LDCF).

64. These resources have been used to enhance Samoa's climate resilience in the ways listed below.
- Mainstreaming climate change into sectoral planning for tourism, agriculture, health, forestry and coastal protection.
- Strengthening climate information services such as a network for climate monitoring and provision of tailored information on climate change to the various sectors.
- Enhancing technical capacities on climate risk and hazard mapping, early warning systems, remote sensing, cost-benefit analyses for selection of adaptation options and the use of climate information to inform adaptation strategies.
- Strengthening finance and budgeting capacities through the CPEIR, which assisted the various sectors to analyse public expenditure on climate change, design markers for climate change adaptation and identify budget gaps and opportunities for planning.
- Supporting communities in the implementation of adaptation interventions through demonstrations of agriculture, watershed management, coastal protection and health.

65. UNDP's Multi-country Office in Samoa has a number of staff experienced in the fields of climate change adaptation, DRM (including disaster prevention and recovery) and natural resource management. Technical aspects of project implementation are supported by a dedicated technical advisor based in Bangkok and a global senior technical advisor. The global network of the region-based advisors enables sharing and dissemination of knowledge beyond the country and region. Furthermore, the operational staff of UNDP Samoa has long-standing working relations with both MNRE and MoF. In addition, UNDP has project operational support mechanisms that are provided to line ministries such as the Ministry of Agriculture and Fisheries (MAF) and Ministry of Health. This will enable effective implementation of project processes that will include an established system for quarterly work planning and review of project performance. UNDP's use of

the National Implementation Modality has built capacity for project management and reporting in GoS. This will prove beneficial for supporting ongoing partnerships between UNDP and GoS for project implementation. UNDP's emphasis application of the Human Rights Based Approach and its emphasis on gender equality in development programming will ground the implementation of the proposed LDCF project on these important development principles.

66. The UNDP Multi-Country Office's comparative advantage in the implementation of this economy-wide project for climate change adaptation also lies in its experience with effective facilitation of partnerships with fellow UN Agencies and regional organisations. In particular, UNDP has experience in collaborative partnerships with agencies that are party to the Council of Regional Organisations of the Pacific, such as SPREP, SPC/SOPAC, SPTO and several NGOs.

67. UNDP's comparative advantage for GEF focal areas lies in its global network of country offices – such as the UNDP Multi-Country Office in Samoa – and its experience in supporting integrated policy development, human resources development and institutional strengthening as well as promotion of NGO and community participation. This experience means that UNDP is well-placed to assist GoS Samoa in designing and implementing this project in a manner that is consistent with the LDCF mandate as well as national development planning. UNDP's added value is also evident as described below.

- ***Accountability***: a track record of quality management of development finance as well as M&E and reporting on project implementation.
- ***Technical Expertise***: a large number of experienced and qualified staff with expertise in a number of relevant fields (e.g. climate change adaptation, development planning) in country offices and regional headquarters, as well as a world-wide knowledge network of specialists.
- ***Regional and global cooperation***: experience with developing synergies and cooperation at the regional and global levels, including through initiatives for North-South and South-South collaboration.
- ***Coordination with other UN agencies***: a mandate to support coordination and collaboration between other UN agencies as leader of the United Nations Development Group.

68. In summary, UNDP has a proven ability to: i) formulate project proposals; ii) collaborate with development partners and donors; iii) mobilise resources for development implementation; iv) monitor, evaluate and report on results; v) support and further develop national/local capacities for implementation; and vi) contribute to ongoing learning and improvement of processes. UNDP's track record of effective coordination of development planning and implementation – both with GoS and other development partners – makes the organisation ideally placed to support the implementation of this project.

2.4. Project Objective, Outcomes and Outputs/activities

69. The **project objective** is to establish an economy-wide approach to climate change adaptation and DRM in Samoa. This approach will support the integration and management of climate change adaptation and DRM within national development planning and programming frameworks, enhancing the resilience of Samoan communities to the expected effects of climate change such as climate-induced natural disasters.

70. The proposed LDCF project intends to address the currently fragmented policy approach to climate change adaptation by creating an enabling framework to guide interventions on climate change and DRM. This will make adaptation to climate change a priority within socio-economic development in all sectors. The project will build on existing initiatives to ensure that current limitations in implementation of interventions for climate change adaptation are addressed. Furthermore, the interventions in this project will focus on implementing Priorities 1, 5 and 7 of Samoa's NAPA, namely: i) securing community water resources; ii) agriculture and food security sustainability; and iii) coastal Infrastructure for highly vulnerable districts. To achieve this, the project will build the capacity of GoS as well as communities across Samoa to enable them to more effectively prepare for and manage climate risks.

71. The project objective will be achieved through a strategic combination of technical assistance and investments in on-the-ground interventions through pilot demonstrations of adaptation options. The project will deliver five integrated and complementary outcomes, namely: i) Outcome 1.1 – Policy Strategies/Institutional Strengthening; i) Outcome 1.2 – Public finance management at the national and village level; iii) Outcome 2.1 – Protection of communities' physical assets and livelihoods; iv) Outcome 2.2 – Climate change adaptation/DRM plans and implementation; and v) Outcome 3.1 – Knowledge about climate change adaptation and DRM at the regional and global level.

COMPONENT 1. STRATEGIC INTEGRATION OF CLIMATE CHANGE ADAPTATION AND DISASTER RISK MANAGEMENT IN NATIONAL POLICY FRAMEWORKS AND DEVELOPMENT PLANNING THROUGH AN ECONOMY-WIDE APPROACH

OUTCOME 1.1. Policy Strategies/Institutional Strengthening: Climate change adaptation and DRM mainstreamed in relevant policies, sectoral strategies, sub-national strategies[29] and budgeting processes through enhanced coordination of government institutions.

Co-financing amounts for Outcome 1.1: US$ US$15,765,849
LDCF project grant requested: US$788,638

Without LDCF Intervention (baseline)

72. At present, national capacity for management of the risks posed by climate-induced natural disasters is limited, as recently evidenced by the damage and losses caused by Cyclone Evan. This limited capacity is a result of restricted resources and a poor skill base for DRM as described by the National Progress Report on the Implementation of the Hyogo Framework for Action (2011–2013). Agencies and institutions with designated responsibility for DRM are not able to implement and enforce risk reduction regulations. In addition, there is a disparity between the modalities for implementation of activities for climate change adaptation at the national level as opposed to at the community level. Existing plans and activities that are relevant to climate change adaptation and DRM include *inter alia*: i) community disaster recovery plans; ii) watershed management plans; iii) coastal infrastructure management plans; iv) NAPA projects; v) climate change adaptation strategies for the tourism, health and agriculture sectors; and vi) village development plans. This proliferation of plans – coupled with poor coordination of activities between these plans – results in overlap and duplication of activities. This is being addressed by the establishment of a joint management committee for the AF and PPCR projects. However, more efforts are needed to ensure efficient coordination of climate change activities across all sectors.

73. The SDS 2012–2016 explicitly outlines the need for mainstreaming climate change into national planning processes such as the Sector Plans for each of the fifteen national sectors. MoF – through its Economic Policy and Planning Division (MoF-EPPD) – is mandated to coordinate policy and planning within all sectors that contribute to the objectives of the SDS. This is in line with GoS' goal of adopting an integrated approach to development planning. The state of integration of climate change adaptation into the fifteen sectors is described below.
    - The **Economic Sector** in Samoa comprises: i) agriculture; ii) tourism; iii) trade, commerce and manufacturing; and iv) finance. The Agriculture Sector Plan (2010-2015), Tourism Development Plan (2009-2013) and Trade, Commerce and Manufacturing Sector Plan (2012-2016) all include climate change adaptation and DRM considerations within their planning frameworks. However, the Finance Sector Plan (2012-2017) does not presently include specific reference to climate change adaptation or DRM.
    - The **Social Sector** in Samoa comprises: i) health; ii) communities; iii) public administration; iv)law and justice; and v) education. The Health Sector Plan (2008-2018), Community Sector

[29] Sub-national strategies include district/village strategies and a strategy for Apia

Plan (2010-2015) and Education Sector Plan (2013-2018) currently all make explicit reference to climate change adaptation and DRM for ongoing sectoral planning. By contrast, there is currently no inclusion of climate change adaptation and DRM within the Public Administration Sector Plan (2013-2017) – which is in final draft phase – or the Law and Justice Sector Plan (2012-2016).

- The **Infrastructure Sector** in Samoa comprises: i) water and sanitation; ii) transport; iii) telecommunications; iv) energy; and v) construction. The Water and Sanitation Plan (2012-2016), Transport Sector Plan (2013-2018) – currently in final draft phase – Telecommunications Sector Plan (draft phase) and Energy Sector Plan (2012-2016) all include considerations for climate change adaptation and DRM. The Construction Sector Plan has yet to be formulated.
- The **Environmental Sector** in Samoa is considered a cross-cutting sector. The National Environment Sector Plan (2013-2016) does include climate change adaptation and DRM in its planning framework.

74. MoF conducts bimonthly meetings with the coordination units of each sector. These meetings support and facilitate: i) harmonised accounting and reporting procedures; ii) improved collaboration among ministries and other agencies on advancing development; and iii) better management of national data and information. In addition, MoF meets regularly with representatives from donor agencies to coordinate aid funding with government planning processes. MoF's mandate for sector coordination provides an opportunity for facilitating the development of mechanisms for cross-sectoral coordination of climate change adaptation and DRM.

75. At present, all external development financing is administered through MoF. Donor assistance currently comprises ~20% of annual GDP[30]. This includes external financing for climate change adaptation, which is to be administered through the Climate Resilience Investment Coordination Unit (MoF-CRICU). However – despite its strong mandate for coordination of all sectors – MoF needs specialists in thematic areas of expertise related to the specific sectors. This is particularly the case for climate change adaptation and DRM. As a consequence, planning remains largely decentralised between the line ministries and there is poor coordination of activities designed to build climate resilience. These limitations prevent CRICU from effectively coordinating national planning for climate change adaptation efforts. Enhanced collaboration between CRICU and the National Planning Division of MoF is necessary to improve planning for adaptation across all sectors.

76. MNRE is mandated with policy-making, planning and implementation related to climate change adaptation in Samoa. As such, this ministry is responsible for producing policy documents to guide climate change programming, such as the National Policy on Climate Change and the NAPA. In addition to this, MNRE is also the designated secretariat for the National Climate Change Country Team (NCCCT). The NCCCT was envisaged provide overall coordination of the national response to climate change. However, the NCCCT's activities have not been sustained and it is currently inactive. While MNRE's GEF Unit has served as an important focal point for climate change financing, the ministry does not have sufficient capacity to implement initiatives for climate change adaptation in an economy-wide, cross-sectoral manner. At present, MNRE's capacity limitations restrict both the scope and the scale of its ability to support climate change adaptation.

77. MNRE's mandate also extends to policy-making and planning for management of the natural environment. This mandate includes the implementation of interventions focused on management of: i) water resources – through the Water Resources Division; ii) disaster risks – through the Disaster Management Office; iii) forests and terrestrial ecosystems – through the Forestry Division; and iv) urban planning – through the Planning and Urban Management Agency.

[30] See World Bank Data, World Development Indicators: http://data.worldbank.org.

Although the environment is considered a cross-cutting sector, several factors constrain MNRE from collaborating effectively with other ministries. MNRE staff has little access to information and knowledge produced outside of their specific divisions. Obtaining data from other ministries takes time and requires approval of such a request from MoF. Consequently, MNRE is not able to coordinate initiatives for climate change adaptation effectively, despite its mandate for DRM.

78. The creation of the sector coordination units has established a forum for enhanced sectoral planning and decision-making. However, the sector coordination units have yet to explicitly integrate climate change adaptation and DRM within ongoing planning and prioritising across sectors. Furthermore, budget performance frameworks liked to sectoral planning do not include climate change adaptation as a key performance indicator. As a result, there is still insufficient inclusion of climate change considerations within sectoral planning frameworks.

79. In summary, planning and implementing initiatives for climate change adaptation and DRM remains fragmented. National and sectoral development strategies and plans are not informed by up-to-date scientific knowledge on climate change as there is necessary information is rarely available. Sectoral and other lower-level plans do not link with an overarching plan/strategy for addressing climate change. Project management for climate change-related initiatives remains problematic. This results in duplication of staffing, reporting and implementation with consequent inefficiencies.

With LDCF Intervention (adaptation alternative)

80. At the national level, the GoS will use LDCF resources to integrate climate change adaptation and DRM into an overall national policy for adaptation as well as within sectoral development planning. As a result, all sectoral plans will have sector-specific objectives for climate change adaptation. This will create a stronger institutional framework for climate change adaptation along with the integration of climate change considerations into budget allocations. Ongoing planning and budgeting will consequently be conducted in a more climate-resilient manner with enhanced monitoring and evaluation of climate-related initiatives (linked to Component 3).

81. The Public Financial Management Reform Plan (PFMRP) will provide US$12,300,000 as parallel support co-financing to the LDCF project through its ongoing support to the sector coordination units within GoS. This is part of a performance-linked budget support programme that is supported by the Governments of New Zealand, Australia and the European Union as well as the World Bank and Asian Development Bank. The PFMRP has a focus on building the institutional, organisational and administrative capacity of line ministries and government agencies in Samoa and improving public finance management systems for better accountability. In addition, the PFMRP has strengthened capacity for preparation of budget performance frameworks linked to sectoral planning. The proposed LDCF project will build on these activities by supporting the inclusion of climate change adaptation within the budget performance frameworks. This will be guided by the improved integration of climate change risks and opportunities into sectoral planning as well as national development strategies.

82. The proposed LDCF project will support strengthening of national mechanisms for coordination of plans and projects for climate change adaptation. Strengthened coordination between the various divisions of MNRE, MoF and other government agencies will enhance overall operational efficiency. This will enable better sequencing and prioritising of activities to limiting duplication and overlap. Public expenditure and activities implemented by *inter alia* donor agencies and NGOs will be streamlined within a coherent national framework. Clear responsibilities for climate change will be allocated to government institutions to improve coordination of climate policy and programming as well as budgetary and fiscal mainstreaming of climate change activities. Reports detailing public expenditure on climate change will inform strategic decision-making on climate change adaptation and DRM.

83. The improvements in efficiency and coordination will result in increased benefits derived from the available resources. Gaps in planning and/or implementation of activities for climate change

adaptation will be identified and addressed effectively. Specific mandates will be developed for monitoring, evaluating and reporting on the implementation of interventions for climate change adaptation and DRM in alignment with the Monitoring and Evaluation Framework for the SDS. This will strengthen national capacity for delivering climate-resilient benefits in an integrated manner.

Output 1.1.1. Climate change adaptation mainstreamed into development and sectoral plans.

84. A proposed National Climate Change Adaptation Strategy (NCCAS) will be developed[31] by MNRE in alignment with the recommendations outlined in the ongoing Samoa Climate Change Policy Review and Way Forward (being completed in 2014) and in consultation with all relevant stakeholders including the MoF. A comprehensive literature review and stakeholder consultations were conducted to assess the current state of climate change policy in Samoa, including progress on implementation of priorities outlined in the NAPA and the National Policy for Combating Climate Change. MNRE will build on these recommendations for strengthening the institutional and policy framework for climate governance in order to mainstream climate change into sectoral planning and national development policy. The NCCAS will form the foundation of the National Adaptation Plan process in Samoa by outlining mechanisms for integrating climate change adaptation into national and sub-national development planning. In addition, the NCCAS will formulate a long-term national adaptation implementation strategy. Development of the NCCAS will take into account the NAP Guidelines produced by the UNFCCC. Relevant lessons learned and best practices from LDCs –as reflected in web-based knowledge products of the NAP Global Support Programme[32] – will be used to guide and inform the finalisation of the NCCAS.

85. In addition, MNRE and MoF will coordinate the integration of climate change adaptation and DRM into the next Strategy for the Development of Samoa (2017-2021)[33] as well as sectoral planning for all 15 sectors[34]. Explicit consideration of climate change in on-going planning and budgeting will support climate-resilience of all aspects of Samoa's planning and budgeting for recurrent expenditure.

86. Activities will include:

1.1.1.1 Identify entry points for integration of climate change into all sector plans. This will include a sector-by-sector review of medium- and long-term climate change risks and opportunities, based on up-to-date information on climate change projections and expected impacts for Samoa.

1.1.1.2 Revise all sector plans to take medium- and long-term climate change risks and opportunities into account. The revisions will include explicit budgets and M&E indicators to guide implementation of sectoral priorities for climate change adaptation. This will occur as part of GoS's schedule for sector revisions whereby all sector plans will be updated between 2014–2018.

1.1.1.3 Develop MNRE and MoF's human resource capacity to continuously revise sector plans based on up-to-date information on expected impacts of climate change (see Annex 4). This will occur based on the capacity assessments conducted under Output 1.1.2. and will include appointment of a Climate Change Policy Advisor to provide guidance and input into sectoral plans.

1.1.1.4 Finalise review of the NPCC (2007) and produce a proposed National Climate Change Adaptation Strategy to mobilise the integration of adaptation in medium- and long-term planning and budgeting processes in Samoa. This will build on the "Samoa Climate Change Policy Review & the Way Forward" report that has identified key gaps and opportunities in the current policy framework.

[31] In accordance with Recommendations R2 and R8 of the CPEIR.
[32] Currently being jointly implemented by UNDP and UNEP.
[33] In accordance with Recommendations R1 and R8 of the CPEIR.
[34] In accordance with Recommendations R3 and R8 of the CPEIR.

1.1.1.5 Develop concrete recommendations to align the next Strategy for the Development of Samoa (2017-2021) with the draft National Climate Change Adaptation Strategy and recommendations for sector plans.

Output 1.1.2. Institutional and operational frameworks for coordination of climate change adaptation strengthened.

