

# **Strengthened adaptive capacity and reduced exposure to climate risks of vulnerable livelihoods and infrastructure in the Vaisigano River Catchment**

## **Environmental and Social Management Framework and Management Plan**

### Environmental and Social Management Plan for Strengthened adaptive capacity and reduced exposure to climate risks of vulnerable livelihoods and infrastructure in the Vaisigano Catchment

#### Introduction

1. This Environmental and Social Management Framework and Management Plan (ESMF and MP) has been prepared in support of a project proposal on “Strengthened adaptive capacity and reduced exposure to climate risks of vulnerable livelihoods and infrastructure in the Vaisigano Catchment” by the Government of Samoa to the Green Climate Fund (GCF). In line with Samoan law, and Environmental and Social Impact Assessment is only required for a portion of the project and this has previously been undertaken by the Government. As this project is supported by UNDP in its role as a GCF Accredited Entity, the project has been screened against UNDP’s Social and Environmental Standards Procedure and deemed to be a medium risk (Category B) project. Discussions on the impact assessment are provided in the Social and Environmental Screening Template which provided the rationale for the project being classified as a Category B. This ESMF and MP provides further discussion below.

#### Project Overview

2. The project promotes a paradigm shift through its integrated and holistic approach to both hard and soft flood protection of the Greater Apia Catchment, and specifically, the Vaisigano River through three inter-linked outputs:
  - a. Strengthening capacities and mechanisms for integrated approach to reduce flood-related risks. Under this output, the activities include:
    - i. Conduct a feasibility study to review the interdependence of flood mitigation options: A number of flood mitigation interventions have been identified but have to-date only been considered in isolation and without the benefit of detailed LiDAR topographic data now available. An assessment of the overall performance of the proposed interventions as an integrated flood management system is required. This is best achieved through the use of an integrated hydraulic model;
    - ii. Conduct feasibility studies for flood-buffering reservoir in the upper catchment of the Vaisigano River: The study will assess options to support flood management with potential co-benefits in hydropower generation and as a potable water storage for the Apia Urban Area (AUA). Terms of Reference for the study have been prepared as part of this proposal;
    - iii. Conduct a feasibility study for improving the flood resilience of the Central Cross Island Road: The Central Cross Island Road is one of the main economic arteries on Upolu Island, as well as an important evacuation route for the densely populated AUA. The feasibility study will assess design as well as undertake an environmental and social impact assessment as there is the potential need for land acquisition for the widening of the road corridor;
    - iv. Conduct feasibility studies for Apia integrated sewage system: the project will undertake a feasibility study to develop an integrated sewage system for the whole AUA;
    - v. Establish a health surveillance system to track and manage flood related health issues; expand the early warning system to provide coverage for flood alerts in the AUA;
    - vi. Conduct awareness raising campaigns on building practices and designs for communities at risk in the Vaisigano River Catchment;
    - vii. Expand the early warning system’s coverage to provide flooding alerts in Apia; and
    - viii. Conduct awareness raising campaigns on climate resilient building practices and designs for at risk communities living along the Vaisigano River.
  - b. Flood roof key infrastructure in the Vaisigano River Catchment to increase resilience to negative effects of excessive water. Under this output, the activities include:

- i. Review proposed designs for channelization of Segment 2, 3 and 4 of the Vaisigano River including the impact on channel capacity and the potential for optimizing scheme design and durability;
  - ii. Establishment of flood protection measures along segments 2, 3 and 4 of the Vaisigano River;
  - iii. Replacement of Lelata Bridge to accommodate increase flood waters;
  - iv. Extension of floodwalls at Leone and Lelata Bridges to prevent damage during extreme events;
  - v. Capacity building of maintenance teams for flood protection measures;
  - vi. Contracting members of the local communities for execution of activities with regards to building and landscape restoration along the Vaisigano River; and
  - vii. Implement ecosystem responses upstream for decreased flows during extreme weather events including through participatory mapping by communities and value chain system actors, with a focus on women and youth, to support adoption of climate-resilient technologies and practices.
- c. Upgrading drainage in downstream areas to increase water flow regulation. Under this output, the activities include:
- i. Developing a climate resilient Stormwater Master Plan; and
  - ii. Upgrading drainage systems in nine (9) priority segments and outfalls in the central business district coastal hazard area to accommodate flooding events.

### Assumptions underpinning the development of the ESMF and MP

1. The following assumptions have been made in the preparation of this ESMF and MP:
  - a. none of the interventions will require the displacement of people;
  - b. none of the interventions will be conducted in sensitive locations;
  - c. the excavation works for the river channel works will be undertaken during the dry season;
  - d. all sediment removed from the river will be placed on existing agricultural land and/or stored in an appropriate manner;
  - e. all drainage work will be undertaken in the dry season and all waste streams will be managed effectively;
  - f. acid sulfate soils will be managed effectively if found during construction;
  - g. the construction of the new bridge will be undertaken in the dry season and all waste streams will be managed effectively;
  - h. where practicable, materials will be pre-fabricated to reduce waste;
  - i. appropriate erosion and sediment control will be undertaken during all stages of the projects; and
  - j. there will be no release of pollution and/or chemicals as a result of the projects.

### Governing Legislation

2. The legislative basis for the provision of project and environmental and social protection in Samoa are controlled through numerous pieces of legislation and sub-ordinate legislation including but not limited to:
  - a. *Agriculture, Forests and Fisheries Ordinance 1959*;
  - b. *Alienation of Customary Land Act 1965*;
  - c. *Alienation of Freehold Land Act 1972*;

- d. *Animals Ordinance 1960;*
  - e. *Disaster and Emergency Management Act 2007;*
  - f. *Environmental Impact Assessment Regulations 2007;*
  - g. *Fisheries Management Act 2016;*
  - h. *Forestry Management Act 2011;*
  - i. *Health Ordinance 1959;*
  - j. *Lands, Surveys and Environment Act 1989;*
  - k. *Land Titles Registration Act 2008;*
  - l. *Marine Pollution Prevention Act 2008;*
  - m. *Ministry of Health Act 2006;*
  - n. *Ministry of Internal Affairs Act 1995, 2010 and as amended;*
  - o. *Ministry of Women Affairs Act 1990, 1998, 2009 and as amended;*
  - p. *Ministry of Works Act 2002;*
  - q. *Ministerial and Departmental Arrangements Act 2003;*
  - r. *National Parks and Reserves Act 1974;*
  - s. *Pesticides Regulation 2011;*
  - t. *Planning and Urban Management Act 2004;*
  - u. *Ports Authority Act 1998;*
  - v. *Quarantine (Biodiversity) Act 2005;*
  - w. *Samoa Water Authority Act 2003;*
  - x. *Samoa Water Authority (Sewerage and Wastewater Regulations) 2009;*
  - y. *Scientific Research Organisation of Samoa Act 2008;*
  - z. *Spatial Information Management Act 2010;*
  - aa. *Taking of Land Act 1964;*
  - bb. *Waste Management Act 2010;*
  - cc. *Water Resources Management Act 2008;*
  - dd. *Water Resources and Management Regulation 2013;*
  - ee. *Water Schemes Act 2015;* and
  - ff. *Village Fono Act 1990.*
3. Additionally, the project is being undertaken by the UNDP. As such, the project will not only comply with Samoa's national law, but with any obligations imposed and applicable under international law, whichever is the higher standard.

#### ***Planning and Urban Management Act 2004***

4. The *Planning and Urban Management Act 2004* is the primary piece of legislation to address nature conservation and national parks management as well as land planning and development. The Act established a development consent process mainly for land use planning.
5. The *Planning and Urban Management Act 2004* is administered by MNRE. The Act broadly defines development and considers its impacts on the 'total' environment (social, economic and bio-physical). The objectives of the Act are to provide for the fair, orderly, economic and sustainable use, development and management of land including the protection of natural and man-made resources and the

maintenance of ecological processes and genetic diversity; to enable land use and development planning and policy to be integrated with environmental, social, economic, conservation and resources management policies at national, regional, district, village and site specific levels; to create an appropriate urban structure and form for the development of Apia and other centers so as to provide equitable and orderly access to transportation, recreational, employment and other opportunities; to secure a pleasant, efficient and safe working, living, recreational environment for all Samoans and visitors to Samoa; to protect public utilities and other assets and enable the orderly provision and coordination of public utilities and other facilities for the benefit of the community; and to balance the present and future interests of all Samoans.