87. The respective roles and responsibilities of MNRE and MoF with regard to coordination of policy-making, planning and implementation of climate change activities will be defined using a sector-wide approach. This will support the mainstreaming of climate change adaptation into sectoral and development planning (as outlined under Output 1.1.1).

88. A Climate Change Unit (CCU) will be established within MNRE. Guidelines for the CCU – as outlined in a concept note submitted to the Public Service Commission for endorsement in May 2014 – will include: i) mandating MNRE for overall coordination of climate change adaptation and DRM initiatives; and ii) outlining how it will coordinate with CRICU and other government agencies[35]. This will enable better sequencing and prioritising of activities through a more programmatic approach to reducing duplication and overlap of efforts. The resulting improvements in efficiency and coordination will increase the benefits provided to local communities.

89. The CCU will initiate a stock-taking exercise to update the inventory of all current and planned climate change adaptation projects in Samoa. Based on this stock-taking, capacity for the coordination of climate change activities will be strengthened. This will serve to prevent duplication of initiatives and identify gaps in planning and implementation on a sector basis. As new adaptation initiatives are planned and implemented, the CCU will coordinate continuous revisions of the inventory of climate change adaptation projects to ensure that climate change adaptation follows a programmatic and cross-sectoral approach.

90. Specific guidelines for CRICU's functions will be prepared to guide mainstreaming of climate change adaptation into budgetary and accounting frameworks. This will enable more streamlined and efficient management of climate finance that will support sequencing and prioritising of climate change activities and reflect most effective pathways by which integration of climate change has taken place at sector and national levels.

91. Activities will include:

1.1.2.1 Conduct capacity assessments of MNRE and MoF to identify capacity gaps related to coordination of climate change activities nation-wide including those implemented by government ministries/institutions as well as development partners and NGOs (see Annex 4).

1.1.2.2 Create a Climate Change Unit within MNRE to improve decision-making and project management of national climate change activities (see Annex 4). This unit will provide a central point for supporting management and implementation of climate change adaptation activities across all sectors as well as those carried out by development partners and NGOs.

1.1.2.3 Define roles for MoF and MNRE to ensure coordinated climate policy-making, planning, and implementation in collaboration with relevant sectors. This will include specific roles for nation-wide policy-making, planning, budgeting and monitoring of adaptation activities according to national and sectoral priorities developed under Output 1.1.1.

1.1.2.4 Conduct periodic and ongoing stocktaking of all current and planned climate change adaptation projects, plans, reports and assessments. This will be carried out at regular intervals by the MNRE Climate Change Unit to include all new adaptation activities as

[35] Recommendations R8, R9, R11 and R12 of the CPEIR.

new initiatives by government ministries/institutions, development partners and NGOs are planned and initiated.

1.1.2.5 Develop specific guidelines for CRICU functions including accounting, budgetary and fiscal mainstreaming of climate change initiatives. This will allow for centralised monitoring of the progress towards national and sectoral objectives related to climate change adaptation.

OUTCOME 1.2. Public finance management at the national and village level: Capacity to access, manage, implement and monitor use of climate change funds is enhanced at the national and village level.

Co-financing amounts for Outcome 1.2: US$1,999,124
LDCF project grant requested: US$100,000

Without LDCF Intervention (baseline)

92. Various sources of funding – in particular the Civil Society Support Programme (CSSP) – are available for community-based organisations (CBOs) and individuals to implement local-level development projects. CBOs and communities also receive training to enhance their ability to successfully apply to these sources of funding. The training is primarily provided through the Samoa Umbrella for Non-Governmental Organisations (SUNGO) and covers: i) project identification and prioritisation; ii) proposal writing and application; iii) project management and procurement; and iv) financial management and M&E. The activities that are undertaken mainly comprise construction of household and community assets. As such, the types of projects funded through these programmes focus on conventional socio-economic benefits. At present, there is no particular emphasis on using such funding for building climate resilience, for example by prioritising projects that will retrofit community assets following the "build back better" approach. As a result, the sustainability of benefits delivered to communities by such projects are likely to be threatened by climate change.

93. As the lead government financial agency, MoF is mandated to coordinate the budgeting and financing across all sectors. At present, MoF receives support for building capacity to improve public finance management through the PFMRP. Specific areas for building capacity include planning and budgeting as well as accounting, monitoring and reporting. Under the PFMRP, MoF has carried out a Public Expenditure Review (PER) detailing analysis of expenditure for the period 2006–2012.These PERs support a strengthened analytical basis for the GoS' management of public expenditure to improve linkages between policy and planning with budgeting and expenditure. In this way, line ministries will have enhanced capacity for improved decision-making and prioritisation across all sectors. However, the PERs are yet to detail expenditure on climate change adaptation and DRM explicitly. As a result, line ministries are presently unable to identify climate expenditure within the various sectors. The application of these skills to climate-related expenditure presents a broader cross-sector challenge that requires additional expertise.

94. To address this challenge, the CPEIR was initiated as a collaborative effort between MoF, UNDP and other development agencies that provided MoF with some background in public finance management for climate change. During this process, assistance was provided to analyse public expenditure on climate change, design markers for climate change adaptation and identify budget gaps and opportunities for planning within the relevant sectors. However, MoF does not currently have the in-house expertise required to perform such an analysis of climate expenditure on a regular basis. This constrains MoF's capacity to prioritise and manage climate financing.

With LDCF Intervention (adaptation alternative)

95. Building capacity for managing climate finance at all levels will enable improved programming for adaptation. This is dependent on accessibility of information on initiatives for climate change adaptation including knowledge of funding opportunities, how to access them, methodologies for prioritisation of interventions and modalities for implementation.

96. With LDCF resources, MoF will build the capacities of communities to access funding for climate-resilient development. This will build on the current suite of training offered by SUNGO and other CBOs that is supported by the PPCR. Community members will be trained on using the funding made available through initiatives such as the CSSP for local-level activities that focus on climate change adaptation. The training will focus on identifying and prioritising interventions that build climate resilience. Such interventions could include retrofitting houses following the "build back better" principle, constructing disaster shelters, installing community-level early warning systems and enhancing climate-resilient agricultural production. Communities will also be trained on management of community-level projects for climate change adaptation. This capacity development will enhance the ability of communities to leverage available funding for improving local-level resilience to climate change.

97. In addition, MoF will use LDCF resources to adapt the CPEIR methodology to provide guidelines for ongoing analysis of climate-related expenditure. This will be aligned with MoF's experience related to the PERs under the PFMRP. The PFMRP will provideUS$3,000,000 as parallel support co-financing to the LDCF project through its ongoing capacity development of MoF to conduct regular PERs. These PERs support the GoS' capacity to analyse and manage public expenditure, improving linkages between policy and planning with budgeting and expenditure. MoF will be supported to develop a methodology for conducting regular analysis of public expenditure on climate change as part of the PER process. The adapted methodology will guide the compilation of a report that details *inter alia*: i) new developments in climate-related policies across all sectors; ii) recent trends in climate expenditure, building on the CPEIR; iii) new developments in international cooperation on climate change; and iv) opportunities for climate funding. The climate expenditure report will be prepared through a collaboration between MNRE – responsible for policy-related aspects – and MoF – responsible for finance-related aspects. By building capacity to analyse climate expenditure – especially with regard to monitoring and evaluation – across all sectors, MoF will be better able to deliver climate finance on an economy-wide scale using a programmatic approach.

Output 1.2.1. MoF and MNRE climate change units – as well as NGOs and village governance structures – have enhanced capacity to manage climate finance.

98. Communities will be trained on managing climate change adaptation projects. A number of NGOs have demonstrated success in building the capacity of communities to access funds made available by development partners and through other initiatives. Training conducted under this project will build on these initiatives by supporting communities to plan and implement community-based adaptation projects. This training will include guidelines for identification of adaptation priorities, project design, funding proposals and financial management of projects. Communities will be better able to access funding to implement community-based adaptation activities that is available through programmes such as the CSSP and the GEF Small Grants Programme.

99. MoF-CRICU and MNRE-CCU presently have nascent capacity to monitor and report on expenditure for climate change adaptation. To further develop this capacity, the methodology of the CPEIR will be refined to produce guidelines for preparation of a biennial report on climate expenditure[36]. Based on the revised methodology, a CPEIR-style report will be piloted to finalise the guidelines and toolkits. These guidelines/toolkits will then be used to produce two further reports on public expenditure for climate change. These reports will support improved M&E of climate expenditure to enhance the mainstreaming of climate change in sectoral planning and budgeting under Outcome 1.1. MoF-CRICU and MNRE-CCU will consequently have strengthened capacity for prioritising public expenditure on climate change in a programmatic manner.

100. Activities will include:

[36] Recommendations R3, R8, R10, R12 and R17 of the CPEIR.

1.2.1.1 Develop guidelines for communities on management of climate change adaptation/DRM projects. These guidelines will outline approaches to prioritisation, design, proposal writing and financial management of community-based projects for climate change adaptation and DRM.

1.2.1.2 Train communities on managing projects for climate change adaptation and DRM following the guidelines developed through Activity 1.2.1.1. The training will equip communities to identify climate risks, prioritise adaptation actions, design adaptation interventions, develop costed project proposals, apply for funding and implement the projects. In particular, communities will be trained to manage project finances and on-the-ground activities.

1.2.1.3 Develop guidelines/toolkits – based on the CPEIR methodology – for a biennial analysis of government climate expenditure. This approach will be aligned with MoF's procedures for conducting Public Expenditure Reviews, with a focus on identifying and quantifying climate-specific expenditure.

1.2.1.4 Produce three biennial, CPEIR-style reports on climate change expenditure as a means for harmonising government agencies' monitoring of climate change adaptation. These analyses will occur in conjunction with MoF's Public Expenditure Reviews, following the methodologies developed in the guidelines/toolkits.

COMPONENT 2. ENHANCE RESILIENCE OF COMMUNITIES AS FIRST RESPONDERS OF CLIMATE CHANGE-INDUCED HAZARDS

OUTCOME 2.1. Protection of communities' physical assets and livelihoods: Increased resilience, and decreased exposure and susceptibility of communities to climate change and natural disasters by protection of household and community assets and promoting resilient livelihoods.

Co-financing amounts for Outcome 2.1: US$58,139,920
LDCF project grant requested: US$9,997,492

Without LDCF Intervention (baseline)

101. Climate change is expected to have severe effects on urban settlements in Samoa. Urbanisation is resulting in greater exposure of infrastructure to climate risks. Settlements are concentrated in coastal areas with approximately 70% of the population living within one kilometre of the coast. As a result, critical infrastructure – such as hospitals, schools, places of employment, power plants and airports – is also primarily located in the coastal zone. This infrastructure is at risk to flooding caused by extreme rainfall events and coastal inundation during storms. For example, the PDNA estimated the total cost of damage caused to physical assets by Cyclone Evan at ~US$103 million.

102. In particular, critical economic as well as household infrastructure is becoming increasingly affected by climate-induced disaster events. Transport infrastructure is vulnerable to climate change as evidenced by the damage caused to roads and bridges by Cyclone Evan. Roads in Samoa are exposed to a range of climate risks, including: i) sea level rise; ii) storm surges and wave action during cyclones; iii) flooding and landslips during extreme rainfall events; and iv) accelerated deterioration of road surfaces owing to extreme weather and rising water tables. Tourism developments are also at risk as these are generally located on the coast and are consequently exposed to climate-induced natural disasters. At present, GoS considers maintenance of the ~2,340 kilometres of road and 52 bridges to be a priority for promoting connectivity and access of communities to *inter alia* government services and agricultural markets. However, the increase in frequency and severity of cyclones expected to result from climate change will threaten the sustainability of maintenance and construction of infrastructure in the long-term.

103. The National Recovery Plan (NRP) will contribute US$59 million as parallel investment co-financing to the LDCF project. This investment will largely be used to rebuild economic and community assets damaged/destroyed by Cyclone Evan. For example, the damage to the Leone

Bridge in Apia has disrupted a major east–west transport corridor and destruction of road infrastructure has affected other commercial links. Consequently, the NRP identified repair and reconstruction of bridges and roads as a priority for revitalising the economy and restoring access to markets and important services (e.g. health care). However, the current schedule for reconstruction does not include long-term consideration of the increased risk of natural disasters expected under a changing climate scenario. As a result, the infrastructure that is to be constructed under the NRP is likely to remain vulnerable to extreme weather events.

104. In addition to the damage caused to economic infrastructure, the flooding caused by Cyclone Evan damaged 2,088 houses located across the country, mostly in urban settlements on Upolu Island. GoS has identified the need to ensure a "build back better" approach when housing is being rebuilt. However, there is at present limited capacity for ensuring that climate-resilient designs are followed during reconstruction of housing. This is exacerbated by the fact that some houses are being rebuilt within hazard zones such as areas prone to flash floods during storm surges. Small catchment areas and steep slopes – coupled with poor drainage – result in rapidly rising water levels during rain events. The flooding also resulted in extensive destruction of household goods and the temporary displacement of ~7,500 people. These problems are exacerbated by human activities such as deforestation in upper watershed areas that reduce infiltration and increase run-off. The area around Apia is particularly modified, with urban development in the coastal plain and peri-urban development and commercial agriculture in the watersheds.

105. The Greater Apia area comprises three districts, *viz.* Faleata West, Faleata East and Vaimauga West. Five rivers – the Vaisigano, Gasegase, Fuluasou, Loimata o Apaula and Fagalii Rivers – flow through these districts. GoS' main approach to water resource management in these and other river systems is through the implementation of Watershed Management Plans (WMPs). However, the development and enforcement of WMPs have been delayed by limited capacity for design and implementation. WMPs have been developed for the Vaisigano, Gasegase, Fuluasou and Loimata o Apaula Rivers. However, these WMPs do not include comprehensive hydrological models that include projections of the impacts of climate change on the watersheds[37]. There is at present no WMP for the Fagalii River. Without effective design and implementation of WMPs for these five watersheds, urban planning and infrastructure construction in the Greater Apia area will remain vulnerable to the expected effects of climate change. Communities and infrastructure within these watersheds will consequently remain exposed to flood risks during extreme rainfall events.

106. The PPCR is developing CIM-2 Plans for the three districts within the Greater Apia area. However, the scope of these plans are not sufficient to include the comprehensive development of an integrated WMP on the scale required to inform the design and implementation of the interventions that would be necessary to reduce the vulnerability of these communities within these districts. The degree of urbanisation of these districts (approximately 20% of the national population resides here) necessitates technical inputs such as characterisation of geo-physical and socio-economic features, comprehensive vulnerability assessments and detailed engineering design of interventions that are beyond the scope of the PPCR. Furthermore, the PPCR will be unable to implement the large-scale flood protection infrastructure that would be required to protect communities and their assets within the Greater Apia area.

107. While much of the impact of climate change is felt by individual households, households have little financial capital for implementing household-level interventions for climate change adaptation. The limited disposable income of most Samoan households means that tendencies for short-term gain take precedence over investment into longer-term measures for climate resilience. Households are not able to save for contingencies, nor are they able to proactively implement interventions that will reduce their vulnerability to the effects of climate change.

[37] A hydrological study will be conducted on the Vaisigano River during the first half of 2014.

108. Approximately 68% of the population of Samoa is classified as "Agriculturally Active"[38]. However, the sector only contributes ~10% of the country's GDP. This is because most agricultural production is subsistence or semi-commercial in nature. There are limited opportunities for commercialisation of agricultural products as the value chains are not presently sustainable. This is largely owing to limits in terms of the quality and sustainability of the supply of agricultural products that lead to preference for expensive imports.

109. The Trade Sector Support Programme (TSSP) is a partnership between MoF, Women in Business Development (WIBDI) and the Scientific Research Organisation of Samoa (SROS) that is supporting the expansion of agricultural value chains for coconut and cocoa. Despite the initiatives planned under the TSSP, a number of potential value chains still remain underexploited in Samoa. Commercial crops such as bananas, papaya and taro as well as traditional crops such as *nonu* and *laupele* could potentially be economically viable in local or regional markets. In addition, there is potential for beneficiation of these products such as producing dried fruit or pulp for fruit juice. At present, however, there are limited opportunities for exploiting the market potential. This is a result of *inter alia*: i) weak value chains; ii) poor quality of agricultural production; and iii) limited supply of agricultural products. There are similar opportunities for the production of handicrafts such as wood carvings and textiles. However, these products suffer from similar limitations to the agricultural products described above.

With LDCF Intervention (adaptation alternative)

110. The proposed LDCF project will guide the planning for reconstruction of infrastructure damaged during Cyclone Evan. This will serve to climate-proof the ongoing reconstruction of infrastructure under the NRP. In order to reduce the risks by flooding to the communities living in Apia, the project will develop an integrated watershed management plan that will address up- and down-stream causes and effects of climate vulnerability within all five watersheds in the Greater Apia area. LTA will complete vulnerability and adaptation assessments for the Vaisigano, Gasegase, Fuluasou, Loimata o Apaula and Fagalii Rivers. On the basis of these assessments, an integrated WMP for the Greater Apia area will be developed. This integrated WMP will include the following elements:
    - Geophysical features such as climate, geology, hydrology and vegetation.
    - Socio-economic features such as population and land-use.
    - Water resource characterisation such as water use, water quality and pollution.
    - Flood risk assessments such as flood scenarios and identification of risk zones.

111. The integrated WMP will thus outline climate risks posed to the communities living in Faleata West, Faleata East and Vaimauga West. It will follow the "Ridge-to-Reef" principle following an integrated approach to building climate resilience and supporting community livelihoods through the inclusion of aspects such as water, land and coastal management within an overarching framework. The work done under this LDCF project will build on the work conducted by the PPCR within the three districts that constitute the Greater Apia area by integrating recommendations from the CIM-2 Plans within is the integrated WMP framework. For example, the integrated WMP will identify particular hazard zones that can be expected to be prone to repeated flooding during extreme weather events. In addition, it will detail upstream mitigation measures that can be taken to reduce the risk of such disaster incidents. For example, improved management of watersheds with a focus on rehabilitation of deforested areas will improve infiltration of water during precipitation events and consequently reduce flooding. The hydrological models will also be able to inform the implementation of additional water management measures such as check dams and percolation ponds. These will all result in a reduced occurrence of climate-induced disasters.