6. The Act provides a process for the development of sustainable management plans and various coordination, education and promotional roles. With respect to the plans, a hierarchy of national, regional, district and village sustainable management plans is in place.
7. MNRE has a statutory role under Section 63 of the Act to “...remove or minimize the impacts affecting the amenity of an area or place...” Amenity is defined as the pleasant, comfortable and normal convenient values of an area or place that must be protected and safeguarded from negative impacts of a nuisance. Pursuant to section 63, the amenity of an area or place must not be comprised by:
  - a. Excessive noise; or
  - b. Excessive dust;
  - c. Visually offensive signage, material or structures;
  - d. Poor airspace, lighting or ventilation; or
  - e. Excessive traffic generation;
  - f. Smell, fumes, vapour;
  - g. Waste materials, including bulk material, used goods and property
  - h. Waste water, sewage and drainage; and
  - i. Stray and domestic animals.
8. While the *Planning and Urban Management Act 2004* does not outline an administrative process, it does require an environmental impact assessment to be prepared in accordance with written specifications under Section 42 of the *Planning and Urban Management Act 2004* PUMA (s42 (2)). These requirements can be generated without Regulation although this is not ruled out as the power to institute Regulations under s105, includes the following with respect to environmental assessment
  - (e) the documents and information required to accompany development applications, including documents that will assist the Agency in assessing the environmental effects of development;
  - (j) the form of statements of environmental effects and environmental impact assessments;
  - (k) the documents and information required to accompany statements of environmental effects and environmental impact statements;
  - (r) the factors to be taken into account when consideration is being given to the likely impact of a development on the environment;
  - (s) the preparation, contents, form and submission of environmental impact assessments;
  - (t) the making of environmental impact assessments available for public comment;
  - (u) the methods of examination of environmental impact assessments and representations made with respect to activities to which any such statements relate.
9. The riverbank works have previously undertaken an environmental impact assessment and this has been attached as an annexure to the ESMF and MP. No other works undertaken under the project require an environmental and social impact assessment.

10. The *Planning and Urban Management (EIA) Regulations 2007* establishes a process required to assess the environmental impacts of any development works. The regulation is developed as per the Act, to facilitate the requirement for environmental assessment reports as one of many key considerations when assessing the development proposals. The proposed programme will be fully aligned with these procedures and will further strengthen them through supporting the integration of climate change and disaster risk management considerations during a formal review process.
11. No works undertaken under the project, apart from the riverbank works require an environmental and social impact assessment.

### *Lands, Surveys and Environment Act 1989*

12. The *Lands, Surveys and Environment Act 1989* is the primary piece of legislation for any project on Government land. The Vaisigano River is government land as are the areas where drainage works will be undertaken.
13. The *Lands, Surveys and Environment Act 1989* requires the completion of an environmental impact assessment as a prerequisite for development proposals. As noted above, the riverbank works have previously undertaken an environmental impact assessment which has been approved by Government. The Act also prohibits activities in the coastal zone. The only actions that will be taken indirectly in the coastal zone are those related to drainage, although the project will not specifically be undertaken in the coastal zone.
14. The Act also establishes a regime for monitoring of environmental impacts and the undertaking of investigations of activities affecting the environment through the provision of compliance orders. The project will follow any requirements under the Act for all projects undertaken on Government land.

### *Water Resources Management Act 2008*

15. The *Water Resources Management Act 2008* requires consideration of water resource-related provisions in any environmental impact assessment under *Planning and Urban Management Act 2004* (Part VII).
16. The *Water Resources Management Act 2008* requires the precautionary principle (Part II, s. 5) to be considered for any potential environmental impacts.

### **Overview - Institutional Requirements for the Environmental and Social Management Framework and Management Plan**

17. The ESMF and MP will be assessed for each component of the project by the Ministry of Natural Resources and Environment (MNRE) and UNDP prior to any works being undertaken and will be reviewed continuously through the life of the project. The ESMF and MP identifies potential risks to the environment and social matters from the projects and outlines strategies for managing those risks and minimizing undesirable environmental and social impacts. Further, the ESMF and MP provides a Grievance Redress Mechanism for those impacted by the projects that do not consider their views have been heard.
18. The Ministry of Finance (MOF) in coordination with MNRE will be responsible for the supervision of the ESMF and MP. The UNDP will gain the endorsement of the MNRE and will ensure the ESMF and MP is adequate and followed. The supervising engineer will ensure timely remedial actions are taken by the contractor where necessary.

### **Objectives of the Environmental and Social Management Framework and Management Plan**

19. An ESMF and MP is a management tool used to assist in minimising the impact to the environment and reach a set of environmental objectives. To ensure the environmental objectives of the projects are met, this ESMF and will be used by the contractor to structure and control the environmental management safeguards that are required to avoid or mitigate adverse effects on the environment.
20. The environmental and social objectives of the projects are to:



- a. ensure the river bank, drainage and other construction and ecosystem works do not cause environmental and social impacts;
  - b. improve upstream sediment retention through revegetation of the catchment thus increasing water quality both downstream and entering the coastal lagoon;
  - c. reduce the impact of flooding and thus the loss of assets and social disruption from overtopping of the Vaisigano River;
  - d. enhance the existing early warning system that ensures adequate measures are undertaken prior to any rainfall and flood event;
  - e. encourage good management practices through planning, commitment and continuous improvement of environmental practices;
  - f. minimise or prevent the pollution of land, air and water pollution;
  - g. protect native flora and fauna from the impacts of flooding;
  - h. comply with all applicable laws, regulations and standards for the protection of the environment; adopt the best practicable means available to prevent or minimise environmental impact;
  - i. describe all monitoring procedures required to identify impacts on the environment; and
  - j. provide an overview of the obligations of MNRE and UNDP staff and contractors in regard to environmental and social obligations.
21. The ESMF and MP will be updated from time to time by the contractor in consultation with the UNDP staff and MNRE to incorporate changes in the detailed design phase of the projects. The ESMF and MP will continue through the life of the project to comply with the UNDP Safeguards policies and all relevant Samoan laws.

### Livelihood Interventions and Soft Infrastructure

22. The project proposes to undertake a number of livelihood interventions and soft infrastructure. These include:
- a. Establish a health surveillance system to track and manage flood related health issues; expand the early warning system to provide coverage for flood alerts in the AUA;
  - b. Expand the early warning system's coverage to provide flooding alerts in Apia;
  - c. Conduct awareness raising campaigns on building practices and designs for communities at risk in the Vaisigano River Catchment;
  - d. Conduct awareness raising campaigns on climate resilient building practices and designs for at risk communities living along the Vaisigano River.
  - e. Contracting members of the local communities for execution of activities with regards to building and landscape restoration along the Vaisigano River
  - f. Implement ecosystem responses upstream for decreased flows during extreme weather events including through participatory mapping by communities and value chain system actors, with a focus on women and youth, to support adoption of climate-resilient technologies and practices
23. Dot points a and b require the installation of infrastructure, albeit, relatively small infrastructure including field monitoring instruments and sirens as examples. It will be necessary to ensure during the installation of this equipment that it is placed so as to not impact the community but ensure that it provides the most benefit and sufficient warning prior to an event.
24. Dot points c and d are related to the whole of the population of the AUA. They will be undertaken widely and as such, there will be no specific targeting or particular sectors of the community, notwithstanding that it will be targeted at those living in vulnerable housing.
25. As part of the previous and current project assessment, a total of 18 villages that are vulnerable to climate change were identified in the AUA, these being Aai o Niue, Avele, Faatoialemanu, Lelata, Leone,

Levili, Letava Maagiagi Uta, Maluafou, Matautu Uta, Papauta, Tanugamanono, Vaiala Uta, Vailima, Vaipuna, Vaoala, Vasigano, and Vinifou. The total population for the 18 villages identified is 8,651 with 4,318 females, or 50% of the population, according to the 2011 population census. The 2014 School to Work Transition Survey listed 2,392 youths defined as those between the age bracket of 18 and 35 years of age for these villages.

26. These villages will receive access to a number of livelihood interventions as well as soft infrastructure projects and have been targeted for their vulnerability. No indigenous people and/or ethnic minorities are known to live in Samoa
27. The villages at the heart of this proposal are located in urban or peri-urban areas, and as such there may be some variance from traditional village governance and distribution of resources. For example, the market analysis conducted for this proposal notes that the 18 communities are more likely to live on freehold land than on customary lands, with 58% of households in the Apia Urban Area located on freehold, 12.5% on leased land, and 29.2% on customary land. This is likely to give households more autonomy on what they might develop on their respective lands, compared with those on customary land.
28. These villages will be targeted with respect to dot points e and f to provide both employment and resilient communities. The intervention focuses on implementation of the Upland Watershed Conservation Policy, the 2-million-trees campaign as well as activities under the Integrated Water Management Plan which deal with protecting the upstream and midstream areas of the Vaisigano River against soil degradation and increasing the water holding capacity of both soils and land use systems. That would mean introducing agroforestry systems that introduce as much soil cover as possible and integrate as much organic material into the soil as possible, without reducing soil porosity. For the more sensitive areas, such as river- and streambeds and other water bodies, the existing regulations with regards to preserving a strip of original vegetation along riparian corridors should be strictly obeyed; which would mean no building or agricultural activities in this strip that might cause soil disturbance. Above a certain percentage, slopes should no longer be used for agricultural purposes without anti-erosive measures and on even steeper slopes, only land use should be applied that doesn't disturb the soil; which mostly coincides with pure conservation through reforestation, preferably with native tree species.
29. Given that there are no indigenous people and/or ethnic minorities, there is no need to develop specific plans for these activities. However, the project will develop specific consultation plans for these vulnerable communities to ensure there is free, prior and informed consent before any consultation occurs and the same re their engagement in activities. There has also been a Memorandum of Understanding signed between the Ministry of Women, Community and Social Development and Small Business Enterprise Centre to work together to establish a Small Business Incubator for Youth in Apia, Samoa.
30. Further, it will be imperative that no impacts occur to the use of one's land where ecosystem based activities are to be conducted and moreover, that this does not impact the livelihoods of those living on their lands. As such, prior to undertaking any activities, the Project Management Unit will undertake appropriate consultations and prepare a Livelihood Plan. The Livelihood Plan should include access rights and resource rights.

#### Land Issues

31. For the purposes of the current projects, excluding other aspects of the programme, all activities will be undertaken on land or within rivers currently owned by the Government of Samoa. As such, there is no requirement for any form of land acquisition and/or compensation to be paid.
32. With respect to the land where ecosystem based activities, the land tenure in 2011 shows around 29.9% of Vaimauga West households living on customary land, 55.9% on freehold land and 13.7% on leased land. The land tenure ratio for Vaimauga West is very similar to that of the AUA with 29.2% on customary land, 58% of households on Freehold land and 12.5% living on leased land. This compares to the majority of households outside AUA living on customary lands. Thus the majority of the 18 vulnerable communities are more likely to live on freehold land which gives these households more autonomy on what they could develop on their respective lands compared to those living on customary lands. All the activities under the project will not require any acquisition and or resettlement.



### Indigenous Peoples

33. As part of due diligence, an analysis and consultations were undertaken as to the likelihood of any of the project's activities involving indigenous people and/or ethnic minorities. No indigenous people and/or ethnic minorities are known to live in Samoa.

### Environmental and Social Impact Assessment

34. An impact risk assessment was undertaken to assess the likelihood (remote, rare, unlikely, possible, occasional, likely) and the consequence of each impact (negligible, minor, moderate, severe, major, catastrophic). From this, a significance value was attributed to the potential impact (negligible, low, medium, high and extreme).

		Consequence						
		Negligible	Minor	Moderate	Severe	Major	Catastrophic	
		0	1	2	3	4	5	
Likelihood	Remote	1	0	1	2	3	4	5
	Rare	2	0	2	4	6	8	10
	Unlikely	3	0	3	6	9	12	15
	Possible	4	0	4	8	12	16	20
	Occasional	5	0	5	10	15	20	25
	Likely	6	0	6	12	18	24	30

35. When undertaking the risk assessment, all activities were assessed, including, hard, soft infrastructure and livelihood interventions. Specific measures for each matter eg water are discussed with mitigation measures provided later in this ESMF and MP.

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Activity	Unmitigated Impacts	Likelihood of Impact and Consequence	Avoidance and Mitigation Measures	Likelihood of Impact and Consequence post mitigation
Conduct a feasibility study to review the interdependence of flood mitigation options	This will involve hydrological modelling. The only impacts would be the installation of equipment to collect data. As such, the study is unlikely to have any significant impact although there is the potential, albeit small to impact the environment or land during the installation of loggers	Likelihood: 1 Consequence: 2	Prior to installation, the project should undertake due diligence and ensure no land is being adversely affected and that the monitoring equipment is not placed in a sensitive location.	Likelihood: 1 Consequence: 1
Conduct feasibility studies for flood-buffering reservoir in the upper catchment of the Vaisigano River	This will involve undertaking engineering and an environmental and social impact assessment. The only impacts would be the installation of equipment to collect data and or geotechnical works to understand the geology of the existing environment. As such, the study is unlikely to have any significant impact although there is the potential, albeit small to impact the environment or land during the installation of loggers and or drilling bore holes	Likelihood: 4 Consequence: 2	Prior to undertaking any works, the project should undertake due diligence and ensure no land is being adversely affected and that the monitoring equipment is not placed in a sensitive location.	Likelihood: 1 Consequence: 1
Conduct a feasibility study for improving the flood resilience of the Central Cross Island Road	This will involve undertaking engineering and an environmental and social impact assessment. The only impacts would be the installation of equipment to collect data and or geotechnical works to understand the geology of the existing environment. As such, the study is unlikely to have any significant impact although there is the potential, albeit small to impact the environment or land during the installation of loggers and or drilling bore holes	Likelihood: 4 Consequence: 2	Prior to installation, the project should undertake due diligence and ensure no land is being adversely affected and that the monitoring equipment is not placed in a sensitive location.  It is noted that there is the potential for land acquisition to need to occur; however this will only be considered should the project follow through following the feasibility assessment.	Likelihood: 1 Consequence: 1
Conduct feasibility studies for Apia integrated sewage system	This will involve undertaking engineering and an environmental and social impact assessment. The only impacts would be the installation of equipment to collect data and or geotechnical works to understand the geology of the existing environment so as septic tanks	Likelihood: 4 Consequence: 2	Prior to undertaking any works, the project should undertake due diligence and ensure no land is being adversely affected and that the monitoring equipment is not placed in a sensitive location.	Likelihood: 1 Consequence: 1



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	could be assessed. As such, the study is unlikely to have any significant impact although there is the potential, albeit small to impact the environment or land during the installation of loggers and or drilling bore holes			
Establish a health surveillance system to track and manage flood related health issues;	The only impacts would be the installation of equipment to collect data. As such, the study is unlikely to have any significant impact although there is the potential, albeit small to impact the environment or land during the installation of loggers	Likelihood: 3 Consequence: 1	Given the nature of the activity, it is unlikely that there will be the need to undertake an mitigation measures	Likelihood: 1 Consequence: 1
Conduct awareness raising campaigns on building practices and designs	The activity will engage with community so as they can better understand the implications of the new Building Code and what matters they should consider when undertaking the construction of a new dwelling etc	Likelihood: 0 Consequence: 1	Given the nature of the activity, it is unlikely that there will be the need to undertake an mitigation measures	Likelihood: 0 Consequence: 1
Expand the early warning system's coverage to provide flooding alerts in Apia	The only impacts would be the installation of equipment to collect data. As such, the study is unlikely to have any significant impact although there is the potential, albeit small to impact the environment or land during the installation of loggers	Likelihood: 1 Consequence: 1	Given the nature of the activity, it is unlikely that there will be the need to undertake an mitigation measures	Likelihood: 1 Consequence: 1
Review proposed designs for channelization of Segment 2, 3 and 4 of the Vaisigano River including the impact on channel capacity and the potential for optimizing	This activity will have no environmental or social impacts, although if the review was not conducted effectively, this could then have flow on impacts to the relevant activities in stream which could result in impacts as identified for each activity.	Likelihood: 1 Consequence: 1	Given the nature of the activity, it is unlikely that there will be the need to undertake an mitigation measures	Likelihood: 1 Consequence: 1

scheme design and durability				
Establishment of flood protection measures along segments 2, 3 and 4 of the Vaisigano River	<p>This activity will require the potential need for road closures, loss of access to the River where works are being undertaken. An Environmental and Social Impact Assessment has been prepared for the project and included as an annexure to this ESMF and MP</p> <p>The activity will not impact on greenfield locations; it will all be undertaken in existing locations. There are a number of potential impacts associated with the works including but not limited to the potential erosion and sediment movement during rainfall events and as a result of dust, all of which could have impacts on water quality, noise impacts from the use of jack hammers and excavators, the potential leakage of chemicals and oils, and other potential impacts.</p> <p>The construction activities could also result in changes to people's ability to move within the region and a loss of access for recreational activities.</p>	Likelihood: 5 Consequence: 2	The ESMP sets out appropriate mitigation measures for the impacts of the construction of the river walls. The most appropriate mitigation measure is to ensure activities to do not occur during periods of rainfall which could significantly increase sediment discharges and erosion.	Likelihood: 4 Consequence: 2
Replacement of Lelata Bridge to accommodate increase flood waters	<p>This activity will require roadworks and road closures to remove the existing bridge and construct the new bridge. This might also require the relocation of services.</p> <p>The activity will not impact on greenfield locations; it will all be undertaken in existing locations. There are a number of potential impacts associated with the works including but not limited to the potential erosion and sediment movement during rainfall events and</p>	Likelihood: 5 Consequence: 2	The ESMP sets out appropriate mitigation measures for the impacts of the upgrading of the Lelata Bridge. One critical mitigation measure would include not undertaking the decommissioning and construction of the Lelata Bridge until such time as the Leone Bridge has been commissioned.	Likelihood: 4 Consequence: 2



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	as a result of dust, all of which could have impacts on water quality, noise impacts from the use of jack hammers and excavators, the potential leakage of chemicals and oils, and other potential impacts. The construction activities could also result in changes to people’s ability to move within the region.			
Extension of floodwalls at Leone and Lelata Bridges to prevent damage during extreme events	<p>This activity will require river works and potential road closures to access the river, undertake excavation works and construct the river walls. This might also require the relocation of services.</p> <p>The activity will not impact on greenfield locations as the river is highly disturbed both natural and anthropogenic.</p> <p>There are a number of potential impacts associated with the works including but not limited to the potential erosion and sediment movement during rainfall events and as a result of dust, all of which could have impacts on water quality, noise impacts from the use of jack hammers and excavators, the potential leakage of chemicals and oils, and other potential impacts. The construction activities could also result in changes to people’s ability to move within the region.</p>	<p>Likelihood: 5 Consequence: 2</p>	<p>The ESMP sets out appropriate mitigation measures for the impacts of the construction of the river walls. The most appropriate mitigation measure is to ensure activities to do not occur during periods of rainfall which could significantly increase sediment discharges and erosion.</p>	<p>Likelihood: 4 Consequence: 2</p>
Capacity building of maintenance teams for flood protection measures	<p>The activity will engage GoS so as they can better understand the implications of maintaining the works post construction</p>	<p>Likelihood: 1 Consequence: 1</p>	<p>Given the nature of the activity, it is unlikely that there will be the need to undertake an mitigation measures</p>	<p>Likelihood: 1 Consequence: 1</p>