112. The integrated WMP will also be used to guide the implementation of downstream measures for disaster mitigation. This will build on the LIDAR mapping to be undertaken as part of the PPCR as

[38] Samoa Bureau of Statistics. 2009. *Agriculture Census Analytical Report 2009.*

well as a hydrological mapping exercise that is currently being undertaken for the Vaisigano River. Mapping of hazard zones will be used to inform urban planning to prevent development within these areas. On the basis of the integrated WMP, the project will develop flood protection infrastructure for the Vaisigano River. Flooding in this river was particularly evident during Cyclone Evan, necessitating evacuation of local communities and resulting in considerable damage to assets and infrastructure. The construction of climate-resilient riverbank protection will safeguard communities and physical infrastructure from flooding associated with extreme weather events. Tourism infrastructure, community households, local businesses and other livelihood assets will be protected from damages and loss resulting from river flooding.

113. MNRE, with LDCF resources will support comprehensive planning and design of flood protection infrastructure. Based on the integrated WMP, appropriate options for structural (e.g. river banks, rock walls, river channelling) and non-structural (early warning systems, flood awareness) measures will be developed. These will be prioritised based on cost-benefit analyses as well as comprehensive environmental and social impact assessments. Community consultations as well as expert advice will be used to guide the selection of measures that are most socially and economically appropriate for implementation.

114. In addition to up- and down-stream mitigation measures, LTA and PUMA will be supported to increase resilience and decrease exposure and susceptibility of communities to climate change and natural disasters by climate-proofing household and community assets. The protection and reinforcement of these assets will reduce the damage caused by natural disasters. The project will provide the means for the design and reconstruction of community assets following the "build back better" principle. Communities with at-risk housing and other assets will benefit from technologies and technical assistance pertaining to climate-resilient housing, water supply and sanitation. Furthermore, community members will be engaged in the construction of these community assets as well as the flood protection infrastructure described above[39]. These community members will also receive training on climate-resilient construction techniques. As a result, these community members will have enhanced employability after the project implementation is completed owing to their expanded skillsets. Furthermore, they will have improved understanding of climate-resilient housing that can be expected to inform future choices concerning design and construction of household assets.

115. The proposed LDCF project will also promote the adoption of diversified livelihood options to enhance climate resilience at the household level. The development of micro-businesses opportunities related to food production and manufacture will be supported to enhance linkages between supply and market, as well as increasing beneficiation of existing production. The TSSP is an Enhanced Integrated Framework-supported initiative funded by the European Investment Fund and will provide co-financing of US$2,000,000). The LDCF project interventions will build on this initiative by supporting the identification and development of sustainable and commercially viable value chains for agricultural products as well as handicrafts. This will be done through improving linkages between suppliers and markets, with a focus on developing the quality and quantity of production to the level required to satisfy demand in local and/or regional markets.

116. Technical assistance will be provided to analyse agricultural and handicrafts products with the potential for enhanced commercial viability. This will include analysis of the potential for beneficiation of agricultural crops such as producing dried fruit or pulp for fruit juice as well as identification of value chains for textiles and other handicrafts. Community members will receive training on the techniques required to improve sustainability of supply and quality of production for the identified value chains. Household members involved in training on agricultural products will receive planting materials and household processing facilities such as drying machines. Household members involved in training on handicraft production will receive equipment such as sewing machines. This will increase income-generating opportunities for community members,

[39] For example, through the "cash-for-work" modality.

improving the levels of disposable income and enhancing their capacity to save. Enhanced savings will enable communities to build up a financial buffer to help them cope with and adapt to climate change in the short-, medium- and long-term. For example, households will be able to invest in climate-resilient buildings. Improved savings will also lead to households being able to recover independently after disaster events rather than having to rely on aid from GoS or other aid agencies.

117. These livelihoods interventions will be complementary to the Asian Development Bank-supported agribusiness initiative. The ADB project will support an export processing and packaging facility for agricultural products. LDCF project beneficiaries who receive processing facilities will therefore be able to deliver the agricultural products to the packaging facility, thereby linking the value chain to export markets.

Output 2.1.1. Integrated Watershed Management Plan for Greater Apia following "Ridge-to-Reef" approach.

118. An integrated WMP for the Greater Apia area will be developed[40] to identify the root causes of climate vulnerability and outline strategies for reducing the risks posed by climate-induced disasters[41]. Technical staff in MNRE and the Land Transport Authority (LTA) will be supported to design this integrated WMP[42]. The integrated WMP will detail both "hard" (i.e. structural) and "soft" (i.e. non-structural) options to build climate resilience. Based on the integrated WMP, the project will support LTA to design of flood protection infrastructure to protect economic and community assets. Flood protection measures are likely to include: i) check dams and retention ponds to control flow rates; ii) diversion channels to reroute water flows away from vulnerable communities during flood events; and iii) riverbank stabilisation to prevent flood waters from damaging economic infrastructure and community assets.

119. The design of flood protection measures will include cost-benefit analyses as well as comprehensive environmental and social impact assessments to ensure that construction of these measures will take place in an environmentally and socially responsible manner that is also cost effective and sustainable in the long-term. The structural and non-structural interventions will be designed to provide optimal protection of economic infrastructure as well as community assets from risks posed by climate-induced disasters. These interventions will follow international best practices and standards for cost-effectiveness. In addition, the interventions will be designed to address the specific long-term vulnerabilities to climate risks identified in current climate change projections while at the same time consisting of "no-regrets" measures that will address current vulnerabilities. Details of the steps, Terms of Reference for the technical team, and a list of physical and socio-economic data requirements involved in the design of the Integrated WMP for Greater Apia are to be found in Annexes 6, 8 and 9.

120. Activities will include:

2.1.1.1 Conduct complete assessments of the Vaisigano, Gasegase, Fuluasou, Loimata o Apaula and Fagalii Rivers to identify the root causes of climate risks in the Greater Apia urban area. These assessments will include collection of: i) physical data such as geology and soil mapping, vegetation mapping, climate change projections and hydrology; and ii) socio-economic data such as population census and land use/land tenure (see Annex 8).

2.1.1.2 Conduct a comprehensive vulnerability and risk assessments to identify risks posed to economic infrastructure and community assets within the Greater Apia urban area. This assessment will include analysis of the location and vulnerability of human populations and critical infrastructure as well as climate/flood risk assessments to identify threats posed to these populations and infrastructure (see Annex 8).

[40] Recommendation under "Disaster Risk Management" section of NRP.
[41] Recommendation under "Environment" section of NRP.
[42] Recommendation under "Disaster Risk Management" section of NRP.

2.1.1.3 Conduct community consultations to field-truth the vulnerability and risk assessments. These consultations will assist to identify locations of vulnerable populations, community assets and economic infrastructure. In addition, these consultations will serve to prioritise structural and non-structural interventions to reduce vulnerability to climate-induced risks.

2.1.1.4 Develop an integrated watershed management plan detailing threats and management responses for the catchments in the Greater Apia area. This plan will be based on the assessments outline above, focussing on the prioritised structural and non-structural interventions to reduce vulnerability to threats identified by the climate/flood risk assessments (see Annexes 6 and 8).

2.1.1.5 Design structural flood protection measures such as check dams, retention ponds, diversion channels and riverbank stabilisation to reduce the flood risk posed to communities in the Vaisigano River catchment. This design will include feasibility studies, climate-resilient design, cost-benefit analyses, EIAs, SIAs, etc. (see Annexes 6 and 8).

Output 2.1.2. Hard and soft measures for protection of community assets.

121. This output will serve as a demonstration of integrated management of climate risks following a "Ridge-to-Reef" approach. Based on the integrated WMPs and climate-resilient infrastructure designs produced under Output 2.1.1, flood protection measures will be built by LTA to protect community assets and livelihoods as well as critical infrastructure in the Greater Apia area from climate risks. The flood protection measures are likely to include check dams, retention ponds, diversion channels and riverbank stabilisation. These flood protection measures will reduce the frequency and impact of climate-induced hazards occurring within the Greater Apia area. Details of the proposed climate-proofed infrastructure interventions that can stem from the integrated WMP are listed under the "Samoa Infrastructure Vulnerability Assessment" (Annex 6).

122. In addition, ecosystem-based approaches to watershed management and other non-structural interventions will be implemented by MNRE-Water Resources Division and MNRE-Forestry Division in the upper catchment areas to reduce the frequency and severity of climate-induced hazards. These measures will include reforestation of degraded catchments promotion of land-use activities that will reduce the rate of run-off during flood events and consequently reduce the impact of climate-induced disasters.

123. Furthermore, community assets (e.g. houses, sanitation, drinking water sources, disaster shelters, evacuation routes) in high risk areas that were damaged during Cyclone Evan will be rebuilt by LTA according to the "build back better" principle[43]. PUMA will be supported to use best-practice regulations and building codes to inform planning and implementation of reconstruction that is climate-smart. As a result, communities are expected to experience a reduced threat to lives as well as fewer economic losses induced by climate-induced disasters.

124. The structural and non-structural interventions implemented here will be located where they can provide optimal protection of economic infrastructure as well as community assets from risks posed by climate-induced disasters. In particular, up-stream interventions will reduce the likelihood and intensity of potential disaster events while down-stream interventions will reduce the exposure of infrastructure and assets to such risks. Implementation will be guided by *inter alia* the Post-Disaster Needs Assessment in such a way as to address high risk areas susceptible to flooding as experienced during Cyclone Evan. This will ensure that the losses to be expected to result from such climate-induced disasters are considerably reduced. Details of the types of structural mitigation measures and indicative costs are described in Annex 6.

125. Activities will include:

2.1.2.1 Build structural flood protection measures designed under Output 2.1.1 – such as check dams, retention ponds, diversion channels and riverbank stabilisation – in the Vaisigano

[43] Recommendation under "Transport" section of NRP.

River catchment. These will be constructed based on the feasibility studies, cost-benefit analyses and EIAs undertaken for the integrated WMP.

2.1.2.2 Implement ecosystem-based approaches to watershed management. These will focus on management of upper catchment areas to reduce the risks posed by floods and other climate-induced disasters.

2.1.2.3 Reconstruct community assets such as climate-proof houses, drinking water supply systems, disaster shelters, evacuation routes and sanitation systems. This will be based on international best practices for climate-resilient development following "build-back-better" approaches.

Output 2.1.3. Sustainable micro-enterprises for youth and women on agro-businesses with a sustainable and resilient value chain approach to promote diversified livelihoods.

126. Building on the TSSP initiative implemented by MoF and WIBDI, MNRE and MWCSD will support communities to diversify livelihoods by increasing income-generating opportunities for community members with particular consideration for vulnerable groups such as women and youth[44]. Promotion of diversified livelihoods will enhance climate resilience at the household level by increasing household income and savings. Households will have enhanced capacity to cope with and adapt to climate change as they will have the financial resources to invest in measures for climate-resilience. Households will also have more resources for recovery after disaster events.

127. This approach to strengthen the climate resilience of livelihoods of women and vulnerable population groups in Samoa will focus on the development of business incubators through the creation of sustainable and resilient value chains for agricultural and handicraft products. The attached "Socio-Cultural Gender Report" (Annex 5), highlights some gaps in the context of gender empowerment in climate change adaptation interventions in Samoa, including the need to: i) review the impact of livelihoods projects on women's empowerment; ii) further train and build capacity among women on climate change adaptation; and iii) work with existing organisations to build on and expand specific interventions that contribute directly to enhancing the resilience of women to respond to climate-induced hazards.

128. Communities and women and youth groups who will participate in these interventions will be identified and selected, through household surveys which will be carried out in 100 villages across Samoa to support interventions of this output and Output 2.2.1 of the project. The surveys will provide detailed socio-economic and demographic data (including disaggregated data for age and sex) to identify the most vulnerable groups within these communities.

129. Access to robust household baseline information will serve to identify not only the most vulnerable populations to climate risks across Samoa (for adequate planning of DRM efforts, as described under Output 2.2.1), but also contribute to more targeted interventions in building community resilience of these vulnerable groups. For example, the identification of single mothers living in a community can contribute to involving them in income-generating activities and as such, build their capacity and ensure they are more resilient and not severely disadvantaged during a disaster. This approach also contributes to the cost-effectiveness of interventions planned in both outputs.

130. MNRE – in collaboration MWCSD – will hire specialists to carry out assessments of the current business-as-usual value chains for crops and handicrafts to identify gaps and opportunities to build the sustainability of these value chains. The assessments may include the potential for new agricultural and handicraft products[45] and identification of stronger linkages between supply and demand, leading to increased opportunities for communities to produce and sell agricultural and handicraft products. Further, the specialists will be tasked with identifying climate change risks

[44] Recommendation under "Disaster Risk Management" section of NRP.
[45] Recommendation under "Agriculture, Livestock and Fisheries" section of NRP.

and opportunities of the value-chains in question and identify measures to mitigate such impacts (designing an “adaptive value chain”), as well as additional potential market options for these products.

131. Finally, through this output, MWCSD in partnership with local NGOs will provide training to selected community members (mainly women and youth) on the techniques required to improve production of agricultural and handicraft products for the identified value chains. Approximately 300 community members will be trained for each identified value chain (i.e. 300 for agriculture and 300 for handicrafts) through 10 training sessions for each value chain. Community members involved in the training programmes will receive planting materials and household processing facilities such as fruit driers (for agricultural production) and equipment such as sewing machines (for handicraft production).This initiative will equip women and youth with the skills and inputs required to sustain small business enterprises. These will be sustainable as beneficiaries will have: i) appropriate technical know-how for production; ii) start-up resources such as seeds and equipment; and iii) links to sustainable markets.

132. This intervention will improve household welfare in order to build resilience to climate-induced disasters. Introducing the specific technological equipment – coupled with targeted technical training – will allow women to improve the sustainability and profitability of their livelihoods. Use of the supplied technology and improved production skills will lead to improved enterprise outcomes, allowing women to invest in household welfare and further improvements to their businesses. Such investments are likely to lead to direct as well as indirect improvements in climate resilience. Possible outcomes of increased income-earning opportunities include: i) re-investment into livelihood assets and production; ii) improved health and welfare, especially of children; iii) investments into education; iv) enhanced savings, especially for post-disaster recovery; v) investment in climate resilience of household or community assets (e.g. climate-proofed housing, evacuation centres); vi) improved nutrition; vii) clean water; and viii) sanitation. Such investments decrease climate vulnerability by reducing the impact of disasters on community/household assets (through climate-proofing), reducing the likelihood of disease after disaster events (improved health, sanitation and drinking water) and enhancing post-disaster recovery (through savings).

133. MWCSD will lead the execution of this output, as it currently oversees Government commitments to Samoa’s vulnerable and marginalized groups, and is the *de facto* entry point to the communities. During PPG phase, NGOs and national research organizations were consulted and potential partnerships were identified for this output; these can be further explored during project implementation (particularly with WIBDI and SROS) in order to benefit from existing engaging and training methodologies at the community level. The Government Women Representatives are the liaison officers between GoS and the village and therefore, these representatives will also have a significant role in the execution of this output.

134. Activities will include:

2.1.3.1 Assess value chains for crops such as *misiluki,* papaya, *nonu, laupele* and taro. These assessments will analyse operational and productions costs, potential for development of new products and gaps/barriers to sustainability of both supply and demand.

2.1.3.2 Assess value chains for handicrafts such as wood carvings and *siapo.* These assessments will analyse operational and productions costs, potential for development of new products and gaps/barriers to sustainability of both supply and demand.

2.1.3.3 Based on the assessment in Activity 2.1.3.1, provide training to 300 women and youth on the technical skills required to supply viable value chains with agricultural products.

2.1.3.4 Based on the assessment in Activity 2.1.3.2, provide training to 300 women and youth on the technical skills required to supply viable value chains with handicraft products.

2.1.3.5 Provide planting materials, equipment and household processing facilities for women and youth to supply viable value chains with agricultural and handicraft products.

2.1.3.6 Design and implementation of a quasi-experimental design approach (Difference-in-Differences) to test the impact of the value chain interventions in household welfare.

135. In order to understand the impact that diversification of community livelihoods will have on building the climate-resilience of women and youth, an innovative aspect of this project is that LDCF resources have been allocated to pilot a quasi-experimental design strategy to accurately measure benefits provided through this output. During PPG consultations, GoS and practitioners have recognized that, in most projects, evidence of success still remains in the confines of anecdotal evidence, making it difficult to attribute changes in indicators to project interventions and in quantifying project effects. Therefore, an experimental design pilot has been designed to assist the project team to gain additional insights into developmental and adaptive impact of the livelihood interventions that will be carried out in this output. Details of how this strategy will be implemented are explained in Annex 15 "Experimental Design".

OUTCOME 2.2. <u>CCA/DRM plans and implementation:</u> Increased adaptive capacity of communities for implementation of effective risk management and protection of household and community assets.

Co-financing amounts for Outcome 2.2: US$2,812,463
LDCF project grant requested: US$500,000

<u>Without LDCF Intervention (baseline)</u>

136. The national Disaster Management Programme has developed some Village Disaster Risk Management Plans (VDRMPs) for disaster risk reduction and response. Implementation of these plans has been facilitated by MNRE's Disaster Management Office in collaboration with *inter alia* the Samoan Red Cross. VDRMPs include household surveys to identify specific vulnerabilities to disasters. These surveys are then used to inform plans for disaster preparation and response, such as planning of evacuation routes. However, these plans have only been developed for ~40 of the more than 300 villages in the country. Consequently, a large number of communities have yet to develop and implement local-level plans for coordinating disaster preparedness and response. These communities remain extremely vulnerable to the increased incidence of climate-induced natural disasters expected under future climate scenarios.