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## and Management Plan

<p>Contracting members of the local communities for execution of activities with regards to building and landscape restoration along the Vaisigano River</p>	<p>This activity will involve the creation of jobs and businesses for the local community.</p> <p>There are unlikely to be any environmental impacts associated with the activity.</p> <p>There is the potential for social impacts including health related issues, pressure from family members to gain access to the financial benefits that contracted people gain, potential loss of businesses which could result in family upheaval should businesses fail.</p>	<p>Likelihood: 2 Consequence: 3</p>	<p>The project has established a Memorandum of Understanding signed between the Ministry of Women, Community and Social Development and Small Business Enterprise Centre to work together to establish a Small Business Incubator for Youth in Apia, Samoa. Where possible, this should be extended under the project to ensure those people entering business are provided the proper training and advice to know how to properly manage their activities, both individually and communally.</p>	<p>Likelihood: 1 Consequence: 2</p>
<p>Implement ecosystem responses upstream for decreased flows during extreme weather events</p>	<p>This activity will involve undertaking replanting and other livelihood interventions on both private and GoS land. It will not require any acquisition or resettlement.</p> <p>Previous modelling undertaken for the EWACC Project has highlighted the significant environmental and social benefits of these activities. However there is the potential, if not properly conducted to have both environmental and social impacts.</p> <p>Environmentally, the impacts include the potential erosion and sediment movement during rainfall events and as a result of dust, all of which could have impacts on water quality, noise impacts from the use of any machinery, the potential leakage of chemicals and fertilisers, and other potential impacts.</p> <p>Social, the activity could result in changes to livelihoods and the normal day to day activities. It is critical that due diligence be properly undertaken prior to the undertaking of any activity including the development of a Livelihood Plan.</p>	<p>Likelihood: 3 Consequence: 3</p>	<p>If the appropriate mitigation measures as identified in the ESMF and MP are undertaken, including for example, the establishment of sediment curtains etc, and the development of a Livelihood Plan, then the impacts should be significantly mitigated.</p>	<p>Likelihood: 2 Consequence: 1</p>





## Annex VI (b) – Environmental and Social Management Framework

GREEN CLIMATE FUND FUNDING PROPOSAL

## and Management Plan

<p>Developing a climate resilient Stormwater Master Plan</p>	<p>This will involve undertaking engineering and an environmental and social impact assessment. The only impacts would be the installation of equipment to collect data and or geotechnical works to understand the geology of the existing environment so as septic tanks could be assessed. As such, the study is unlikely to have any significant impact although there is the potential, albeit small to impact the environment or land during the installation of loggers and or drilling bore holes</p>	<p>Likelihood: 2 Consequence: 2</p>	<p>Prior to undertaking any works, the project should undertake due diligence and ensure no land is being adversely affected and that the monitoring equipment is not placed in a sensitive location. It may be necessary to re-route traffic during times of any testing etc.</p>	<p>Likelihood: 1 Consequence: 1</p>
<p>Upgrading drainage systems in nine (9) priority segments and outfalls</p>	<p>This activity will require roadworks to access existing drainage lines. The activity will not impact on greenfield locations; it will all be undertaken in existing locations. There are a number of potential impacts associated with the works including but not limited to the potential disturbance of acid sulphate soils, erosion and sediment movement during rainfall events and as a result of dust, all of which could have impacts on water quality, noise impacts from the use of jack hammers and excavators, the potential leakage of chemicals and oils, and other potential impacts</p>	<p>Likelihood: 5 Consequence: 2</p>	<p>The ESMP sets out appropriate mitigation measures for the impacts of the upgrading of the drainage lines.</p>	<p>Likelihood: 4 Consequence: 2</p>

### General Management Structure and Responsibilities under the ESMF and MP

36. The UNDP and MNRE are accountable for the provision of specialist advice on environmental and social issues to the contractor and for environmental and social monitoring and reporting. The MNRE will assess the environmental and social performance of the contractor in charge of construction throughout the project and ensure compliance with the ESMF and MP.
37. The MNRE will be responsible for monitoring the implementation of the ESMF and MP by relevant supervisory staff during construction. During operations the contractor will be accountable for implementation of the ESMF and MP. Contractors working on the projects have accountability for preventing or minimising environmental and social impacts.

### Administration

38. The MNRE will be responsible for the revision or updates of this document during the course of work. It is the responsibility of the person to whom the document is issued to ensure it is updated.
39. The site supervisor will be responsible for daily environmental inspections of the construction site. The MNRE will cross check these inspections by undertaking monthly audits.
40. The contractor will maintain and keep all administrative and environmental records which would include a log of complaints together with records of any measures taken to mitigate the cause of the complaints.
41. The contractor will be responsible for the day to day compliance of the ESMF and MP.
42. MNRE will be the implementing agency and will be responsible for the implementation and compliance with the ESMF and MP via the contractor. The ESMF and MP will be part of any tender documentation.
43. The Supervising Engineer/Project Manager will supervise the contractor, while the MNRE will be responsible for environment and social issues.

### Site Supervisor

44. The site supervisor is responsible for ensuring compliance with the ESMF and MP. The site supervisor will provide advice on effective environmental management of the project to the UNDP Staff, MNRE and engineers and all construction site personnel. The site supervisor is to also ensure the environmental awareness of project personnel is maintained through appropriate training. A compliance report on mitigation measures will be submitted by the UNDP to MNRE for the civil contractor. An independent review of the compliance may be undertaken during construction and post construction where deemed necessary.

### Environmental Procedures and Site and Activity-Specific Work Plans/Instructions

45. Environmental procedures provide a written method describing how the management objectives for a particular environmental element are to be obtained. They contain the necessary detail to be site or activity-specific and are required to be followed for all construction works. Site and activity-specific work plans and instructions are to be issued and will follow the previously successful work undertaking similar projects.

### Environmental Incident Reporting

46. Any incidents, including non-conformances to the procedures of the ESMF and MP are to be recorded using an Incident Record and the details entered into a register. For any incident that causes or has the potential to cause material or serious environmental harm, the site supervisor shall notify MNRE as soon as possible. The contractor must cease work until remediation has been completed as per the approval of MNRE.

### Daily and Weekly Environmental Inspection Checklists

47. A daily environmental checklist is to be completed at each work site by the relevant site supervisor and maintained within a register. The completed checklist is forwarded to MNRE for review and follow-up if any issues are identified. A weekly environmental checklist is to be completed and will include reference to any issues identified in the daily checklists completed by the Site Supervisors.

### Corrective Actions

48. Any non-conformances to the ESMF and MP are to be noted in weekly environmental inspections and logged into the register. Depending on the severity of the non-conformance, the site supervisor may specify a corrective action on the weekly site inspection report. The progress of all corrective actions will be tracked using the register. Any non-conformances and the issue of corrective actions are to be advised to MNRE.

### Review and Auditing

49. The ESMF and MP and its procedures are to be reviewed at least every two months by UNDP staff and MNRE. The objective of the review is to update the document to reflect knowledge gained during the course of construction operations and to reflect new knowledge and changed community standards (values). Any changes are to be developed and implemented in consultation with UNDP Staff and MNRE. When an update is made, all site personnel are to be made aware of the revision immediately through a tool box meeting.

### Training of Contractors

50. The main contractor has the responsibility for ensuring systems are in place so that relevant employees, contractors and sub-contractors are aware of the environmental and social requirements for construction, including the ESMF and MP.
51. All construction personnel will attend an induction that covers health, safety, environment and cultural requirements.
52. All staff and contractors engaged in any activity with the potential to cause serious environmental harm (e.g. handling of hazardous materials) will receive task specific environmental training.

### Public Consultation and Environmental and Social Disclosure

53. The ESMF and MP includes public consultation as part of their stakeholder engagement plan. The project was discussed with MNRE staff and approved by Government. On-ground consultations have been undertaken including with civil society in the design of the project and it is expected that consultation with any affected communities will continue. It is anticipated that based on the communities' needs, the projects will be fully accepted.
54. The UNDP and MNRE will develop and release Community Flyers on a regular basis to provide interested stakeholders with an update on the construction status of the projects. A publicised telephone number will be maintained throughout the construction of all projects to serve as a point of contact for enquiries, concerns and complaints. All enquiries, concerns and complaints will be recorded on a register and the appropriate manager will be informed. All material will be published in English as the official language of Samoa.
55. Where there is a community issue raised, the following information will be recorded:
  - a. time, date and nature of enquiry, complaint or concern;
  - b. type of communication (eg telephone, letter, personal contact);
  - c. name, contact address and contact number;
  - d. response and investigation undertaken as a result of the enquiry, complaint or concern; and

- e. actions taken and name of the person taking action.
- 56. Some enquiries, complaints and concerns may require an extended period to address. The complainant(s) will be kept informed of progress towards rectifying the concern. All enquiries, complaints and concerns will be investigated and a response given to the complainant in a timely manner. A Grievance Redress Mechanism has been included in the ESMF and MP to address any complaints that may not be able to resolved quickly.
- 57. A nominated contractor staff will be responsible for undertaking a review of all enquiries, complaints and concerns and ensuring progress toward resolution of each matter.
- 58. Details of consultations that have been undertaken as part of the preparation of the project are attached as Annexure One to the ESMF and MP.

### Complaints Register and Grievance Redress Mechanism

- 59. During the planning, construction and implementation phases of any project, a person or group of people can be adversely affected, directly or indirectly due to the project activities. The grievances that may arise can be related to social issues such as eligibility criteria and entitlements, disruption of services, temporary or permanent loss of livelihoods and other social and cultural issues. Grievances may also be related to environmental issues such as excessive dust generation, damages to infrastructure due to construction related vibrations or transportation of construction material and/or for example, river sediment, noise, traffic congestions, decrease in quality or quantity of private/public surface/ground water resources during river works etc.
- 60. Should such a situation arise, there must be a mechanism through which affected parties can resolve such issues in a cordial manner with the project personnel in an efficient, unbiased, transparent, timely and cost-effective manner. To achieve this objective, a grievance redress mechanism has been included in ESMF and MP for this project.
- 61. The project allows those that have a complaint or that feel aggrieved by the project to be able to communicate their concerns and/or grievances through an appropriate process. The Complaints Register and Grievance Redress Mechanism set out in this ESMF and MP and to be used as part of the project will provide an accessible, rapid fair and effective response to concerned stakeholders, especially any vulnerable group who often lack access to formal legal regimes.
- 62. While recognizing that many complaints may be resolved immediately, the Complaints Register and Grievance Redress Mechanism set out in this ESMF and MP encourages mutually acceptable resolution of issues as they arise. The Complaints Register and Grievance Redress Mechanism set out in this ESMF and MP has been designed to:
  - a. be a legitimate process that allows for trust to be built between stakeholder groups and assures stakeholders that their concerns will be assessed in a fair and transparent manner;
  - b. allow simple and streamlined access to the Complaints Register and Grievance Redress Mechanism for all stakeholders and provide adequate assistance for those that may have faced barriers in the past to be able to raise their concerns;
  - c. provide clear and known procedures for each stage of the Grievance Redress Mechanism process, and provides clarity on the types of outcomes available to individuals and groups;
  - d. ensure equitable treatment to all concerned and aggrieved individuals and groups through a consistent, formal approach that, is fair, informed and respectful to a complaint and/or concern;
  - e. to provide a transparent approach, by keeping any aggrieved individual/group informed of the progress of their complaint, the information that was used when assessing their complaint and information about the mechanisms that will be used to address it; and
  - f. enable continuous learning and improvements to the Grievance Redress Mechanism. Through continued assessment, the learnings may reduce potential complaints and grievances.

63. In order to ensure that any grievance that may arise is resolved in a manner that will accrue maximum benefits to both the project and affected parties, the following aspects were taken into consideration in developing the grievance redress mechanism:
  - a. special attention to cultural norms in Samoa;
  - b. will building on existing national mechanisms in Samoa;
  - c. ensure that community have information about the project activities, selection criteria and possible impact on them;
  - d. to build up productive relationships among the stakeholders including any affected parties;
  - e. provide a mechanism for the affected parties to negotiate and influence the decisions and policies of the project which might adversely affect them;
  - f. mitigate or prevent adverse impacts of the project on the environment and produce appropriate corrective or preventive action;
  - g. to harmonise project activities with the activities of potentially affected parties to avoid grievances or disputes if possible before they arise; and
  - h. should a grievance or dispute arise, provide a forum for addressing such issues at the lowest possible level so that they are resolved as and when they occur.
64. Eligibility criteria for the Grievance Redress Mechanism include:
  - a. Perceived negative economic, social or environmental impact on an individual and/or group, or concern about the potential to cause an impact;
  - b. clearly specified kind of impact that has occurred or has the potential to occur; and explanation of how the project caused or may cause such impact; and
  - c. individual and/or group filing of a complaint and/or grievance is impacted, or at risk of being impacted; or the individual and/or group filing a complaint and/or grievance demonstrates that it has authority from an individual and or group that have been or may potentially be impacted on to represent their interest.
65. The Grievance Redress Mechanism has been designed to be problem-solving mechanism with voluntary good-faith efforts. The Grievance Redress Mechanism is not a substitute for the legal process. The Grievance Redress Mechanism will as far as practicable, try to resolve complaints and/or grievances on terms that are mutually acceptable to all parties. When making a complaint and/or grievance, all parties must act at all times, in good faith and should not attempt to delay and or hinder any mutually acceptable resolution.
66. A complaints register will be established to record any concerns raised by the community during construction. Any complaint will be advised to the UNDP and MNRE within 24 hours of receiving the complaint. The complaint will be screened. Following the screening, complaints regarding corrupt practices will be referred to the UNDP for commentary and/or advice along with the Government of Samoa's Office of the Attorney General.
67. A summary list of complaints received and their disposition must be published in a report produced every six months in English.
68. In order to ensure smooth implementation of the Project and timely and effectively addressing of problems that may be encountered during implementation, a robust Grievance Redress Mechanism, which will enable MOF and MNRE to address the grievances of the stakeholders of the project has been established.
69. All complaints regarding social and environmental issues can be received either orally (to the field staff), by phone, in complaints box or in writing to the UNDP, MNRE or the Construction Contractor. A key part of the grievance redress mechanism is the requirement for the project proponent and construction contractor to maintain a register of complaints received at the respective project site offices. All complainants shall be treated respectfully, politely and with sensitivity. Every possible effort should be made by the project proponent and construction contractor to resolve the issues referred to in the

complaint within their purview. However, there may be certain problems that are more complex and cannot be solved through project-level mechanisms. Such grievances will be referred to the Grievance Redress Committee. It would be responsibility of the MNRE to solve these issues through a sound / robust process.

70. The Grievance Redress Mechanism has been designed to ensure that an individual and/or group are not financially impacted by the process of making a complaint. The Grievance Redress Mechanism will cover any reasonable costs in engaging a suitably qualified person to assist in the preparation of a legitimate complaint and/or grievance. Where a complaint and/or grievance is seen to be ineligible, the Grievance Redress Mechanism will not cover these costs.
71. Information about the Grievance Redress Mechanism and how to make a complaint must be placed at prominent places for the information of the key stakeholders.
72. The Safeguards officer in the PMU will be designated as the key officer in charge of the Grievance Redress Mechanism. The Terms of Reference for these positions (as amended from time to time) will have the following key responsibilities:
  - a. PMU – Safeguards Officer
    - (i) coordinate formation of Grievance Redress Committees before the commencement of constructions to resolve issues;
    - (ii) act as the focal point at the PMU on Grievance Redress issues and facilitate the resolution of issues within the PMU;
    - (iii) create awareness of the Grievance Redress Mechanism amongst all the stakeholders through public awareness campaigns;
    - (iv) assist in redress of all grievances by coordinating with the concerned parties;
    - (v) maintain information on grievances and redress;
    - (vi) monitor the activities of MNRE on grievances issues; and
    - (vii) prepare the progress for monthly/quarterly reports.
73. A two tier Grievance Redress Mechanism structure has been developed to address all complaints in the project. The first tier redress mechanism involves the receipt of a complaint at the local/village and/or Divisional Secretariat level. The stakeholders are informed of various points of making complaints (if any) and the PMU collect the complaints from these points on a regular basis and record them. This is followed by coordinating with the concerned people to redress the Grievances. The Safeguards Officer of the PMU will coordinate the activities at the respective Provincial level to address the grievances and would act as the focal point in this regard. The Community Development Officer of the Local Authority or in the absence of the Community Development Officer, any officer given the responsibility of this would coordinate with the Safeguards and Gender Manager of the PMU and MNRE in redressing the grievances. The designated officer of the Local Authorities is provided with sufficient training in the procedure of redress to continue such systems in future.
74. Following the receipt of a complaint, the following entities would be informed:
  - a. Pulenu'u of the Fono (village) under the *Village Fono Act 1990*;
  - b. Concerned High Chief (Tapa'au);
  - c. Sui ole Malo (women' representative);
  - d. A representative of the aumaga or untitled men; and
  - e. Safeguards Officer PMU.
75. The complaints can be made orally (to the field staff), by phone, in complaints box or in writing to the UNDP, MNRE or the Construction Contractor. Complainants may specifically contact the Safeguards Officer and request confidentiality if they have concerns about retaliation. In cases where confidentiality is requested (i.e. not revealing the complainant's identity to UNDP, MNRE and/or the Construction



Contractor). In these cases, the Safeguards Officer will review the complaint, discuss it with the complainant, and determine how best to engage project executing entities while preserving confidentiality for the complainant.