137. After the occurrence of natural disasters, communities have limited capacity to recover. Their capacity is constrained by loss of assets and livelihoods. Post-disaster needs include *inter alia*: i) food, water and medical supplies; ii) building materials for reconstruction of houses; iii) financial support to cover loss of income; and iv) seeds and planting materials to compensate for destruction of crops. At present, disaster support is not provided in a timely and effective manner. In addition, community members do not have access to the knowledge and information necessary to respond to disasters appropriately. For example, communities may not know how to react during different climate-induced disaster scenarios and may not be aware of how to go about obtaining assistance from MNRE-DMO and other relief services. As a consequence, communities are not able to respond to and recover quickly from climate-induced disasters.

138. The NRP has outlined the need for prioritisation of enhanced DRM, particularly with regard to the risks posed by flooding during cyclones. However, the NRP is unable to provide support to communities for the development and implementation of VDRMPs. The CIM-2 Plans developed by the PPCR and AF project are focused on district-level planning. This is unlikely to include adequate design for village-level DRM measures. There is therefore limited availability of resources for moving from planning to implementation of VDRMPs. Consequently, communities remain poorly equipped to prepare for, respond to and recover from climate-induced disaster events.

<u>With LDCF Intervention (adaptation alternative)</u>

139. The capacity of communities to cope with climate-induced natural disasters will be strengthened. MNRE's Disaster Management Office (DMO) – in collaboration with MWCSD – will develop and implement VDRMPs in 100 villages to support communities to act as "first responders" to climate-

induced disasters. These disaster management plans will integrate climate adaptation information and thus will help communities prepare for, respond to, and recover from climate-induced disasters. This will have a direct effect on the ability of communities reduce climate risks and minimise future losses.

140. Communities will directly benefit from increased community coordination and ownership of CCA and DRM initiatives. By building community-level capacity, communities will be able to adopt a more proactive approach to climate change adaptation. This will reduce the burden on GoS to coordinate localised planning and implementation of adaptation interventions. Consequently, delays in disaster response will be reduced and communities will be able to react in a timely manner. This will have a direct effect on the capacity of communities to cope with climate-induced natural disasters.

141. The NRP will provide co-financing of US$2,812,463 through its ongoing work on strengthening of DRM governance through revisions of the Disaster and Emergency Management Act (2007) as well as enhancing the national climate risk forecasting and warning systems. However, this work occurs at a national level and the NRP does not currently support communities with regards to adaptation planning. The LDCF project will build on this work by supporting community-based adaptation activities through improved planning and implementation of local-level DRM. This will address the limited availability of resources for moving from planning to implementation of VDRMPs.

142. DMO will coordinate closely with the work on village-level disaster planning undertaken by the PPCR and the AF project. The CIM-2 Plans will provide a framework within which the LDCF project will conduct household-level surveys to identify climate vulnerabilities. These surveys will inform the design and implementation of VDRMPs, including the provision of the necessary training to ensure that community members are aware of their roles in the event that a climate-induced disaster occurs.

Output 2.2.1. Building on the work of DMO, village plans designed and implemented to develop the capacities of 100 communities to prepare, respond, recover and manage CC risks.

143. At present, less than 15% of villages in Samoa have VDRMPs. DMO and MWCSD coordinate the development and implementation of VDRMPs in an additional 100 communities to increase national coverage of these plans to ~50% of all villages. In order to guide this process, household surveys will be conducted to identify vulnerabilities of local communities to climate risks, disaggregated by age and gender. These household surveys will be complemented by broader-level community consultations that will be conducted to identify localised disaster risks and outline potential response strategies such as evacuation plans, access to drinking water and health care services. On the basis of the survey and consultations, VDRMPs will be developed and implemented to support these 100 communities to act as “first responders” to disasters. Community members will be trained on implementation of the VDRMPs such as the individual roles and actions to be taken during disaster events. This will enable communities to prepare for, respond to, recover from and manage climate risks.

144. Activities will include:

2.2.1.1 Conduct household surveys to map vulnerability to climate risks. This will follow the methodology successfully used by DMO in the VDRMPs developed to date and is likely to comprise an ongoing partnership with Samoa Red Cross.

2.2.1.2 Analyse data from household surveys to identify most vulnerable groups and communities to establish gender- and age-disaggregated vulnerabilities.

2.2.1.3 Hold community consultations to identify localised climate risks as well as appropriate responses during and after disaster events.

2.2.1.4 Develop and implement Village Disaster Risk Management Plans that outline roles and actions for responding to climate-induced disasters. This will be coordinated by DMO to

ensure that there is no overlap between the communities targeted under the LDCF project and those targeted by other initiatives (e.g. Samoa Red Cross, PPCR, AF).

2.2.1.5 Provide training on the implementation of Village Disaster Risk Management Plans. This will include informing community members of evacuation routes and disaster responses, provision of first aid training, drills for disaster events and post-disaster recovery activities.

145. The household surveys conducted under this output will also be used as the baseline survey for the quasi-experimental design strategy to be conducted under Output 2.1.3. Collection and analysis of household-level data will be used to identify households to be targeted to benefit from livelihood diversification activities, as well as to identify households to serve as a control group. Details of how this strategy will be implemented are explained in Annex 15 "Experimental Design".

COMPONENT 3. MONITORING AND EVALUATION AND KNOWLEDGE MANAGEMENT

OUTCOME 3.1. Knowledge about CCA and DRM is captured and shared at the regional and global level.

Co-financing amounts for Outcome 2.2: US$6,996,933
LDCF project grant requested: US$350,000

Without LDCF Intervention (baseline)

146. Samoa has recently undertaken a series of assessments on the efficiency and effectiveness of national initiatives for climate change adaptation[46]. These assessments have generated recommendations to strengthen and coordinate climate change adaptation at the national level. A common recommendation within the assessments includes the importance of a strong M&E framework. Existing M&E systems are not able to track the success of adaptation interventions. Principles of results-based management – such use of baseline indicators, tracking success of outputs and documentation of tangible results – are new to public sector work in Samoa. Consequently, there are few government ministries that have mainstreamed such principles into operational practice. As a result, capacity for monitoring, analysing, evaluating and reporting on the effectiveness of adaptation interventions remains weak.

147. Such capacity limitations are particularly evident within the Ministry for Women, Communities and Social Development (MWCSD). Large amounts of community-level data passes through MWCSD but little of this is captured and analysed systematically. As a result, communities do not have access to lessons learned from interventions implemented by GoS or other development actors. The coordination unit for the Community Development Sector has begun with tracking of village progress against villages' sustainable development plans. However, this tracking does not follow M&E techniques such as measuring progress against baseline data. In addition, the coordination unit is constrained by limited human resources that affect its ability to collect and analyse data. As a result, there is minimal management of knowledge occurring in a coordinated and systematic manner.

148. Reporting between different agencies – e.g. government institutions, development partners, NGOs – is done according to each agency's protocols. The various agencies have separate reporting systems to track project progress. At present, these reporting systems are labour intensive. In addition, current M&E systems track progress achieved in activities through monitoring of project expenditure. There is consequently minimal analysis of information on project results to determine whether the projects are achieving their respective outputs and outcomes. Without detailed knowledge on how projects deliver benefits to communities, ongoing

[46] These assessments include the: i) CPEIR; ii) National Strategy for a Climate-Resilient Samoa; iii) Climate Resilience in Samoa; iv) Capacity Assessment and Enhancement Consultancy; v) Situation Analysis; and vi) Policy, Institutional and Legal Framework for a Climate-Resilient Samoa.

planning and decision-making cannot be based on lessons learned and rely instead on anecdotal evidence.

149. Where information on progress and success of interventions is available, it remains scattered between line ministries, donor agencies and NGOs. While MoF is mandated to coordinate initiatives implemented by line ministries and using donor aid, it experiences difficulties with gathering and managing information from the various sectors. Some projects have contributed towards knowledge management and the establishment of databases for information on climate change. For example, the UNDP-GEF project "Integrating Climate Change Risks in the Agriculture and Health Sectors in Samoa" strengthened the management of climate databases. However, such knowledge management initiatives are not coordinated or centralised. As a consequence, information on climate change adaptation and DRM remains fragmented.

150. The PDNA revealed that there is presently minimal knowledge on the roles that communities can play in contributing towards climate change adaptation and DRM. Rather, there is a misconception that communities should rely on GoS, donor agencies and NGOs to secure their safety. As a result, there are insufficient autonomous initiatives by communities to proactively engage in climate change adaptation. Without awareness raising on the potential and opportunities for communities and individuals to implement DRM initiatives independently, they will remain vulnerable to the expected effects of climate change.

151. The PFMRP is strengthening the overall framework for monitoring and reporting with GoS. This includes linking performance indicators within each sector to development planning and sectoral budgets. Support is being provided for a monitoring framework to enhance linkages between and within line ministries for monitoring performance horizontally as well as vertically. However, the PFMRP Annual Progress Report for 2013 identified gaps in the availability, accuracy and timeliness of data which is reducing the effectiveness of M&E. In addition, there are currently no M&E frameworks that clearly identify progress towards targets and performance indicators for climate change adaptation and DRM. As a result, line ministries are unable to monitor, evaluate and report on progress towards targets for reducing climate vulnerability within the various sectors. Without a systematic M&E framework that details performance on climate change adaptation and DRM, sectoral planning is likely to suffer from implementation gaps as a result of inadequate prioritisation of sectoral needs. The PFMRP will provideUS$10,700,000 as parallel support co-financing to the LDCF project.

With LDCF Intervention (adaptation alternative)

152. The proposed LDCF project will develop a knowledge management strategy to improve access to data and information on climate change for government institutions, particularly MNRE, MWCSD and MoF. These ministries will consequently be better able to plan and budget for climate change adaptation in sectoral budgets and plans. A comprehensive M&E framework will be created to support the coordination of knowledge and information on climate change adaptation. The development of a systematic M&E framework will enable:

- less labour-intensive monitoring;
- greater comparability of results between ministries and initiatives;
- improved tracking of progress at a national level;
- tracking changes in vulnerability to climate change to determine effectiveness of interventions;
- measuring progress on specific interventions to determine the efficiency of implementation;
- cost-benefit analysis of adaptation;
- identification of implementation gaps and additional needs; and
- sustainable and coordinated implementation of adaptation strategies.

153. The M&E framework will form the basis for harmonised reporting on climate change adaptation between government institutions. This would enable: i) less labour intensive monitoring; ii) greater comparability of results; and iii) improved tracking of progress at a national level. Data collected through the framework will be used to prepare the climate expenditure report (see Component 1),

enabling annual monitoring and reporting on efficiency and efficacy of climate expenditure. Monitoring will focus on tracking of concrete and tangible benefits provided by adaptation interventions, rather than progress towards activities and annual expenditure. This will provide lessons learned that will be able to inform future development planning and budgeting for climate change adaptation and DRM.

154. In order to pilot the implementation of the M&E framework, the framework will be used to monitor the progress of the proposed LDCF project. This will follow an experimental design approach to tracking of project results. Benefits accruing from project interventions implemented through Component 2 will be compared with business-as-usual activities elsewhere in the country. In this way, tangible and concrete results will be generated to inform planning and decision-making for climate change adaptation and DRM. These lessons learned will be fed into national and international platforms for knowledge sharing. Project benefits to be tracked include:

- climate-resilience of infrastructure (e.g. reduced maintenance costs);
- protection provided by infrastructure (e.g. reduced losses incurred); and
- improved income from climate-resilient livelihoods.

155. The M&E framework will also feed into a centralised database on climate change adaptation and DRM. This database will build on the databases developed through NAPA projects and other initiatives, providing a central clearing house for information on climate change adaptation. The database will also provide a foundation for improved knowledge sharing. This knowledge sharing will enable government institutions to learn from past activities – both nationally and internationally – on delivery of interventions for climate change adaptation to communities. The knowledge-sharing strategy will feed into the existing GEF regional "Ridge to Reef" project, also implemented by UNDP. The strategy will also be used to guide national awareness raising and inform line ministries on climate change adaptation.

156. The proposed LDCF project will also raise awareness among communities on climate change adaptation and DRM. This will build and community-level capacity to respond to climate change and extreme weather events. Communities will be informed on how to enhance the climate resilience of community assets and livelihoods, based on results and lessons learned from the interventions under Component 2. In particular, the results from the quasi-experimental design pilot to analyse benefits from the livelihood diversification interventions under Output 2.1.3 will be used to inform the knowledge management and awareness raising strategies. Lessons learned from this analysis of project benefits will be carefully documented at various stages during project implementation (see Annex 15). This will provide the basis for detailed analysis and description of the impacts of livelihood diversification on community resilience with specific reference to benefits provided to women and youth. These will be shared nationally – through awareness campaigns – as well as internationally – through the Ridge-to-Reef and other regional initiatives – to contribute to knowledge on best practices for building climate resilience.

Output 3.1.1. Knowledge management strategy developed, including national awareness campaigns and information sharing through existing international platforms and new multimedia platforms

157. Based on the databases developed through the NAPA projects – and in coordination with the work of the Rio+ project – a national climate and disaster risk database will be established by MNRE in collaboration with MoF. This database will be linked to the national M&E framework (see Output 3.1.2) and will provide information on *inter alia*: i) climate change scenarios; ii) expected effects of climate change; iii) international best practices on climate change adaptation and DRM; and iv) lessons learned from national adaptation activities. This will improve the access of government institutions, donor agencies and NGOs to knowledge on climate change risks. Line ministries will consequently be better able to plan and budget for climate change adaptation (supporting work under Component 1 of this project). In addition, awareness campaigns on climate change adaptation and DRM will target village leaders and the general public. "User-

friendly" media – especially video – will translate scientific findings into useful guidance for the general public.

158. The LDCF project will also link with the awareness campaigns to be conducted under the PPCR. MNRE will undertake campaigns to increase public awareness concerning climate change, vulnerability and adaptation. Awareness campaigns will disseminate this information during village meetings, church gatherings and through various media such as radio and television.

159. Data, information and lessons learned will be collated and synthesised for sharing on the national database as well as via regional and international platforms. This will promote regional exchange of best practices on building climate resilience across the Pacific Region. Particularly, lessons learned and best practices of this LDCF project will be shared and linked up with the "Ridge-to-Reef" programme (currently under implementation by UNDP, UNEP, and FAO). It is expected that the results from the quasi-experimental design pilot will generate credible and transparent evidence, which will be analysed and integrated into this and other regional knowledge platforms to increase catalytic leverage of GoS investments (in the context of LDCF adaptation interventions), supporting in this way the sustainability and replication of the livelihoods interventions of the project.

160. Activities will include:

3.1.1.1 Develop protocols for storage and sharing of information/data between government institutions.

3.1.1.2 Establish a national climate and disaster risk database that is centralised and accessible to all Ministries.

3.1.1.3 Develop and pilot plan for systematised uploading and monitoring of data and information generated by adaptation projects in Samoa (particularly taking into account results from the quasi-experimental design) onto regional and international platforms such as the Ridge-to-Reef programme.

3.1.1.4 Conduct awareness campaigns on water resources, land management, village development, climate change adaptation and DRM.

Output 3.1.2. M&E system established to strengthen institutional coordination and enhance the effectiveness of the interventions on adaptation with an economy wide approach.

161. A standardised M&E framework will be established by MNRE in collaboration with MoF to support harmonisation of reporting systems between government institutions as well as the private sector, NGOs, CSOs and villages. The national M&E framework will feed into the national climate database (Output 3.1.1) as well as the biennial climate expenditure report (Output 1.2.1). This would enable: i) less labour intensive monitoring; ii) greater comparability of results; and iii) improved tracking of progress at a national level. Consequently, the mainstreaming of climate change adaptation into sectoral and development planning will be based on up-to-date information on national adaptation activities.

162. Activities will include:

3.1.2.1 Review current M&E systems to identify best practices and opportunities for standardisation of reporting modalities.

3.1.2.2 Establish a national M&E framework with guidelines for collecting, analysing and reporting of data on water resources, land management, village development, climate change adaptation and DRM.

3.1.2.3 Develop a standardised reporting modality to enable harmonised monitoring, evaluating and reporting of expenditure and progress of interventions for climate change adaptation.

2.5. Key indicators, risks and assumptions

2.5.1 Indicators

163. Indicators for the proposed LDCF project were developed in line with UNDP's Strategic Plan and UNDP's "Monitoring and Evaluation Framework for Climate Change Adaptation". In addition, project indicators were aligned with the LDCF Adaptation Monitoring and Assessment Tool (AMAT). The Project Results Framework in Section 3 details indicators, baselines, targets and sources of verification at the Objective and Outcome level. These indicators will be used to track progress in achieving project Outcomes. Baseline values for these indicators will be collected within the first six months of project implementation.

164. At the level of the **Project Objective**, the indicators are as follows:
- Increased capacity within GoS for coordination of cross-sectoral actions for climate change adaptation, including planning, budgeting, implementing and monitoring and evaluating.
- Integration of climate change adaptation and DRM into the Strategy for the Development of Samoa 2017–2021.

165. The Outcome-level indicators are described below.

Outcome 1.1: Policies Strategies/Institutional Strengthening.
- Sector plans that include specific budgets for adaptation actions [adapted from AMAT 1.1.1].
- Formulation and endorsement of National Climate Change Adaptation Strategy.

Outcome 1.2: Public finance management at the national and village level.
- Increase in number of community-managed projects for adaptation to climate risks.
- Improved monitoring of government expenditure on climate change adaptation.

Outcome 2.1: Protection of communities' physical assets and livelihoods.
- Number of people benefitting from improved flood management through implementation of hard and soft measures for protection of community assets. [AMAT 1.2.15].
- Number of people with increased income – compared to the control group – as a result of diversified livelihood practices and more secure access to livelihood assets, disaggregated by age and gender.
- Number of people adopting household-level processing facilities transferred to targeted groups – disaggregated by age and gender [adapted from AMAT 3.1.1].