76. As soon as a complaint is received, the Safeguards Officer would issue an acknowledgement. The Community Development Officer receiving the complaint should try to obtain relevant basic information regarding the grievance and the complainant and will immediately inform the Safeguards Officer in the PMU.
77. The PMU will maintain a Complaint / Grievance Redress register at the Provincial Level. Keeping records collected from relevant bodies is the responsibility of PMU.
78. After registering the complaint, the Safeguards Officer will study the complaint made in detail and forward the complaint to the concerned officer with specific dates for replying and redressing the same. The Safeguards Officer will hold meetings with the affected persons / complainant and then attempt to find a solution to the complaint received. If necessary, meetings will be held with the concerned affected persons / complainant and the concerned officer to find a solution to the problem and develop plans to redress the grievance. The deliberations of the meetings and decisions taken are recorded. All meetings in connection with the Grievance Redress Mechanism, including the meetings of the Grievance Redress Committee, must be recorded. The Safeguards Officer for the Grievances Redress Mechanism will be actively involved in all activities.
79. The resolution at the first tier will be normally be completed within 15 working days and the complaint will be notified of the proposed response through a disclosure form. The resolution process should comply with the requirements of the Grievance Redress Mechanism in that it should, as far as practicable, be informal with all parties acting in good faith. Further, the Grievance Redress Mechanism should, as far as practicable, achieve mutually acceptable outcomes for all parties.
80. Should the grievance be not resolved within this period to the satisfaction of the complainant, the grievance will be referred to the next level of Grievance Redress Mechanism. If the social safeguard and gender officer feels that adequate solutions can be established within the next five working days, the officer can decide on retaining the issue at the first level by informing the complainant accordingly. However, if the complainant requests for an immediate transfer to the next level, the matter must be referred to the next tier. In any case, where the issue is not addressed within 20 working days, the matter is referred to the next level.
81. Any grievance related to corruption or any unethical practice should be referred immediately to the Government of Samoa's Office of the Attorney General and the Office of Audit and Investigation within the UNDP in New York.
82. Should the grievance not be resolved at the first tier, the aggrieved person can take the matter to court under the *Planning and Urban Management Act 2004*. All costs of the aggrieved person will be covered by the PMU. MNRE will closely liaise with the Ministry of Justice and Court Administration to ensure grievance are heard and resolved quickly.
83. The Social Safeguard and Gender Officer from the PMU will coordinate with the respective Commissioner of Local Government in getting these Committees constituted for each Province and get the necessary circulars issued in this regard so that they can be convened whenever required.
84. The Terms of Reference for the Grievance Redress Committee are:
  - a. providing support to the affected persons in solving their problems;
  - b. prioritise grievances and resolve them at the earliest;
  - c. provide information to the PMU and MNRE on serious cases at the earliest opportunity;
  - d. Coordinate with the aggrieved person/group and obtain proper and timely information on the solution worked out for his/her grievance; and
  - e. study the normally occurring grievances and advise PMU, National and Local Steering Committee on remedial actions to avoid further occurrences.

85. The Grievance Redress Committee will hold the necessary meetings with the aggrieved party/complainant and the concerned officer and attempt to find a solution acceptable at all levels. The Grievance Redress Committee would record the minutes of the meeting.
86. Grievance Redress Committee will communicate proposed responses to the complainant formally. If the proposed response satisfies the complainant, the response will be implemented and the complaint closed. In cases where a proposed response is unsatisfactory to the complainant, the Grievance Redress Committee may choose to revise the proposed response to meet the complainant's remaining concerns, or to indicate to the complainant that no other response appears feasible to the GRC. The complainant may decide to take a legal or any other recourse if s/he is not satisfied with the resolutions due to the deliberations of the three tiers of the grievance redress mechanism.
87. In addition to the project-level grievance redress mechanism, complainants have the option to access UNDP's Accountability Mechanism, with both compliance and grievance functions. The Social and Environmental Compliance Unit investigates allegations that UNDP's Standards, screening procedure or other UNDP social and environmental commitments are not being implemented adequately, and that harm may result to people or the environment. The Social and Environmental Compliance Unit is housed in the Office of Audit and Investigations, and managed by a Lead Compliance Officer. A compliance review is available to any community or individual with concerns about the impacts of a UNDP programme or project. The Social and Environmental Compliance Unit is mandated to independently and impartially investigate valid requests from locally impacted people, and to report its findings and recommendations publicly.
88. The Stakeholder Response Mechanism offers locally affected people an opportunity to work with other stakeholders to resolve concerns about the social and environmental impacts of a UNDP project. Stakeholder Response Mechanism is intended to supplement the proactive stakeholder engagement that is required of UNDP and its Implementing Partners throughout the project cycle. Communities and individuals may request an Stakeholder Response Mechanism process when they have used standard channels for project management and quality assurance, and are not satisfied with the response (in this case the project level grievance redress mechanism). When a valid Stakeholder Response Mechanism request is submitted, UNDP focal points at country, regional and headquarters levels will work with concerned stakeholders and Implementing Partners to address and resolve the concerns. Visit [www.undp.org/secu-srm](http://www.undp.org/secu-srm) for more details. The relevant form is attached at the end of the ESMF and MP.
89. The Safeguard Officer of the PMU will prepare the Quarterly Report on the Grievance Redressal issues of the Project for addition into the quarterly report.

## Key Environmental and Social Indicators

90. This section identifies the Key Environmental and Social Indicators identified for the project and outlines respective management objectives, potential impacts, control activities and the environmental performance criteria against which these indicators will be judged (i.e. auditable). This section further addresses the need for monitoring and reporting of environmental performance with the aim of communicating the success and failures of control procedures, distinguish issues which require rectification and identify measures which will provide continuous improvement in the processes by which the projects are managed.

## Water Quality

91. The Vaisigano River flows north through Apia and drains an area of around 34 km<sup>2</sup>. The river is the largest river on Upolu. The Vaisigano River is one of the main sources of water in Apia, and also feeds two hydroelectric stations, which supply the bulk of the city's electricity. The floodplain comprises a mixture of businesses and nine village communities. The area is prone to flooding whenever there is an overflow in Vaisigano River as a result of intense rainfall and as such, is a disturbed environment. Further, the coastal parts of the area were originally wetland and coastal marshlands that have been reclaimed. Approximately 80 per cent of the region is residential, although it also comprises a number of small hydro-electric dam, hotels, schools and businesses.
92. Samoa's climate is characterised by high rainfall and humidity, near-uniform temperatures throughout the year, the dominance of south-easterly trade winds and the occurrence of tropical cyclones. Samoa has a wet tropical climate with temperatures ranging between 17°C and 34°C and an average temperature of 26.5°C. Samoa's climate is normally driven by the South Pacific Convergence Zone and El Nino Southern Oscillation (ENSO). ENSO is a natural phenomenon that occurs on a global scale but mainly affects countries in the Pacific Ocean. ENSO has two phases - La Nina and El Nino - but also a neutral phase between the two. During a La Nina year, Samoa experiences flooding in downtown Apia as a result of extreme rainfall. Samoa is also vulnerable to anomalously long dry spells that coincide with El Niño years. Drought and forest fires are most prevalent during the dry season in the northwest division of Savaii, due to the coinciding effects of El Nino such as low rainfall and a prolonged dry season.
93. Specific water quality issues in the Apia catchments have been identified in the Watershed Management Plans made in 2012 under the *Water Resources Management Act 2008* for each of the catchments. They include
- Soil erosion resulting from heavy rain exacerbated by removal of forest cover;
  - Mass movements – landslides on unstable slopes;
  - Degradation of forest cover for farming, and subsequent invasive plants;
  - Waste dumping;
  - Farm effluents (cattle);
  - Agricultural chemicals;
  - Hospital waste discharge;
  - Septic leachate;
  - Upland urbanisation increasing pressure on water resource catchments; and
  - Community behaviour and land tenure
94. By undertaking some of the works proposed as part of this project, the project will actually improve water quality in the Vaisigano River.
95. No baseline data has been collected at the site; however, prior to the commencement of works, baseline data will be collected to develop a suitable monitoring regime.

### Performance Criteria

96. The following performance criteria are set for the construction of the projects:
- a. no significant decrease in water quality as a result of construction and operational activities;
  - b. no significant decrease in the quality and quantity of surface and/or groundwater as a result of construction and operational activities in proximity to the projects;
  - c. water quality shall conform to any approval conditions stipulated by UNDP, MNRE and/or other government departments, or in the absence of such conditions follow a 'no worsening' methodology;
  - d. no offsite impact will occur other than through the release of brine into the environment; and
  - e. effective implementation of site-specific Erosion, Drainage and Sediment Control Plan (EDSCP).
97. By following the management measures set out in the ESMF and MP, the construction of river works, bridges and drainage and revegetation upstream will not have a significant impact on water quality across the broader area.

### Monitoring

98. A standardised water quality monitoring program has been developed for the project. The program is subject to review and update at least every two months from the date of issue. The site supervisor will be required to conduct a visual inspection and take water samples as appropriate for nitrates, phosphates, faecal coliforms, heavy metals, turbidity and oil/grease within or adjacent to their work area as a part of the daily site inspection checklist.

### Reporting

99. All water quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF and MP. The MNRE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to water quality is exceeded.