Outcome 2.2: CCA/DRM plans and implementation.
- Number of villages covered by Village Disaster Risk Management plans to reduce risks of and respond to climate variability [adapted from AMAT 2.2.1].

Outcome 3.1: Knowledge about CCA and DRM is captured and shared at the regional and global level.
- Increased capacity of government staff to access information on climate and disaster risks as well as M&E on climate change adaptation.

2.5.2 Risks and assumptions

166. Risks and assumptions are outlined in the table below. For the full risk log, see Annex 14.

Description	Type	Impact & Probability	Countermeasures / Management Response	Assumptions
Poor coordination with AF and PPCR projects reduces opportunities for collaboration and alignment with interventions under	Operational & Strategic	P = 2 I = 2	Develop strong coordination arrangements between LDCF project and AF/PPCR projects. Use common members of Project Board (PB) and Technical Advisory Team (TAT) to coordinate workplans	Constant coordination between projects ensures continuous progress that is complementary and aligned.

LDCF project.			and procurement processes. Ensure regular communications of updates between project boards.	
Delays in progress of baseline projects prevent implementation of interventions under LDCF.	Operational & Strategic	P = 2 I = 2	Ensure regular communication of targets and workplans between LDCF and baseline projects. When delays seem imminent, PB members to advocate for accelerating processes or design alternative strategies to deliver on outputs.	Constant coordination with baseline projects ensures that LDCF project can build on on-going initiatives.
High staff turnover affects project implementation.	Operational	P = 3 I = 4	Explore a partnership between the University of the South Pacific, the Secretariat of the Pacific Community and GoS, whereby national students or new graduates can be fast-tracked into working in the project in the case of staff turnover. These students could join the project as interns or on a time-bound entry-level contract. This will not only directly contribute to the project implementation capacity, but also help build a pool of young professionals who can contribute towards future initiatives in the environment space.	Low rates of staff turnover and proper handover procedures ensure continuity. Mechanisms for recruiting new staff quickly will minimise delays.
Community participation decreases as benefits of adaptation measures and project interventions are not immediately evident.	Organisational	P = 3 I = 4	Maintain constant communication with communities concerning project progress, targets and expected benefits. Implement tangible and visible activities to address community priorities early during project implementation. Manage community expectations to ensure that they are aligned with project scope. Disseminate project findings and lessons learned through appropriate media to maintain project profile and positive community perception.	Constant communication and management of expectations ensures continuous community involvement throughout planning and implementation.
Competing mandates and poor coordination between government agencies/line ministries disrupt project activities.	Political	P = 2 I = 3	Continuously inform policy- and decision-makers of project aims and potential synergies with other projects as well as on-going government initiatives. Demonstrate links between on-the-ground implementation and policies/strategies, with particular reference to contributions to relevant mandates of line ministries. Engage with relevant Sector Coordination Units to ensure alignment of project with sectoral priorities.	Proper coordination between government agencies enhances and sustains project progress that is aligned with sectoral adaptation priorities. MNRE Climate Change Unit and MoF-CRICU will ensure a programmatic approach and coordination of adaptation work.
Disaster events/ hazards destroy or	Environmenta	P = 2	Maintain contact with Met Office to ensure adequate lead time when	Adequate monitoring of potential risks ensures that

delay project interventions.	l	I = 4	disaster is imminent. Schedule project activities during low storm risk periods to reduce likelihood of extreme climate events. Monitoring potential extreme events and ensure coordination of preparation and responses with the national DRM framework.	impacts of these risks are mitigated.
Land disputes amongst community members hamper implementation of adaptation interventions.	Organizationa l	P = 1 I = 4	Ensure adequate consultation with targeted communities throughout planning, design and implementation of project interventions. Maintain strict adherence to approved national practices concerning community involvement. Ensure that project activities are aligned with community priorities in a culturally and social responsible manner.	Socially sensitive approaches to project activities that are in line with approved national practices will prevent land disputes from arising.
Limited human resources in government ministries and agencies delay project activities.	Operational	P = 1 I = 3	Adequately resource the PMU including the securing of positions to be recruited for key technical support. Ensure alignment with PPCR/AF technical assistance. Monitor project processes to identify limitations timeously and allow for alternatives to be implemented.	Human resources in government ministries and agencies will be sufficient to ensure successful implementation of project activities.
Project interventions are not implemented in a gender- and culturally-sensitive manner.	Operational	P = 2 I = 4	Ensure that project team is sensitised to gender and cultural sensitivities. Involve women committees and traditional authority structures in planning and implementation of project activities.	Involvement of women committees and traditional authority structures will ensure gender and cultural sensitivity of project interventions.
Insufficient political and financial support from line ministries and other government departments/ agencies.	Political	P =2 I = 2	Consistently reinforce the importance of adherence to agreed-upon roles and responsibilities for project progress. Update governmental decision-makers of project progress in order to garner high-level support and political will.	Adequate political and financial support contributes to successful implementation of project interventions.
Communities and governmental stakeholders don't distinguish resilience to climate change from baseline weaknesses.	Operational	P = 1 I = 2	Maintain proactive outreach communications strategy for duration of programme, including tailored awareness raising activities linked with the assessment, consultation and planning of adaptation interventions.	Awareness-raising of communities allows them to perceive adaptation benefits of project interventions.
Unanticipated social and/or environmental impacts are caused by project activities.	Strategic	P = 1 I = 4	No interventions will be implemented unless they have adequate measures for mitigating social and environmental impacts. Constant monitoring of design/planning to ensure adequate mitigation measures are included.	Proper design and planning of project interventions will mitigate social and environmental impacts.

2.6. Cost-effectiveness

167. The proposed LDCF project has been designed with an inherently cost-effective approach. The project objective is to enhance integration of climate change adaptation and DRM into development sectoral planning as well as enhancing the resilience of communities to climate change. The project will implement measures that have been shown to be cost-effective in reducing vulnerability to climate change. These measures include: i) building capacity for integration of climate risks into planning across all sectors; ii) strengthening the climate resilience of community assets and livelihoods; iii) investing in disaster prevention and preparedness; and iv) enhancing knowledge management and awareness of climate change risks and adaptation. Alternative approaches to reducing climate vulnerability were considered during the design of the proposed LDCF project. An evaluation of their cost-effectiveness vis-à-vis that of the interventions proposed in Section 2.4 is described below.

Cost-effectiveness of policy-level interventions

Alternative: Continued focus on vulnerabilities of individual sectors to climate risks

168. This approach – as characterised by the implementation of various NAPA projects in Samoa – is aimed at reducing climate risks in the short term. The various government agencies would implement interventions based on their respective mandates[47]. However, the expected effects of climate change in Samoa are likely to result in cross-sectoral impacts that would require a more integrated approach to prevention and management. For example, flooding as a result of tropical cyclones will have wide-spread implications for agriculture, infrastructure, health, water resource management, energy and transport. Facilitation of an economy-wide approach to reducing climate vulnerability will promote more sustainable and efficient management of climate risks. This would also build on the strengths of MoF's role in coordinating policy and planning across all sectors through implementation of the SDS 2012–2016. For these reasons, the actions proposed under Outcome 1.1 – relating to strengthening of national policies and institutions – and Outcome 3.1 – relating to knowledge management and M&E – have been designed to promote cross-sectoral planning for climate change adaptation. In addition, the actions proposed under Outcome 2.1 will coordinate the building of climate resilience across a number of sectors including water, housing, sanitation, agriculture and manufacturing. This economy-wide approach will allow GoS to address national priorities for climate change adaptation across all sectors in the short-, medium- and long-term.

Cost-effectiveness of proposed flood protection measures

Alternative: Implementation of exclusively hard adaptation measures for flood risk management

169. This approach would only implement "hard" infrastructure – such as dykes, levees and sea walls – to reduce the risks of floods resulting from tropical cyclones. Under this option, such infrastructure measures would be built in Apia where flood damages during the recent Cyclone Evan were greatest. However, this approach was rejected for various reasons. Firstly, hard adaptation measures are considerably more expensive and riskier than softer measures such as ecosystem management- based measures. During the development of this project proposal, a potential alternative plan for implementation of exclusively hard infrastructure in Apia only, was budgeted at US$ 12 million by LTA (*not counting* feasibility studies, nor EIAs). This plan would have accounted implementation only in the lower watershed (mainly roads, bridges, and rockwalls) and would consequently reach fewer beneficiaries. After several consultations, it was recommended (and

[47] E.g. DMO for village disaster plans, LTA and PUMA for flood protection infrastructure, WRD for water resource management and MAF for agriculture.

agreed by GoS) that thorough feasibility studies are performed first, stemmed from the recommendations of an Integrated Watershed Management Plan. The IWMP would use a ridge-to-reef approach so as to reduce transfer of risk up- or down-stream. This approach would not only take into account upstream and downstream measures, but also soft, ecosystem-based adaptation measures. Budget was significantly reduced while still accounting for feasibility studies and further cost-benefit analysis of the options presented in the IWRM. The IWRM is intended to propose a mix of hard and soft adaptation measures that would be thoroughly assessed and costed as part of its design. Second, hard measures often have a focus on preventing damage from disaster events rather than reducing the risk of disaster events occurring. Such adaptation measures will reduce both the risk of disaster events occurring as well as the impact of such events if they do occur. The proposed design will see upstream implementation of hard and soft measures such as reforestation and construction of check dams of degraded catchments to reduce the risk of floods to at least 12,000 beneficiaries. Along with this, the project will support implementation of downstream interventions such as diversion channels and riverbank stabilisation to protect economic infrastructure and community assets. This blended approach using both hard and soft adaptation measures is expected to prove less costly and provide protection to more beneficiaries than the exclusive implementation of hard infrastructure

Alternative: Nation-wide implementation of measures for flood risk management

170. This approach would see hard and/or soft measures for adaptation through flood risk management being implemented across various districts and in various catchments across Samoa. Such a design would see greater geographic coverage of the proposed interventions. However, this approach was precluded in preference to design and implementation of adaptation measures for flood risk management only in the Greater Apia area. This is because the population of the Greater Apia area constitutes ~20% of the population of the entire country[48]. In addition, loss-and-damages caused by Cyclone Evan in the Greater Apia area were 10 times greater than those occurring in all but four of the districts in Samoa[49]. Finally, most of Samoa's economically important infrastructure occurs within the Greater Apia area. Examples of this infrastructure and the effects of flooding are described below.

- *Apia Harbour*. The harbour was temporarily closed as a result of debris such as tress and logs as well as sedimentation washed into the harbour during Cyclone Evan. The harbour is a critical link between the islands of Upolu and Savai'i and is one of the best-performing ports in the Pacific region.
- *Alaoa Dam*. This dam provided both drinking water and hydro-electric power prior to Cyclone Evan. However, the capacity of the dam to provide these services was compromised by logs and trees blocking the dam as well as the destruction of the water supply pipes. This had severe impacts on the quality of life of Samoans immediately after Cyclone Evan.

The high proportion of Samoa's population living in the Greater Apia area and the concentration of critical economic infrastructure in Apia make it more cost-effective to focus on implementation of flood protection measures here rather than spreading such measures across a number of districts.

Cost-effectiveness on proposed livelihood diversification measures

Alternative: Crop insurance against climate risks

Crop insurance was identified as a potential solution to compensate farmers against losses incurred owing to climate-induced natural disasters. However, such insurance mechanisms are reliant on inter alia: i) comprehensive climate monitoring systems that are explicitly linked to crop yields; ii) the ability of farmers to pay insurance premiums; and iii) the willingness and ability of government to subsidise insurance premiums. The implementation of such an insurance scheme

[48] Samoa Bureau of Statistics. 2011. *Population and Housing Census.*
[49] GoS. 2013. PDNA. *Post-disaster Needs Assessment: Cyclone Evan 2012.*

was deemed unfeasible for Samoa. Firstly, there is insufficient capacity for climate monitoring and linking this directly to crop yields to inform if/when insurance pay-outs should occur. Secondly, the majority of farmers in Samoa are subsistence farmers with very low levels of income. As such, they would be unable to service insurance premiums and would consequently be unable to participate in insurance schemes. Finally, the GoS is not able to subsidise insurance premiums to the extent required to implement such a scheme. This is compounded by the relative immaturity of the Samoan insurance industry that would make it difficult to obtain the requisite re-insurance to render such a scheme viable. Based on this analysis, it was decided to instead focus the alternative livelihoods component on the development of business incubators through the creation of sustainable and resilient value chains for agricultural and handicraft products. This would allow farmers to increase savings and/or further invest in productive assets, thereby strengthening their capacity to recover autonomously from eventual climate shocks. As there is no financial barrier to participation – i.e. no insurance premiums – this approach is expected to reach more beneficiaries. A total of 300 beneficiaries will receive support for agricultural livelihoods and a further 300 beneficiaries will receive support for handicraft livelihoods.

171. Further general considerations for the cost-effectiveness of some of the proposed LDCF project's interventions are described below.

Cost-effectiveness of protection of infrastructure[50]

172. Strengthening of disaster preparedness measures have proven to be more cost-effective when compared to disaster response and reconstruction activities[51,52]. For example, the inclusion of disaster-resilient features in the design of new construction projects is estimated to increase construction costs by 1%. In comparison, the cost of repair and reconstruction of damage caused by climate-induced natural disasters is estimated to be 35-40% of total construction costs[53]. A case study of the damage caused by Hurricane David (1979) showed that losses totalling ~4.2% of construction cost could have been avoided by investing an additional 1.9% of original construction costs in climate-resilient measures[54].

173. The LDCF project will implement measures for integrated watershed management to reduce risks posed by flooding in the Greater Apia area. According to the PDNA (2012), the total cost of damage and losses from Cyclone Evan was estimated at US$203 million which equates to more than a quarter of the country's GDP. This included damage to physical assets totalling ~US$ 103 million as well as production costs and losses of an additional ~US$ 100 million. Without implementation of appropriate counter-measures for such climate risks, economic assets are threatened by damage critical infrastructure while resources are likely to be diverted away from development spending – such as health and education – towards disaster response and reconstruction efforts. This project will reduce such risks by protecting critical economic and community assets from climate-induced disasters. This will include upstream, "soft" interventions to address the root causes of vulnerability. There is growing evidence of the cost-effectiveness of such investments[55]. An economic analysis of adaptation measures compared the costs and benefits of "soft" interventions, "hard" interventions and a combination of both approaches. The analyses demonstrated that "soft" interventions are twice as cost-effective as "hard" interventions

[50] For more information on the costs and benefits involved, see Annex 6.
[51] Kellett, J. &Peters, K. 2013. *Dare to prepare: Taking risk seriously*. Overseas Development Institute.
[52] Shyam, K.C. 2012. *Cost Benefit Studies on Disaster Risk Reduction in Developing Countries*. EAP DRM Knowledge Notes. Working Paper Series No. 27.
[53] Pereira, J. 1995. *Costs and Benefits of Disaster Mitigation in the Construction Industry*. Caribbean Disaster Mitigation Project. Available at http://www.preventionweb.net/files/1177_CDMPCostsandBenefits.pdf. Accessed on 12 Dec 2013.
[54] Vermeiren, J., S. Stichter, and A. Wason. 2004. *Costs and Benefits of Hazard Mitigation for Building and Infrastructure Development: A Case Study in Small Island Developing States*.
[55] Jones, H.P., D. G. Hole & E. S. Zavaleta. 2012. Harnessing nature to help people adapt to climate change. *Nature Climate Change* 2: 504-509.

(benefit-to-cost ratios of US$10.50 versus US$4.80), while strategies that combined these approaches were likely to reduce losses resulting from disaster by 25% with a benefit-to-cost ratio of US$4.30–8.00[56].

174. Investments into project interventions will contribute to safeguarding long-term socio-economic development. In particular, critical economic as well as household infrastructure will be protected from climate-induced disaster events. Improved management of watersheds in the Greater Apia area will reduce the vulnerability of major transport corridors – such as the east–west corridor over the Leone Bridge – and other commercial links to climate risks. This will enhance the resilience of economic activity by maintaining connectivity and access to markets. In addition, it will enhance the safety and welfare of communities as they will have improved access to government services such as health care and support for post-disaster recovery. As detailed in the Samoa Infrastructure Vulnerability Assessment Report (Annex 6), the design of flood-protection measures derived from the recommendations in the IWMP will have to include an appropriate cost-benefit analysis before any construction activity is conducted.

Cost-effectiveness of strengthening value chains

175. Supporting growth in the agricultural sector has been shown to be more than twice as effective in poverty alleviation when compared to growth in other sectors[57]. Investments in agriculture are more cost-effective for increasing household-level income than comparable investments in roads and other infrastructure[58]. Supporting value chains – agricultural and otherwise – will improve efficiency and strengthen linkages between producers, processors and buyers. This more efficient organisation of value chains will allow greater benefits to accrue to primary producers, while at the same time improving reliability and quality of supply to buyers and consumers. Analysis of value chains will link suppliers to markets and strengthen the ability of the suppliers to produce commodities according to exact product specifications. Raising the productivity and income of value chain actors will allow producers to develop high-return production systems and use their livelihood assets more optimally. Consequently, small-scale producers will have greater capacities for increasing the amount of produce they can supply at the requisite levels of quality. Where quality of products is of particular concern, improved access to processing technology provides a cost-effective means for compensating[59] as processors are able to supply final products rather than raw materials. For these reasons, strengthening of value chains is considered to be one of the most effective approaches for addressing poverty[60].