Table 1: Water Quality Management Measures

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
W1: Elevated suspended solids, nitrates, phosphates, faecal coliforms, heavy metals, silt content and turbidity in surface/ground water systems.	W1.1: Develop and implement a site specific Erosion, Drainage and Sediment Control Plan (EDSCP) to address drainage control, sediment and erosion controls and stockpiling of materials including soil during construction of all components of the projects. EDSCP measures to be inspected regularly to ensure all devices are functioning effectively.	Pre Earthworks	Site Supervisor	Initial set up and then as required with reporting to MNRE and UNDP
	W1.2: Designated areas for storage of fuels, oils, chemicals or other hazardous liquids should have compacted impermeable bases and be surrounded by a bund to contain any spillage. Refuelling to be undertaken in areas away from aquatic systems.	Entire construction and operation phase	All Personnel	Weekly with reporting to MNRE and UNDP
	W1.3: Conduct regular surface and groundwater quality monitoring in location where the groundwater is likely to be impacted including assessing the changes to groundwater quality. Parameters to be monitored could include <i>E.coli</i> , pH, total suspended solids, Residual Chlorine, Nitrate, Nitrite, Ammonia, potassium, surfactants, conductivity, soap, oils and grease and waxes, Phenolic compounds as phenol, heavy metals and acute toxicity	Entire construction and operation phase	Site Supervisor	Weekly and as required with reporting to MNRE and UNDP
	W1.4: Schedule works in stages to ensure that disturbed areas are revegetated and stabilised progressively and as soon as practicable after completion of works.	Pre Earthworks - Works not be undertaken during wet season	Site Supervisor and MNRE	Maintain records
	W1.5: Construction materials will not be stockpiled in proximity to aquatic environment that may allow for release into the environment. Construction equipment will be removed from in proximity to the aquatic environment at the end of each working day or if heavy rainfall is predicted	Entire construction and operation phase	Site Supervisor	Maintain daily records

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
W2: Eutrophication of surrounding aquatic environments and impacts from elevated nutrient levels.	W2.1 Minimise the release of clays and very fine silts into the aquatic environment through the installation of sediment basins, rock checks and sediment fences in appropriate places as outlined in the EDSCPs. Sediment control structures to be inspected regularly.	Entire construction phase	All Personnel	Weekly with reporting to MNRE and UNDP
	W2.2 Disturbance of vegetation and drainage lines to be limited to that required for construction works.	Entire construction phase	All Personnel	Weekly with reporting to MNRE and UNDP
	W2.3 Manage the application of fertilisers and other chemicals (if required during rehabilitation/revegetation of any site) to ensure that over application does not occur.	Post Construction	Site Supervisor	Maintain records
W3: Increase of gross pollutants, hydrocarbons, metals and other chemical pollutants including residue from the construction works into the groundwater and/or surface water environment.	W3.1: Reuse suitable water runoff from site to supplement construction water supply.	All phases	All Personnel	Weekly with reporting to MNRE and UNDP
	W3.2: Designated areas for storage of fuels, oils, chemicals or other hazardous liquids should: 1. Have compacted impermeable bases; and 2. Surrounded by a bund to contain any spillage.	All phases	All Personnel	Weekly with reporting to MNRE and UNDP
	W3.3: Check all vehicles, equipment and material storage areas daily for possible fuel, oil and chemical leaks. Undertake refuelling at designated places away from water systems.	All phases	All Personnel	Daily and maintain records
	W3.4: Rubbish and waste materials to be placed in suitable facilities to ensure that they do not enter aquatic environments. Ensure all absorbent material is placed in contaminant bags prior to removal.	All phases	All Personnel	Weekly reporting to MNRE and UNDP
	W3.5: Minimise the use of herbicides and use only biodegradable herbicides that have minimal impact on water quality and fauna. Use only as per directions.	All phases	All personnel	Maintain records
	W3.6: Ensure any release of waste from the drainage works is managed so as not to cause any adverse impacts	All phases	All Personnel	Weekly reporting to MNRE and UNDP



### Erosion, Drainage and Sediment Control

100. All of the Samoan Islands are tectonically and volcanically very active, having been formed very recently (in geological time). Further volcanic activity cannot be ruled out, but is most likely to occur well to the east of Apia, if/when it occurs. Fresh unweathered basalt is abundantly available for building stone. Otherwise there are few, if any, rock or mineral resources to develop. The islands may be thought of as barely emergent seamounts, rising some 4.5km above the surrounding abyssal plain. Upolu's coastline is about 60% protected by fringing coral reefs. The continuing viability of these fringing reefs is under threat from climate change and other factors including land based pollution and sediment discharge.
101. Activities that could result in erosion, drainage and sediment impacts include
  - a. Excavation of the river bank in preparation for the construction of infrastructure;
  - b. Soil disturbance during the revegetation activities especially if undertaken in wet periods;
  - c. Clearing the river of weeds and debris; and
  - d. Sediment movement during drainage works.
102. Soil erosion also depends on several other parameters such as type of soil, slope, vegetation and the nature of topography. The loss of soil stability and soil erosion can take place due to the removal of vegetation cover, and numerous construction activities. It can cause the loss of soil fertility and induce slope instability. No new access roads are proposed nor is it proposed to alter natural flow paths in the area, although temporary works could result in blockage or alteration of natural flow paths. Effective and efficient mitigation measures can not only reduce, but could improve the conditions over the existing conditions.
103. Soil productivity could decline due to erosion unless steps are taken to control it. Importantly, all sediment removed from the river and drainage work will be assessed, and where practicable, will be reused and placed on agricultural lands or other beneficial reuse options.
104. As the geotechnical surveys that have been undertaken have not assessed the substrate for the potential for acid sulfate soils (ASS) and/or potential acid sulfate soils (PASS), it is therefore assumed they may occur as would normally be observed in areas of mangrove (mangroves were observed in the overflow drainage line of the Vaisigano River). Deposits of ASS are commonly found less than five metres ASL, particularly in low-lying coastal areas which is where all the projects will occur. Mangroves, salt marshes, floodplains, swamps, wetlands, estuaries and brackish or tidal lakes are ideal areas for ASS formation and therefore there is the potential for it to observe in the project locations.
105. Any sediment movement may also expose ASS. Deposits of ASS are commonly found less than five meters above sea level, particularly in low-lying coastal areas which is where a number of the project's activities will occur. Mangroves, salt marshes, floodplains, swamps, wetlands, estuaries and brackish or tidal lakes are ideal areas for ASS formation and therefore there is the potential for it to observe in the project's location. Mitigative controls could potentially be required for the management of ASS and/or PASS during any excavation works due to their locations close to coastal areas. ASS are naturally occurring soils, sediments or organic substrates that are formed under waterlogged conditions. Deposits of ASS are commonly found in less than five meters ASL, particularly in low-lying coastal areas. The presence of ASS may not be obvious on the soil surface as they are often buried beneath layers of more recently deposited soils and sediments of alluvial or aeolian origin. These soils contain iron sulfide minerals (predominantly as the mineral pyrite) or their oxidation products. In an undisturbed state below the water table, ASS are benign. However if the soils are drained, excavated or exposed to air by a lowering of the water table, the sulfides react with oxygen to form sulfuric acid. The release of this sulfuric acid from the soil can in turn release iron, aluminum and other heavy metals (particularly arsenic) within the soil. Once mobilised, the acid and metals can create a variety of adverse impacts including killing vegetation, seeping into and acidifying groundwater and water bodies, killing fish and other aquatic organisms and degrading concrete and steel structures to the point of failure.
106. Prior to any excavation, sediments should be tested for their presence of ASS or PASS. Sampling should be undertaken consistent with that proposed by the Queensland Acid Sulfate Soils Investigation Team as described in Ahern *et al* (2014) and laboratory analysis consistent with Ahern *et al* (2004). If the analysis proves positive, the sediment can be treated by a range of techniques including but not limited to liming the sediment. The contractor should refer to management measures provided by for example by Dear *et al* (2002) to mitigate the impacts. Of critical importance for ground water quality

especially as this is the source of potable water in many areas, one of the most significant impacts is via infiltration into the water table from an ASS stockpiling/treatment area. To reduce this impact, a compacted clay liner should be developed including where possible limed clay although this may reduce the efficiency of compaction and hence increase the permeability of the liner. Every effort should be made to ensure there is no direct or residual impact following treatment.

### Performance Criteria

107. The following performance criteria are set for the construction of the projects:
- no build-up of sediment in the aquatic environments and/or surface and/or groundwater as a result of construction and operation activities;
  - no degradation of water quality on or off site of all projects;
  - all water exiting the project site and/or into groundwater systems is to have passed through best practice erosion, drainage and sediment controls;
  - preferably no disturbance of ASS or PASS; however if there is disturbance, compliance with the management measures discussed above; and
  - effective implementation of site-specific EDSCP.
108. By following the management measures set out in the ESMF and MP, construction and operation activities of the projects will not have a significant impact as a result of sedimentation across the broader area.

### Monitoring

109. A standardised sediment control monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. The site supervisor will be required to:
- conduct site inspections on a weekly basis or after rainfall events exceeding 20mm in a 24 hour period;
  - develop a site-specific checklist to document non-conformances to this ESMF and MP or any applicable EDSCPs; and
  - communicate the results of inspections and/or water quality testing to the Site Supervisor and ensure that any issues associated with control failures are rapidly rectified and processes are put in place to ensure that similar failures are not repeated.
110. It is the responsibility of the site supervisor to:
- conduct daily inspections of EDS control measures as part of the Daily Check Procedure; and
  - consult MNRE and UNDP staff when a non-conformance is suspected and amend accordingly.

### Reporting

111. All sediment and erosion control monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF and MP. The MNRE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to erosion and sediment control is exceeded.