176. A “rapid economic diagnosis” of the agriculture sector in Samoa was conducted, as part of the project preparatory phase (see Annex 10), to better inform the approach selected to introduce alternative livelihoods. The diagnosis revealed the need and opportunity for strengthening value chains supported by new technologies to promote income generation from agricultural products. It was stated that in the absence of incentives to produce surplus for the market, prevailing circumstances have induced households to gear production towards meeting the subsistence needs of the family unit, in particular if there is cash available from remittances. The prevailing low level of technology compounded by the limited availability of credit may have consolidated both the atomization of market participation and the fragmentation of land use. The overall result has been the amplification of agricultural holdings into operations geared towards home consumption

[56] Rao N.S. *et al*. 2013. *An economic analysis of ecosystem-based adaptation and engineering options for climate change adaptation in Lami Town, Republic of the Fiji Islands*. SPREP Technical Report. Apia, Samoa.
[57] Ligon, E. & Sadoulet, E. 2007. *Estimating the Effects of Aggregate Agricultural Growth on the Distribution of Expenditures*. Background Paper for the World Development Report.
[58] Oehmke, J.F. 2012. *Impacts of USAID-supported Agricultural Programs on Household Income Growth and Cost-Effectiveness for Poverty Reduction*. USAID Policy Brief.
[59] World Bank. 2008. *Growth and poverty reduction in agriculture’s three worlds.* World Development Report 2008: Agriculture for Development.
[60] Devaney, P.L. 2011. *Global Agricultural Value Chains: Sustainable Growth as a Means for Sustainable Development*. Community Development Investment Review, Federal Reserve Bank of San Francisco.

alone. Hence, GoS has recognized the need to address the gap in promoting income-generating activities for households based on diversification of agricultural products.

2.7. Sustainability

177. Adaptation interventions promoted by the project will be mainstreamed into main policy instruments and legislative platforms to enable project results to be sustained beyond the lifetime of the project. Sustainability has been built into the project approach by emphasising institutional and individual capacity development.

178. The focus on improved planning and decision-making on climate change (Outcome 1.1) as well as strengthened PFM management for adaptation (Outcome 1.2) will strengthen GoS' capacity to plan for and implement measures for climate change adaptation in the medium- to long-term. These outcomes thus inherently contribute to sustainability of project activities by mainstreaming climate change adaptation – including practical measures implemented in this project – into national policies, strategies and plans on an ongoing basis.

179. The project's sustainability will be secured through the strengthened institutional structures and public-private partnerships that will be supported through the policy and related capacity-building processes. This cross-sectoral approach includes: i) climate resilient development planning; ii) protection of community assets and livelihoods; and iii) enhanced capacities for climate change adaptation at the national and local level. For example, livelihood enhancement at the household level and implementation of VDRMPs can be replicated in communities outside of those within which the project will be active. The South-South transfer of knowledge proposed under Outcome 3.1 will serve as vehicle to replicate project experience beyond Samoa, while also strengthening national M&E to inform local replication of project experience within the country.

180. The proposed adaptation interventions aim at safeguarding the main livelihoods and physical and environmental assets of communities, and associated value chains from climate-induced risks and hazards. Climate change adaptation in communities can only be tackled through integrated approaches, because it is based on location-specific assets and activities using natural and cultural resources. Therefore, the implementation of these activities will be closely linked to each other, as they will take place in highly vulnerable and exposed areas. To address climate change and environmental concerns in an integrated way, linkages will be explored during the project development phase with other relevant initiatives.

181. Through supporting livelihoods and income-generating opportunities, communities will have access to more financial capital. Supported by strong capacity-building and specific training, these activities will help create a sustainable and virtuous cycle whereby households with greater income re-invest these funds into their livelihoods e.g. through purchase of new productive assets. This virtuous cycle is likely to be sustainable in the long-term, as continual re-investment into livelihoods will lead to further improved income that can again be invested or used for other socio-economic outcomes such as health care, education and improved nutrition.

182. Project resources will be used to systematically capture, analyse and disseminate experience and best practices, from early stages of community engagement and policy-related work.

183. The best practices and lessons learned from this project – which will be uncovered by tracking and measuring the positive effects of the project – will be communicated to the Ridge to Reef regional programme. Consequently, the investments in this project will not only be replicated in other SIDS in the region, but will also catalyse further investments that will help scale up this nationwide approach. In particular, the results from the quasi-experimental design pilot to analyse benefits from the livelihood diversification interventions (see Output 2.1.3) will be used to develop best practice guidelines. Lessons learned from will provide the basis for detailed documentation of the impacts of livelihood diversification on community resilience with specific reference to benefits

provided to women and youth. These will be shared nationally – through awareness campaigns – as well as internationally – through the Ridge-to-Reef and other regional initiatives – to contribute to current knowledge on building climate resilience.

2.8. Replicability

184. The proposed LDCF project is undertaking several different approaches to promoting climate resilience within Samoa. There is therefore considerable potential for replication throughout the country.

185. The close involvement of government institutions and departments in the project's development and implementation promises potential for future incorporation of its approaches into on-going planning and strategies. Additionally, it is expected that the strengthening of capacities among main government stakeholders will enable continued mainstreaming of climate considerations into sectoral planning and decision-making.

186. Furthermore, the extensive training and capacity building of local communities and technical staff regarding adaptation interventions – such as climate-resilient infrastructure and diversified livelihood options – will aligned future activities that are climate-resilient as demonstrated by this project's adaptation interventions. In so doing, project interventions are more likely to be replicated and/or upscaled.

187. After development of an integrated WMP for all watersheds in the Greater Apia area, hard and soft flood protection measures will be implemented within the Vaisigano watershed. Lessons learned from the implementation of these measures will allow for replication of these approaches in the other watersheds in the Greater Apia area, as well as watersheds across the rest of the country. The interventions in this project can therefore serve as a model for future national adaptation projects. In addition, the interventions described here offer potential for replication in other SIDS that suffer from the same climate change impacts, *viz.* increased risk of floods associated with more severe storm events. The project will share lessons learned through the Ridge-to-Reef programme, which will create opportunities for replication across the Pacific region.

188. There is also potential for replication of the livelihood diversification interventions both national and internationally. These interventions may be quite easily replicated in other villages within Samoa with relatively small investment, especially since such interventions will be implemented through experienced national NGOs. Such replication would be able to build on and leverage from ongoing initiatives supported by GoS and WIBDI to enhance the livelihoods of agriculturally active households as well as those involved in handicraft production. There is similarly potential for replication in other SIDS in the region through the sharing of lessons learned through the Ridge-to-Reef network.

2.9. Stakeholder involvement plan

189. Stakeholders at both national and local levels will be engaged during implementation of the proposed LDCF project. During the validation mission, the plan for stakeholder engagement during project implementation was discussed and agreed upon during bilateral consultations and one-on-one meetings with relevant stakeholders as well as during the validation workshop, as presented in Table 4.

Table 2. Relevant partners and stakeholders identified for engagement by project outcome/output.

Outcome	Output	Stakeholder	Key Responsibilities
Outcome 1.1. *Policy Strategies/Institutional Strengthening*	**Output 1.1.1.** Climate change adaptation mainstreamed into development plans and	MNRE MoF Sector	Integrate climate change into sector plans and budgets. Develop National Climate Change Adaptation

	sectoral strategies	coordination units Other line ministries	Strategy. Align Strategy for the Development of Samoa (2017-2021) with the National Climate Change Adaptation.
	Output 1.1.2. Institutional and operational frameworks for coordination of climate change adaptation strengthened	MNRE MoF	Coordinate climate policy-making, planning, and implementation. Stocktake current and planned climate change adaptation projects, plans, reports and assessments. Establish Climate Change Unit. Develop guidelines for CRICU functions.
Outcome 1.2. *Public finance management at the national and village level*	**Output 1.2.1.** MOF and MNRE climate change units – as well as the private sector, NGOs and village governance structures – have enhanced capacity to manage climate finance	MoF MNRE CSOs/NGOs (e.g. SUNGO)	Develop guidelines for community management of climate change projects. Train communities on managing finances for climate change. Develop guidelines/toolkits methodology for biennial analysis of climate expenditure. Produce three reports on climate change expenditure.
Outcome 2.1.*Protection of communities' physical assets and livelihoods*	**Output 2.1.1.** Integrated Watershed Management Plan for Greater Apia following "Ridge-to-Reef" approach.	MNRE MWCSD LTA Other ministries	Develop an integrated management plan for the Greater Apia area. Design flood protection measures to build resilience of communities.
	Output 2.1.2. Hard and soft measures for protection of community assets	MNRE MWCSD LTA	Build flood protection infrastructure along Vaisigano River. Implement ecosystem-based approaches to watershed management. Reconstruct community assets following "build-back-better" approaches.
	Output 2.1.3. Sustainable micro-enterprises for youth and women on agro-businesses with a sustainable and resilient value chain approach to promote diversified livelihoods.	Private sector CSOs/NGOs (e.g. WIBDI, SROS)	Assess agricultural and handicraft value chains. Train women and youth on technical skills for agricultural and handicraft value chains. Provide planting materials and household processing facilities.
Outcome 2.2. *CCA/DRM plans and implementation*	**Output 2.2.1.** Building on the work of DMO, village plans designed and implemented to develop the capacities of 100 communities to prepare, respond, recover and manage CC risks	MNRE MWCSD CSOs/NGOs (e.g. Red Cross)	Conduct household surveys and analyse data to map vulnerability to climate risks. Develop and implement Village Disaster Risk Management Plans.
Outcome 3.1. *Knowledge about CCA and DRM is captured*	**Output 3.1.1.** Knowledge management strategy developed, including national	MNRE MWCSD	Develop protocols for storage and sharing of information/data. Establish national climate and disaster risk

and shared at the regional and global level.	awareness campaigns and information sharing through existing international platforms and new multimedia platforms (feeding into R2R programme)		database. Pilot plan systematised uploading and monitoring of data and information. Conduct awareness campaigns on water resources, land management, village development, climate change adaptation and DRM.
	Output 3.1.2. M&E system established to strengthen institutional coordination and enhance the effectiveness of the interventions on adaptation with an economy wide approach	MNRE MoF	Establish national M&E framework for water resources, land management, village development, climate change adaptation and DRM. Develop a standardised reporting modality to enable harmonised monitoring, evaluating and reporting on climate change adaptation.

2.10 Explain compliance with UNDP Safeguards Policies

190. The UNDP environmental and social safeguard requirements have been followed in the development of the proposed LDCF project. As outlined below, the project is expected to have predominantly positive environmental and social impacts. Where the potential for negative effects exists, adequate provision has been made to plan for appropriate mitigation actions.

191. The LDCF project does include activities that support upstream planning processes. However, the envisaged revisions that will be proposed to national policies and strategies are unlikely to have negative environmental or social impacts. On the contrary, the project will have positive environmental and social impacts by influencing policies and strategies for climate-resilient development planning.

192. The protection of communities' assets and livelihoods – proposed under Outcome 2.1 – will involve the construction of infrastructure to reduce the risk posed by climate-induced disasters. The proposed infrastructure has the potential to affect natural resources negatively. For example, construction of flood protection infrastructure may lead to changes in hydrology and river functioning. As a consequence, the LDCF project will develop detailed plans for watershed management and flood protection measures under Output 2.1.1 prior to construction. This comprehensive planning will include vulnerability and adaptation assessments, gap analysis, feasibility plans, cost-benefit analyses, environmental impact assessments and social impact assessments that will guide the design of infrastructure that will mitigate any potential negative effects. The planning will include extensive consultations with local communities to ensure that interventions maximise social and environmental benefits as well as minimise social and environmental costs. On the basis of these plans, all potential negative impacts will be adequately mitigated during implementation.

193. Construction of flood protection infrastructure could result in increased settlement in areas where the infrastructure has reduced hazard risk. The potential environmental and social effects associated with this will be assessed during the development of the integrated watershed management plan and the design of the flood protection infrastructure. Appropriate mitigation responses for any negative impacts will be clearly elaborated by the implementing partner in consultation with UNDP during the design and implementation of proposed interventions.

194. The integrated watershed management plans developed under Output 2.1.1 will guide the implementation of ecosystem-based approaches to watershed management that will further reduce the risks posed by climate-induced disasters. These measures will *inter alia* stabilise soil, improve water infiltration and restore natural vegetation. This will have a positive effect on the

natural resources and hydrological functioning. The watershed management plans will be based on international best practices and are consequently expected to have positive effects on natural resources and local communities. In addition, the proposed interventions will not increase pollution or greenhouse gas (GHG) emissions. Instead, interventions are likely to increase aboveground biomass – because of the restoration of watershed slopes – and will consequently reduce GHG emissions.

195. Reconstruction of community assets following the "build-back-better" principle will also be informed by the integrated watershed management plan. This plan will be based on community consultations that will identify at-risk communities and physical assets. Reconstruction of community assets will take place outside of hazard zones so that communities can relocate away from areas that will be impacted by climate risks. Local communities will be fully involved in decision-making and implementation of interventions for reconstruction of community assets. This will include stakeholder meetings and other forms of community consultations. A strategy to solve land disputes that may arise among village members will be implemented following the standard practices of the Government of Samoa, which has experience in dealing with such concerns

196. The LDCF project focuses on gender equality and the use of a community-based approach. Consequently, project interventions are community-centred and gender-sensitive to promote social equity and equality. Consultation with community groups – including women and youth – will ensure that interventions take place in a culturally-appropriate manner. Benefits for local communities include *inter alia*: i) reduced vulnerability of communities to natural disasters; ii) positive effects on health; and iii) improved livelihoods. Consequently, the project is expected to have positive socio-economic effects.

197. Communities may not initially perceive benefits of the application of climate sensitive adaptation measures and planning processes. Consequently, indigenous groups will receive training and sensitisation on the inclusion of climate resilience and DRM in village development processes. This will build communities' capacity to identify and prioritise measures for climate change adaptation for implementation through support provided by this project as well as other on-going initiatives in Samoa.

198. The support of micro-businesses has been designed to safely integrate women into decision-making, implementation and monitoring phases of the project. This entails development of diversified livelihoods that will cater specifically to the needs of women through its complementarity with the work undertaken by the Women in Business Development initiative

199. The design and implementation of VDRMPs will be based on extensive engagement with local communities. Household surveys will be conducted to identify vulnerabilities and design counter-measures to enhance resilience. Community members will also be trained on the implementation of these plans. In this way, the interventions will be sensitive to the socio-cultural context of each community. The implementation of Village Disaster Management Plans will focus on the specific needs of women and other vulnerable groups (e.g. the elderly, people with disabilities).

200. In summary, the proposed LDCF project is expected to have largely positive effects on the environment and local communities. Where the potential for negative effects are anticipated, adequate mitigation measures will be included through the development of comprehensive plans based on environmental and social impact assessments.

3. Project Results Framework

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: ***Outcome 3.1.1:****National capacities and institutional mechanisms strengthened for effective disaster response; plans in place capturing community and CSO participation*

Country Programme Outcome Indicators: *Strengthening Gender Responsive Disaster Risk Reduction and Mitigation Programmes in Communities and Amongst Civil Societies.*

Primary applicable Key Environment and Sustainable Development Key Result Area: *3. Promote climate change adaptation.*

LDCF Strategic Objective and Program: **LDCF Climate Change Adaptation**
CCA-1*: Reducing Vulnerability: Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level.*
CCA-2*: Increasing Adaptive Capacity: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level.*
CCA-3*: Adaptation Technology Transfer: Promote transfer and adoption of adaptation technology.*

LDCF Expected Outcomes:
Outcome 1.1: *Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas.*
Outcome 1.2*: Reduced vulnerability in development sectors.*
Outcome 2.2*: Strengthened adaptive capacity to reduce risks to climate-induced economic losses.*
Outcome 3.1*: Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas.*

LDCF Outcome Indicators (AMAT):
Indicator 1.1.1: *Adaptation actions implemented in national/sub-regional development frameworks.*
Indicator 1.2.15: *% of targeted population benefitting from improved flood management through implementation of hard and soft measures for protection of community assets.*
Indicator 2.2.1*: No. and type of targeted institutions with increased adaptive capacity to reduce risks of and response to climate variability.*
Indicator 3.1.1*: % of targeted groups adopting adaptation technologies by technology type (% disaggregated by gender).*

	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
Project Objective[61]: Establishment of an economy-wide approach to climate change adaptation in Samoa, aimed for efficient integration and management of adaptation and DRM into national development planning and programming and enhancing the resilience of communities' physical assets and livelihoods across Samoa, to climate change and natural disasters.	1. Increased capacity within GoS for coordination of cross-sectoral actions for climate change adaptation, including planning, budgeting, implementing and monitoring and evaluating. 2. Integration of climate change adaptation and DRM into the Strategy for the Development of Samoa 2017–2021.	1. Capacity for national coordination of climate change adaptation and DRM is presently limited (Level 3: Partially developed capacity). 2. Integration of climate change adaptation and DRM in the Strategy for the Development of Samoa 2012–2016 is limited.	1. By the end of the project, GoS will have sufficient capacity for effective coordination of cross-sectoral actions for climate change adaptation (Level 5: Fully developed capacity). 2. The Strategy for the Development of Samoa 2017–2021 will include key performance indicators for climate change adaptation for outcomes relating to agriculture, community development, water and sanitation, transport and climate and disaster resilience.	1. Capacity scorecard assessment of officials within the MoF-CRICU and MNRE-Climate Change Unit at MTR and FTE. 2. Endorsed Strategy for the Development of Samoa 2017–2021 that includes climate change adaptation/DRM.	Risk: Competing mandates and poor coordination between government agencies/line ministries disrupt project activities. Assumption: Proper coordination between government agencies enhances and sustains project progress that is aligned with sectoral adaptation priorities. MNRE Climate Change Unit and MoF-CRICU will ensure a programmatic approach and coordination of adaptation work. Risk: Limited human resources in government ministries and agencies delay project activities. Assumption: Human resources in government ministries and agencies will be sufficient to ensure successful implementation of project activities.

[61] Objective (Atlas output) monitored quarterly ERBMand annually in APR/PIR

					Risk: High staff turnover affects project implementation. Assumption: Low rates of staff turnover and proper handover procedures ensure continuity. Mechanisms for recruiting new staff quickly will minimise delays. Risk: Insufficient political and financial support from line ministries and other government departments/agencies. Assumption: Strong political will and financial support will contribute to successful implementation of project interventions.
Outcome 1.1[62] (equivalent to activity in ATLAS): Policy Strategies/ Institutional Strengthening: Climate change adaptation and DRM mainstreamed in relevant policies, sectoral strategies, sub-national strategies[63] and budgeting processes through enhanced coordination of government institutions.	1.1.1. Sector plans that include specific budgets for adaptation actions [adapted from AMAT 1.1.1] 1.1.2. Formulation and endorsement of National Climate Change Adaptation Strategy.	1.1.1. At present, 4 sector plans do not include climate change adaptation. 1.1.2. There is presently no National Climate Change Adaptation Strategy.	1.1.1. All 15 sector plans are formulated to include climate change adaptation and are approved by the end of the project. 1.1.2. A National Climate Change Adaptation Strategy is formulated and endorsed by the end of the project.	1.1.1. Updated and approved sector plans. 1.1.2. Formulated and endorsed National Climate Change Adaptation Strategy.	Risk: Competing mandates and poor coordination between government agencies/line ministries disrupt project activities. Assumption: Proper coordination between government agencies enhances and sustains project progress that is aligned with sectoral adaptation priorities. MNRE Climate Change Unit and MoF-CRICU will ensure a programmatic approach and coordination of adaptation work. Risk: Limited human resources in government ministries and agencies delay project activities. Assumption: Human resources in government ministries and agencies will be sufficient to ensure successful implementation of project activities. Risk: Insufficient political and financial support from line ministries and other government departments/agencies. Assumption: Strong political will and financial support will contribute to successful implementation of project interventions.
Outcome 1.2 (equivalent to activity	1.2.1. Increase in number of	1.2.1. Few community-managed	1.2.1. At least 20 community-managed projects for adaptation to	1.2.1. Review of successful	Risk: Community participation decreases as benefits of adaptation measures and

[62] All outcomes monitored annually in the APR/PIR.It is highly recommended not to have more than 4 outcomes.
[63] Sub-national strategies include district/village strategies and a strategy for Apia

in ATLAS): Public finance management at the national and village level: Capacity to access, manage, implement and monitor use of climate change funds is enhanced at the national and village level.	community-managed projects for adaptation to climate risks. 1.2.2. Improved monitoring of government expenditure on climate change adaptation.	projects for adaptation to climate risks. 1.2.2. No monitoring of public expenditure on climate change adaptation.	climate risks. 1.2.2. MoF-CRICU and MNRE-CCU have improved capacity to monitor expenditure on climate change adaptation.	implementation of community-managed projects funded by CSSP and other initiatives. 1.2.2. Review of CPEIR-style reports of public expenditure on climate change adaptation. Capacity assessments of MoF-CRICU and MNRE-CCU on monitoring of expenditure on climate change adaptation.	project interventions are not immediately evident. Assumption: Constant communication and management of expectations ensures continuous community involvement throughout planning and implementation. Risk: Communities and governmental stakeholders don't distinguish resilience to climate change from baseline weaknesses. Assumption: Awareness-raising of communities allows them to perceive adaptation benefits of project interventions.
Outcome 2.1 (equivalent to activity in ATLAS): Protection of communities' physical assets and livelihoods: Increased resilience, and decreased exposure and susceptibility of communities to climate change and natural disasters by protection of household and community assets and promoting resilient livelihoods.	2.1.1. Number of people benefitting from improved flood management through implementation of hard and soft measures for protection of community assets. [AMAT 1.2.15]. 2.1.2. Number of people with increased income – compared to the control group – as a result of diversified livelihood practices and more secure access to livelihood assets, disaggregated by age and gender 2.1.3. Number of people adopting household-level processing facilities transferred to targeted groups – disaggregated by age and gender [adapted	2.1.1. No people benefit from improved flood management from climate-resilient flood protection measures introduced in Vaisigano River catchment for protection of community assets. 2.1.2. No difference in income between targeted and control groups owing to diversified livelihoods and secure access to livelihood assets. 2.1.3. No people have adopted and utilised household-level processing facilities to support diversified livelihoods	2.1.1. At least 12,000 people benefit from improved flood management from climate-resilient flood protection measures introduced in Vaisigano River catchment for protection of community assets (6,000 male and 6,000 female). 2.1.2. At least 600 beneficiaries adopting diversified livelihoods have demonstrable increases in income compared to the control group owing to more secure access to livelihood assets (at least 400 women irrespective of age and 200 youth irrespective of gender). 2.1.3. At least 600 beneficiaries participating in project interventions adopt and utilise household-level processing facilities to support diversified livelihoods (at least 400 women irrespective of age and at	2.1.1. Review of infrastructure design to verify climate resilience. Site visits to verify implementation of climate-resilient flood protection measures. 2.1.2. Household surveys conducted at baseline (prior to implementation of interventions), MTR and TE/endline. 2.1.3. Household surveys conducted at baseline (prior to implementation of interventions), MTR and FTE/endline.	Risk: Poor coordination with AF and PPCR projects reduces opportunities for collaboration and alignment with interventions under LDCF project. Assumption: Proper coordination between government agencies enhances and sustains project progress that is aligned with sectoral adaptation priorities. Risk: Delays in progress of baseline projects prevent implementation of interventions under LDCF. Assumption: Constant coordination with baseline projects ensures that LDCF project can build on on-going initiatives. Risk: Community participation decreases as benefits of adaptation measures and project interventions are not immediately evident. Assumption: Constant communication and management of expectations ensures continuous community involvement throughout planning and implementation. Risk: Disaster events/ hazards destroy or delay project interventions. Assumption: Adequate monitoring of

	from AMAT 3.1.1]		least 200 youth irrespective of gender).		potential risks ensures that impacts of these risks are mitigated. Risk: Land disputes amongst community members hamper implementation of adaptation interventions. Assumption: Socially sensitive approaches to project activities that are in line with approved national practices will prevent land disputes from arising. Risk: Project interventions are not implemented in a gender- and culturally-sensitive manner. Assumption: Involvement of women committees and traditional authority structures will ensure gender and cultural sensitivity of project interventions. Risk: Communities and governmental stakeholders don't distinguish resilience to climate change from baseline weaknesses. Assumption: Awareness-raising of communities allows them to perceive adaptation benefits of project interventions. Risk: Implemented interventions are not climate resilient. Assumption: Proper design and planning of project interventions will ensure climate-resilience. Risk: Unanticipated social and/or environmental impacts are caused by project activities. Assumption: Proper design and planning of project interventions will mitigate social and environmental impacts.
Outcome 2.2 (equivalent to activity in ATLAS): CCA/DRM plans and implementation: Increased adaptive capacity of	2.2.1. Number of villages covered by Village Disaster Risk Management plans to reduce risks of and respond to climate variability [adapted	2.2.1. No Village Disaster Risk Management Plans implemented by the project.	2.2.1. At least 100 Village Disaster Risk Management Plans implemented by the project.	2.2.1. Consultations with community members in villages covered by Village Disaster Risk Management Plans.	Risk: Community participation decreases as benefits of adaptation measures and project interventions are not immediately evident. Assumption: Constant communication and management of expectations ensures continuous community

communities for implementation of effective risk management and protection of household and community assets.	from AMAT 2.2.1]				involvement throughout planning and implementation. Risk: Communities and governmental stakeholders don't distinguish resilience to climate change from baseline weaknesses. Assumption: Awareness-raising of communities allows them to perceive adaptation benefits of project interventions. Risk: Project interventions are not implemented in a gender- and culturally-sensitive manner. Assumption: Involvement of women committees and traditional authority structures will ensure gender and cultural sensitivity of project interventions.
Outcome 3.1 (equivalent to activity in ATLAS): Knowledge about CCA and DRM is captured and shared at the regional and global level.	3.1.1. Increased capacity of government staff to access information on climate and disaster risks as well as M&E on climate change adaptation.	3.1.1. Low capacity of government staff to access information on climate and disaster risks as well as M&E on climate change adaptation.	3.1.1. By the end of the project, key officials from MNRE-CCU and MoF-CRICU will have sufficient capacity for accessing information on climate and disaster risks as well as M&E on climate change adaptation (Level 5: Fully developed capacity).	3.1.1. Consultations with government officials on use of national climate database and M&E framework on climate change adaptation. Capacity scorecard assessment of officials within the MoF-CRICU and MNRE-Climate Change Unit	Risk: Communities and governmental stakeholders don't distinguish resilience to climate change from baseline weaknesses. Assumption: Awareness-raising of communities allows them to perceive adaptation benefits of project interventions. Risk: Insufficient political and financial support from line ministries and other government departments/agencies. Assumption: Strong political will and financial support will contribute to successful implementation of project interventions.

4. Total budget and workplan

Award ID:	00079044	Project ID(s):	00089160
Award Title:	PIMS 5264 FSP LDCF: Economy-wide integration of CC Adaptation and DRM/DRR to reduce climate vulnerability of communities in Samoa		
Business Unit:	WSM10		
Project Title:	Economy-wide integration of CC Adaptation and DRM/DRR to reduce climate vulnerability of communities in Samoa		
PIMS no.	5264		
Implementing Partner(Executing Agency)	MNRE		

LDCF Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (US$)	Amount Year 2 (US$)	Amount Year 3 (US$)	Amount Year 4 (US$)	Amount Year 5 (US$)	Amount Year 6 (US$)	Total (US$)	Budget Notes:
OUTCOME 1.1: Policy Strategies/ Institutional Strengthening	MNRE MoF	62160	LDCF	71300	Local Consultants	$73,200	$51,800	$20,000	$20,000	$20,000	0	$185,000	1.1a
				75700	Training, Workshops and Conferences	$50,000	$20,000	$10,000	0	0	0	$80,000	1.1b
				74200	Audio Visual &Print Prod Costs	0	$10,000	0	0	0	0	$10,000	1.1c
				71400	Contractual Services – Individual	$102,273	$102,273	$102,273	$102,273	$52,273	$52,273	$513,638	1.1d
					Total Outcome 1.1	$225,473	$184,073	$132,273	$122,273	$72,273	$52,273	$788,638	
OUTCOME 1.2: Public finance management at the national and village level	MNRE MoF	62160	LDCF	71300	Local Consultants	$50,000	0	0	0	0	0	$50,000	1.2a
				75700	Training, Workshops and Conferences	$11,000	$12,000	$12,000	0	0	0	$35,000	1.2b
				74200	Audio Visual &Print Prod Costs	0	$5,000	0	$5,000	0	$5,000	$15,000	1.2c
					Total Outcome 1.2	$61,000	$17,000	$12,000	$5,000	0	$5,000	$100,000	
OUTCOME 2.1: Protection of communities' physical assets and livelihoods	MNRE LTA	62160	LDCF	71200	International Consultants	$200,000					0	$200,000	2.1a
				72100	Contractual Services-Companies	$479,000	$1,029,000	$429,000	$429,000	$429,000	0	$2,795,000	2.1b
				72300	Materials & Goods		$986,600	$986,600	$986,600	$986,600	$986,600	$4,933,000	2.1c
				72200	Equipment & Furniture		$313,898	$313,898	$313,898	$313,899	$313,899	$1,569,492	2.1c
				71300	Local Consultants	$40,000					0	$40,000	2.1d
				75700	Training, Workshops and Conferences		$2,000	$2,000	$2,000	$2,000	$2,000	$10,000	2.1e
				72600	Grants		$412,750	$10,750	$10,750	$10,750	$5,000	$450,000	2.1f
					Total Outcome 2.1	$719,000	$2,744,248	$1,742,248	$1,742,248	$1,742,249	$1,307,499	$9,997,492	
OUTCOME 2.2: CCA/DRM plans and implementation	MNRE/MWCSD	62160	LDCF	71400	Contractual Services - Individual	$50,000	$150,000	0	0	0	0	$200,000	2.2a
				75700	Training, Workshops and Conferences	$75,000	$225,000	0	0	0	0	$300,000	2.2b
					Total Outcome 2.2	$125,000	$375,000	0	0	0	0	$500,000	

OUTCOME 3.1: Knowledge about CCA and DRM is captured and shared at the regional and global level	MNRE MoF	62160	LDCF	71300	Local Consultants	0	$100,000	0	0	0	0	$100,000	3.1a
				75700	Training, Workshops and Conferences	0	$30,000	0	0	0	0	$30,000	3.1b
				72800	Information Technology Equipmt	0	$160,000	0	0	0	0	$160,000	3.1c
				74200	Audio Visual &Print Prod Costs	0	$15,000	$15,000	$15,000	$15,000	0	$60,000	3.1d
					Total Outcome 3.1	0	$305,000	$15,000	$15,000	$15,000	0	$350,000	
Project management unit	MNRE	62160	LDCF	71400	Contractual Services - Individual	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$300,000	PM.1
				74100	Professional Services	$20,539	$20,539	$20,539	$20,539	$20,539	$20,539	$123,234	PM.2
				72800	Information Technology Equipmt	$12,000	0	0	0	0	0	$12,000	PM.3
				72500	Supplies	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$30,000	PM.4
				75700	Training, Workshops and Conferences	$10,000	0	$10,000	0	0	$10,000	$30,000	PM.5
				71200	International Consultants	$11,572	0	$40,000	0	0	$40,000	$91,572	PM.6
					Total Management	$109,111	$75,539	$125,539	$75,539	$75,539	$125,539	$586,806	
				PROJECT TOTAL		$1,239,584	$3,700,860	$2,027,060	$1,960,060	$1,905,061	$1,490,311	$12,322,936	

Summary of Funds:

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Amount Year 6	Total
GEF	$1,239,584	$3,700,860	$2,027,060	$1,960,060	$1,905,061	$1,490,311	$12,322,936
Co-financing	$10,282,575	$32,107,705	$16,356,435	$15,472,300	$12,302,500	$3,478,485	$90,000,000
TOTAL	$11,522,159	$35,808,565	$18,383,495	$17,432,360	$14,207,561	$4,968,796	$102,322,936

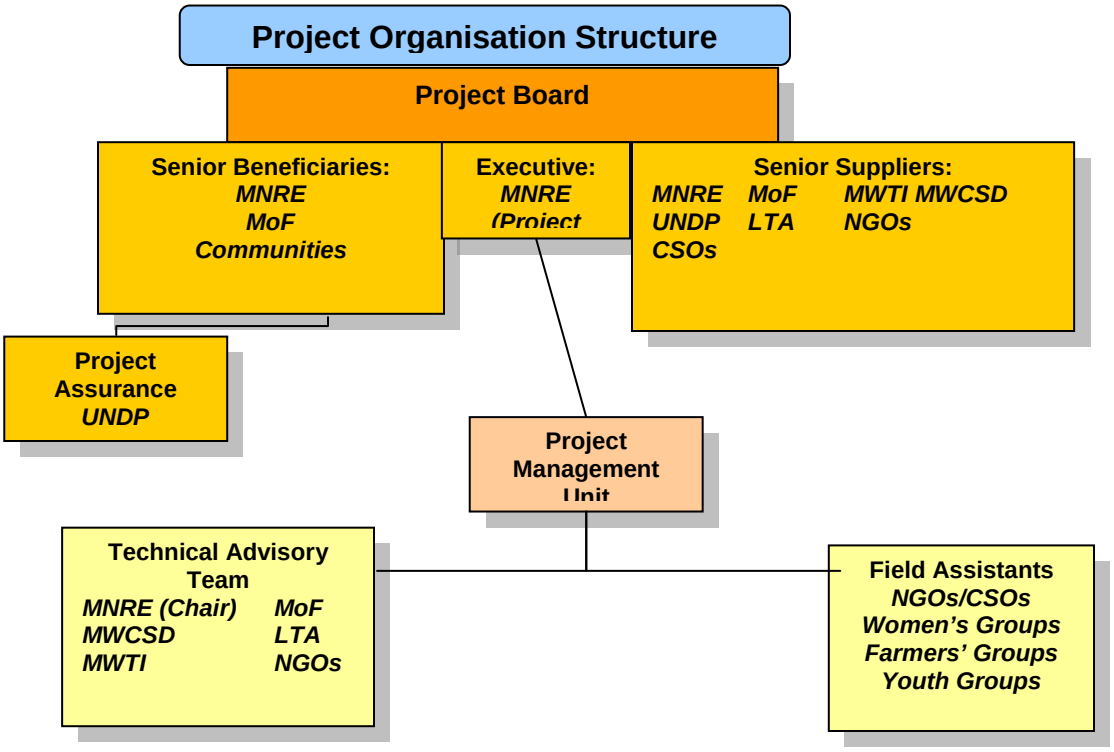
Budget Note	Description of cost item
1.1a	- Local TA to mainstream CCA/DRM into national SDS and relevant sector plans. 20 months @ $5,000 per month. - Local TA to develop National Adaptation Strategy. 10 months @ $5,300 per month. - Local TA to conduct capacity assessments of MNRE and MoF. 4 months @ $5,350 per month.
1.1b	- Workshops for National Adaptation Strategy. 6 workshops @ $5,000 per workshop. - Workshops for strengthening CCA coordination. 10 workshops @ $5,000 per workshop.
1.1c	Printing and publishing National Adaptation Strategy. 100 reports @ $100 per report.
1.1d	- Local TA to MNRE Climate Change Unit for stocktaking and coordinating current/planned CCA initiatives. 4 years @ $50,000 per year. - Principal Climate Change Policy Officer. 6 years @ $25,000 per year. - Senior Knowledge Management and Communications Officer. 6 years @ $15,909 per year. - Climate Change Unit Administration Officer. 6 years @ $11,364 per year.

1.2a	- Local TA to refine CPEIR methodology and streamline into MOF planning and budgetary processes. 8 months @ $5,000 per month. - Local TA to develop guidelines for communities on financial management of CCA/DRM projects. 2 months @ $5,000 per month.
1.2b	- Workshops for CPEIR refinement. 2 workshops @ $2,500 per workshop. - Training workshops for communities on managing finances for CC projects. 10 workshops @ $3,000 per workshop.
1.2c	Produce bi-annual CPEIR style report to analyse climate expenditure. 3 reports @ $5,000 per report.
2.1a	International TA to develop Integrated Watershed management plan for Greater Apia Area (see Annexes 6, 8 and 9). This will comprise a team of specialists with *inter alia* the following competencies: i) hydro-geology; ii) climate change adaptation; iii) drainage and flood control; iv) GIS; and v) environment/natural resources. 4 months @ $50,000 per month.
2.1b	- Services procured to undertake feasibility studies, design, cost benefit analysis, EIA, SIA (see Annexes 6, 8 and 9). This will comprise a team of specialists with *inter alia* the following competencies: i) hydro-geology; ii) drainage and flood control; iii) GIS; iv) environmental engineering; v) economics; vi) town planning; and vii) structural/design engineering. 16 months @ $50,000 per month. - Engineering services to design & supervise flood protection infrastructure. This will comprise a team of specialists with *inter alia* the following competencies: i) hydro-geology; ii) drainage and flood control; iii) GIS; iv) environmental engineering; v) economics; vi) town planning; and vii) structural/design engineering. 12 months @ $50,000 per month. (Total $1,400,000) - Implement ecosystem based approach. Based on indicative costs of: • Community consultations for 5 years @ $21,000 per year. • Community information/awareness raising activities for 5 years @ $20,000 per year. • Establishing 3 community nurseries @ $15,000 per nursery. • Maintaining 3 community nurseries for 5 years @ $5,000 per year. • Procurement of equipment for land preparation and rehabilitation @ $35,000. • Operation/maintenance of equipment for land preparation and rehabilitation for 5 years @ $5,000 per year. • Monitoring and enforcement of ecosystem-based approaches for 5 years @ $10,000 per year. • Training of staff on techniques for ecosystem-based approaches @ $10,000 • Preparation of land and implementation of ecosystem-based approaches in 5 watersheds for 5 years @ $40,000 per watershed per year. (Total $1,395,000)
2.1c	- Construction of flood protection infrastructure. Based on indicative costs as described below (for further references, see Annex 6): • 1 km of riverbank stabilisation @ $3,000 per metre. • 25,000 m^3 of retention ponds/check dams @ $37 per m^3. • 3.6 km of diversion channels @ $280 per metre. - Reconstruct community assets. Based on indicative costs of: • Reconstruction of 40 climate-resilient houses @ $35,000 per house. • Climate-proofing of sanitation services to 90 households @ $1,549.91 per household. • Development and protection of 5 drinking water sources @ $6,000 per water source.
2.1d	- Local TA to develop value chains for selected agricultural products. 4 months @ $5,000 per month. - Local TA to develop value chains for selected handicrafts. 4 months @ $5,000 per month.
2.1e	- Delivery of trainings for selected agricultural products. 10 trainings @ $500 per training. - Delivery of trainings for selected handicrafts. 10 trainings @ $500 per training.
2.1f	Provision of planting materials and household processing facilities. Indicative costs are described below. - Open-pollinated seeds: $25,000.

	- Materials for composting: $23,000. - Small farming equipment (hoes, spades, digging forks, mattocks, compost spreaders): 300 households @ $540 per household. - Household fruit driers: 300 driers @ $500 per drier. - Sewing machines: 300 machines @ $300 per machine.
2.2a	- Household-based village surveys. 100 surveys @ $1,000 per survey. - Analysis of household-based village surveys. 100 surveys @ $1,000 per survey.
2.2b	- Development and implementation of Disaster Management Plans. 100 plans @ $2,000 per plan. - Training for Disaster Management Plans. 100 villages @ $1,000 per village.
3.1a	- TA to develop protocols & pilot plan for data storage. 8 months @ $5,000 per month. - TA to establish national CCA M&E systems and develop standardised CCA reporting system. 10 months @ $6,000 per month.
3.1b	- Workshops for data storage development. 3 workshops @ $5,000 per workshop. - Workshops for M&E systems. 3 workshops @ $5,000 per workshop.
3.1c	Develop and procure equipment & software for centralised database. 8 computers with associated software @ $20,000 per computer.
3.1d	Awareness campaigns for R2R approach. 12 campaigns @ $5,000 per campaign.
PM.1	Project Manager (Project Management Unit). 6 years @ $25,000 per year. Finance and Procurement Officer (part of Project Management Unit). 6 years @ $25,000 per year.
PM.2	Annual audit. 6 audits @ $20,539 per audit.
PM.3	Office Equipment. 4 computers @ $3,000 per computer
PM.4	Office operating consumables for GEF division. 6 years @ $5,000 per year.
PM.5	- Inception Workshop. 1 workshop @ $10,000. - Midterm community consultations for M&E experimental design. $10,000. - Endline community consultations for M&E experimental design. $10,000.
PM.6	- Development of M&E experimental design. $11,572 - Mid-Term Review. 1 MTR @ $40,000. - Final Evaluation. 1 FE @ $40,000.

5. Management Arrangements

The project will be executed according to UNDP's National Implementation Modality (NIM) as per NIM guidelines agree by UNDP and the Government of Samoa.



201. **Implementing Partner (IP).** At the national level, the Ministry of Natural Resources and Environment (MNRE) will act as the Implementing Partner (Project Executive) of the project. Based on the standard NIM procedures, MNRE will be responsible for the overall project and reporting to UNDP Multi- Country Office in Samoa. MNRE will establish a Project Management Unit (PMU) in Apia with a full time Project Manager and other core project staff. The Project Executive (MNRE) will appoint the CEO of MNRE as Project Director (PD), given the strategic importance of the project. The PD will be supported by the Deputy Project Director (the ACEO of MNRE) and the National Project Manager within the PMU.

202. **Responsible Party (RP).** MNRE will designate the following responsible parties: MoF for Outcome 1.1 and 1.2; LTA, MWCSD, MWTI, and NGOs for Outcome 2.1; and DMO for Outcome 2.2.As implementing partner, MNRE has general responsibility for organizing and overseeing all phases of the project as well as for coordinating all other responsible parties involved. Additionally, a range of public and private entities will contribute to specific activities. The roles and responsibilities outlined below will be further guided by capacity assessments of the implementing partners conducted under Output 1.1.2.

203. MNRE responsibilities for the first component of the project involve improving integration of climate in ongoing national policy, strategy and institutional strengthening endeavours. These are largely shared with MoF and focus on: i) better addressing adaptation in the sector plans, the new Strategy for the Development of Samoa, and the National Adaptation Strategy; and ii) developing a more complete

inventory of all ongoing and projected adaptation work – along with mechanisms for maintaining this – and improved national coordination and planning for adaptation.

204. MoF's responsibilities for the first component involve: i) developing detailed guidelines for CRICU functions (for accounting, budgetary and fiscal mainstreaming of climate change initiatives); ii) facilitating development of guidelines for communities on financial management of projects that incorporate CCA and DRR/DRM; iii) developing guidelines/toolkits for preparation of a bi-annual CPEIR-style report on climate change expenditure; and iv) producing these bi-annual reports as a means to harmonizing government agencies' analysis of climate expenditure.

205. MNRE responsibilities for the second component of the project involve activities aimed at protection of communities' physical assets and livelihoods against climate change and disaster. These responsibilities include the development of Integrated Watershed Management Plan for the Greater Apia area as well as the design and implementation of ecosystem-based approaches to watershed management and flood mitigation. Other responsibilities are shared with LTA for developing flood protection measures (such as feasibility studies, climate resilient designs, cost-benefit analyses and Environmental Impact Assessments, for example) and building flood protection infrastructure. The last activities under this component MNRE will carry out primarily with MWCSD and these involve research on climate and disaster vulnerable populations and the development and implementation of Village Disaster Management Plans.

206. Finally, MNRE responsibilities related to the project's third component include: i) improving CC and DRM/DRR knowledge management throughout the country; and ii) establishing a CCA M&E system to better institutional coordination and intervention effectiveness. The first involves development and implementation of a national CC/DRM/DRR centralized database along with protocols for updating and maintaining this, along with general public awareness campaigns on CCA and DRM. The second, a responsibility with MoF, involves the review of current M&E systems and the design and implementation of a national M&E framework for CCA and DRM, along with the appropriate protocols for updating and maintaining this new M&E system.

207. *Audit arrangements*: Audits will be conducted in accordance with the UNDP NIM Audit policies and procedures, and based on UN Harmonized Approach to Cash Transfer (HACT) policy framework. Annual audit of the financial statements relating to the status of UNDP (including GEF) funds will be undertaken according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by a special and certified audit firm. UNDP will be responsible for making audit arrangements for the project in communication with the Project Implementing Partner. UNDP and the project Implementing Partner will provide audit management responses and the Project Manager and Project Management Unit (PMU) will address audit recommendations.

208. **Project Board** is responsible for making management decisions for a project in particular when guidance is required by the Project Manager. The Project Board plays a critical role in project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It oversees that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems with external bodies. In addition, it approves the appointment and responsibilities of the Project Manager and any delegation of its Project Assurance responsibilities. Based on the approved Annual WorkPlan, the Project Board can also consider and approve the quarterly plans (if applicable) and also approve any essential deviations from the original plans.

209. In order to ensure UNDP's ultimate accountability for the project results, Project Board decisions will be made in accordance to standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the final decision shall rest with the UNDP Project Manager.

210. Potential members of the Project Board are reviewed and recommended for approval during the PAC meeting. Representatives of other stakeholders can be included in the Board as appropriate. The Board contains three distinct roles, including:

1) **An Executive**: individual representing the project ownership to chair the group. The Executive is MNRE: The Project Director (CEO of MNRE), assisted by the Project Manager will report to the Board on project progress. The Deputy Project Director (ACEO MNRE) will be responsible for coordinating the flow of results and knowledge from the project to the Board.
2) **Senior Suppliers**: This group represents the interests of the parties concerned which provide technical expertise to the project. The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project: i) Make sure progress towards the outputs remains consistent from the supplier perspective; ii) promote and maintain focus on the expected project outputs from the point of vide of supplier management; iii) ensure that supplier resources required for the project are made available; iv) contribute supplier opinions on project board decisions on whether to implement recommendations on proposed changes; v) arbitrate on, and ensure resolution of, any supplier priority or resource conflicts. Suppliers should also advise on the selection of strategy, design and methods to carry out project activities; ensure that any standards defined for the project are met and used to good effect; monitor potential changes and their impact on the quality of deliverables from a supplier perspective; monitor any risks in the implementation aspects of the project. These senior suppliers are: **UNDP, MNRE, MoF, LTA, MWTI, MWCSD, NGOs/CSOs**
3) **Senior Beneficiary**: individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realisation of project results from the perspective of project beneficiaries. This role includes: i) ensuring the expected output and related activities of the project are well defined; ii) ensuring progress towards the outputs required by the beneficiaries remains consistent from beneficiaries; iii) promote and maintain focus on the expected project outputs; iv) prioritise and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes; v) resolve priority conflicts.
   - MNRE, MoF and targeted communities' authorities
4) The **Project Assurance** role supports the Project Board Executive by carrying out objective and independent project oversight and monitoring functions. The Project Manager and Project Assurance roles should never be held by the same individual for the same project.
   - UNDP

211. **Project Manager**: The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Board. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

212. **Finance and Procurement Officer**: The Finance and Procurement Officer has the responsibility to see to the running of the project's finance. In addition, this officer is responsible for procurement of supplies, goods and materials for the project as well as the recruitment of project staff and technical assistance according to the budget and workplan. This officer will also see to it that the annual audit is conducted.

213. The **Technical Advisory Team (TAT)** consists of technical level staff from all Ministries and NGOs, represented on the Project Board.

6. Monitoring Framework and Evaluation

214. The project will be monitored through the following M&E activities. The M&E budget is provided in the table below.

Project start

215. A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organisation structure, UNDP country office and where appropriate/feasible

regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

216. The Inception Workshop should address a number of key issues including:
   a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
   b) Based on the project results framework and the relevant LDCF Tracking Tool if appropriate, finalise the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
   c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
   d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
   e) Plan and schedule Project Board meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

217. An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalise various agreements and plans decided during the meeting.

Quarterly

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalisation of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc...The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually

- Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July).The APR/PIR combines both UNDP and SOF (e.g. GEF) reporting requirements.

218. The APR/PIR includes, but is not limited to, reporting on the following:
   - Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
   - Project outputs delivered per project outcome (annual).
   - Lesson learned/good practice.
   - AWP and other expenditure reports
   - Risk and adaptive management
   - ATLAS QPR
   - Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

6.1 Experimental design for M&E

219. The project will use experimental design principles to assess the project impacts on targeted groups under Outcome 2.1, focusing on the micro-enterprises developed under Output 2.1.3. The experimental design will follow a randomised control trial approach (please see Annex 15 for a more detailed description). During the household surveys conducted as part of the VDRMPs, households will be identified for tracking during project implementation. Households participating in the activities for promoting crop and handicraft value chains will be compared to households that are not involved in the value chains over the course of the project lifespan to determine benefits attributable to project interventions.

220. The primary goal of the intervention is to improve household welfare in order to build resilience to climate-induced disasters. This is based on the hypothesis that the technical training and involvement in sustainable value chains will lead to improved enterprise outcomes, allowing participants to invest in household welfare. This is likely to include: i) re-investment in ongoing production; ii) improved health; iii) investment in education; iv) increased savings; and v) investment in household and/or enterprise assets.

221. The household surveys will form the baseline assessment, i.e. before any project activities take place. This survey will collect important demographic and socio-economic data including outcome variables of interest such as income, child and family health indicators, enterprise profits and asset holdings. During the Mid-Term Review of the project, these data will again be collected and evaluated to inform ongoing adaptive management of project activities. During the Final Terminal Evaluation, an endline survey will be conducted. This will allow evaluators to estimate the impact that the project interventions had on the target groups.

222. The indicators that will be measured to track project benefits for these groups are described below.
- Change in income generation for households or individuals participating in project interventions for promoting diversified livelihoods (e.g. % increase of per capita income).
- Uptake of agricultural and handicraft practices introduced by project (e.g. % of targeted population sustaining practices).
- Investment of income from diversified livelihood practices into households or community assets (e.g. total US$ investment).
- Re-investment of income from diversified livelihood practices into households or community (e.g. total US$ re-invested into micro-enterprise).
- Improved health as a result of spending on health care, sanitation, hygiene etc. (e.g. reduced illness, total US$ spent on health care, sanitation, hygiene).
- Investment into education (e.g. additional qualifications, short courses or other type of training attended).
- Increased savings (e.g. total US$ saved)

Periodic Monitoring through site visits

223. UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle

224. The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (insert date).The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's

term. The organisation, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-EEG. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Centre (ERC).

225. The relevant SOF (GEF) Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project

226. An independent Final Terminal Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and SOF (e.g. GEF) guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place).The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

227. The Final Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Centre (ERC).

228. The relevant SOF (e.g GEF) Focal Area Tracking Tools will also be completed during the final evaluation.

229. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarise the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing

230. Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums, particularly through the regional "Ridge-to-Reef" programme.

231. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

232. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

6.2 Communications and visibility requirements

233. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at https://intranet.undp.org/country/rbap/in/intra/Programme/Communications/Shared%20Documents/UNDP%20Branding%20Guidelines%202013/Graphic%20Standards%20Guidelines%20for%20Publishing/UNDPGS_2011_final.pdf. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo.

234. Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines").The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf.A mongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

235. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

6.3 M& E workplan and budget

Type of M&E activity	Responsible Parties	Budget US$ Excluding project team staff time	Time frame
Inception Workshop and Report	▪ Project Manager ▪ UNDP CO, UNDP CCA	Indicative cost:10,000	Within first two months of project start up
Initial development of M&E following experimental design	▪ Project Manager ▪ UNDP CO, UNDP CCA	Indicative cost:11,572	Within first 6 months of project start up
Measurement of Means of Verification of project results.	▪ UNDP CCA RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.	To be finalised in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on *output and implementation*	▪ Oversight by Project Manager ▪ Project team	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG	None	Annually
Periodic status/progress reports	▪ Project manager and team	None	Quarterly
Mid-term Evaluation	▪ Project manager and team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost:40,000	At the mid-point of project implementation.
Community consultations at mid-term for M&E experimental design	▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost:10,000	At the mid-point of project implementation.
Final Evaluation	▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost :40,000	At least three months before the end of project implementation
Community consultations at endline for M&E experimental design	▪ Project manager and team, ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	Indicative cost:10,000	At least three months before the end of project implementation
Project Terminal Report	▪ Project manager and team ▪ UNDP CO ▪ local consultant	0	At least three months before the end of the project
Audit	▪ UNDP CO	$20,539	Yearly

Type of M&E activity	Responsible Parties	Budget US$ Excluding project team staff time	Time frame
	▪ Project manager and team		
Visits to field sites	▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives	For GEF supported projects, paid from IA fees and operational budget	Yearly
TOTAL indicative COST Excluding project team staff time and UNDP staff and travel expenses		US$ 244,806	

7. Legal Context

236. This document together with the UNDAF Action Plan, signed by the Government and UNDP through the UNDAF Country Result Matrix, which is incorporated herein by reference, constitute together a Project Document as referred to in the Standard Basic Assistance Agreement (SBAA); as such all provisions of the UNDAF Action Plan apply to this document. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner", as such term is defined and used in the UNDAF Action Plan and this document.

237. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

238. The implementing partner shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

239. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

240. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

241. This project will be implemented by the Ministry of Natural Resources and Environment ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.