**Table 2: Erosion, Drainage, Sediment Control Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
E1: Loss of soil material and sedimentation to the surface and/or groundwater systems from site due to earthwork activities	E1.1: Develop and implement an EDSCP for any surface works, embankments and excavation work, water crossings and stormwater pathways.	Entire construction phase	All Personnel	Maintain records
	E1.2: Ensure that erosion and sediment control devices are installed, inspected and maintained as required.	Entire construction phase	All Personnel	Maintain records
	E1.3: Schedule/stage works to minimise cleared areas and exposed soils at all times.	Pre and during construction	Site Supervisor	Maintain records
	E1.4: Incorporate the design and location of temporary and permanent EDSC measures for all exposed areas and drainage lines. These shall be implemented prior to pre-construction activities and shall remain onsite during work	Pre and during construction	Site Supervisor	Maintain records
	E1.5: Schedule/stage proposed works to ensure that major vegetation disturbance and earthworks are carried out during periods of lower rainfall and wind speeds.	Pre and during construction	Site Supervisor	Maintain records
	E1.6: Strip and stockpile topsoil for use during revegetation and/or place removed soils back on to agricultural lands or other beneficial reuse options.	Pre and during construction	Site Supervisor	Maintain records
	E1.7: Schedule/stage works to minimise the duration of stockpiling topsoil material. Vegetate stockpiles if storage required for long periods.	During construction	All Personnel	Maintain records
	E1.8: Locate stockpile areas away from drainage pathways, waterways and sensitive locations.	Pre and during construction	Site Supervisor	Maintain records
	E1.9: Design stormwater management measures to reduce flow velocities and avoid concentrating runoff.	Pre and during construction	Site Supervisor	Maintain records
	E1.10: Include check dams in drainage lines where necessary to reduce flow velocities and provide some filtration of sediment. Regularly inspect and maintain check dams.	Pre and during construction	Site Supervisor	Maintain records

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
E1: Loss of soil material and sedimentation	E1.11: Mulching shall be used as a form of erosion and sediment control and where used on any slopes (dependent on site selection), include extra sediment fencing during high rainfall.	During construction	All Personnel	Maintain records
	E1.12: Bunding shall be used either within watercourses or around sensitive/dangerous goods as necessary.	During construction	All Personnel	Maintain records
	E1.13: Grassed buffer strips shall be incorporated where necessary during construction to reduce water velocity.	During construction	Site Supervisor	Maintain records
	E1.14: Silt curtain to be installed to protect from increased sediment loads.	During construction	Contractors	Maintain records
	E1.15: Excess sediment in all erosion and sediment control structures (eg. sediment basins, check dams) shall be removed when necessary to allow for adequate holding capacity.	During construction	Contractors	Maintain records
E2: Soil contamination	E2.1: If contamination is uncovered or suspected (outside of the project footprints), undertake a Stage 1 preliminary site contamination investigation. The contractor should cease work if previously unidentified contamination is encountered and activate management procedures and obtain advice/permits/approval (as required).	Entire construction phase	All Personnel	Daily and maintain records
	E2.2: Adherence to best practice for the removal and disposal of contaminated soil/ material from site (if required), including contaminated soil within the project footprints.	Entire construction phase	All Personnel	Daily and maintain records
	E2.3: Drainage control measures to ensure runoff does not contact contaminated areas (including contaminated material within the project footprints) and is directed/diverted to stable areas for release.	Entire construction phase	All Personnel	Daily and maintain records
	E2.4: Avoid importing fill that may result in site contamination and lacks accompanying certification/documentation. Where fill is not available through on site cut, it must be tested in accordance with geotechnical specifications.	Entire construction phase	All Personnel	Daily and maintain records
	E2.5: Ensure no impact of ASS/PASS on water quality and groundwater systems. Where observed, ensure compliance with best practice for the sampling, analysis and handing of all ASS/PASS.	Entire construction phase	All Personnel	Daily and maintain records

### Noise and Vibration

112. All construction and operation activities have the potential to cause noise nuisance. Vibration disturbance to nearby residents and sensitive habitats is likely to be caused through the use of vibrating equipment. Blasting is not required to be undertaken as part of this project.
113. While there is no specific noise and vibration data for Apia, it would be expected that it would have low to medium levels of noise pollution being a larger urban centre in the Pacific.
114. It is assumed that there are no sensitive receptors in proximity to the projects although it is noted that there are a number of properties in close proximity to the river bank construction, bridge upgrade and drainage works that may be impacted by noise and vibration..
115. Contractors involved in construction and rehabilitation activities should be familiar with methods of controlling noisy machines and alternative construction procedures as contained within specific Samoan legislation or in its absence, international good practice may be used if the legislation has not been enacted.
116. The detail, typical equipment sound power levels, provides advice on project supervision and gives guidance noise reduction. Potential noise sources during construction may include:
  - a. excavation equipment for the removal of sediment and re-design of the river banks for construction;
  - b. excavation and other equipment involved in the construction of the bridge;
  - c. excavation and other equipment involved in the drainage works;
  - d. delivery vehicles;
  - e. pumps; and
  - f. power tools and compressors.

### Performance Criteria

117. The following performance criteria are set for the construction of the projects:
  - a. noise from construction and operational activities must not cause an environmental nuisance at any noise sensitive place eg be undertaken between 7am and 5pm Monday to Friday and 7am-3pm on a Saturday (no work to be undertaken on a Sunday);
  - b. undertake measures at all times to assist in minimising the noise associated with construction activities;
  - c. no damage to off-site property caused by vibration from construction and operation activities; and
  - d. corrective action to respond to complaints is to occur within 48 hours.

### Monitoring

118. A standardised noise monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will:
  - a. ensure equipment and machinery is regularly maintained and appropriately operated
  - b. carry out potentially noisy construction activities during daylight hours only; eg 7am and 5pm; and 7am-3pm on a Saturday.

### Reporting

119. All noise monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF and MP. The MNRE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to noise is exceeded.

**Table 3: Noise and Vibration Management Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
N1: Increased noise levels	N1.1: Select plant and equipment and specific design work practices to ensure that noise emissions are minimised during construction and operation including all pumping equipment.	All phases	Contractor	Maintain records
	N1.2: Specific noise reduction devices such as silencers, mufflers and/or acoustic rock breaking heads shall be installed as appropriate to site plant and equipment.	Pre and during construction	Contractor	Maintain records
	N1.3 Minimise the need for and limit the emissions as far as practicable if noise generating construction works are to be carried out outside of the hours: 7am-5pm (Mon - Fri).	Construction phase	All Personnel	Daily and maintain records
	N1.4: Consultation with nearby residents in advance of construction activities particularly if noise generating construction activities are to be carried out outside of the hours: 7am-5pm (Mon - Fri) and 7am-3pm (Saturday).	Construction phase	All Personnel	Daily and maintain records
	N1.5 The use of substitution control strategies shall be implemented, whereby excessive noise generating equipment items onsite are replaced with other alternatives.	Construction phase	All Personnel	Daily and maintain records
	N1.6 Provide temporary construction noise barriers in the form of solid hoardings where there may be an impact on specific residents.	Construction phase	Site Supervisor	Daily and maintain records
	N1.7 All incidents complaints and non-compliances related to noise shall be reported in accordance with the site incident reporting procedures and summarised in the register.	Construction phase	Site Supervisor	Maintain records
	N1.8 The contractor should conduct employee and operator training to improve awareness of the need to minimise excessive noise in work practices through implementation of measures.	Pre and during construction	Contractor	Maintain records
N2. Vibration due to construction	N2.1: Identify properties, structures and habitat locations that will be sensitive to vibration impacts resulting from construction and operation of the project.	Pre and during construction	Contractor	Maintain records
	N2.2: Design to give due regard to temporary and permanent mitigation measures for noise and vibration from construction and operational vibration impacts.	Pre-construction	Contractor	Maintain records
	N2.3: All incidents, complaints and con-compliances related to vibration shall be reported in accordance with the site incident reporting procedures and summarised in the register.	Construction phase	Site Supervisor	Maintain records
	N2.4: During construction, standard measure shall be taken to locate and protect underground services from construction and operational vibration impacts.	Construction phase	Site Supervisor	Maintain records



### Air Quality

120. While there is no specific air quality data for Apia, it would be expected that it would have low to medium levels of air pollution being a larger urban centre in the Pacific.
121. All construction and rehabilitation activities have the potential to cause air quality nuisance.
122. Vibration disturbance to nearby residents is likely to be caused through the use of construction traffic and excavators etc. Blasting is not required to be undertaken as part of this project.
123. Contractors involved in construction and operation activities should be familiar with methods minimising the impacts of deleterious air quality and alternative construction procedures as contained in Samoa legislation.

### Performance Criteria

124. The following performance criteria are set for the construction of the projects:
  - a. release of dust/particle matter must not cause an environmental nuisance;
  - b. undertake measures at all times to assist in minimising the air quality impacts associated with construction and operation activities; and
  - c. corrective action to respond to complaints is to occur within 48 hours.

### Monitoring

125. A standardised air monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will:
  - a. ensure all stockpiles are covered so as to not allow dust to generate; and
  - b. the requirement for dust suppression will be visually observed by all personnel daily and by MNRE and UNDP staff when undertaking routine site inspections (minimum frequency of once per week).

### Reporting

126. All air quality monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF and MP. The MNRE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to air quality is exceeded.

## Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL  
GREEN CLIMATE FUND FUNDING PROPOSAL

**Table 4: Air Quality Management Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
A1: Increase in dust levels at sensitive locations	A1.1: Implement effective dust management measures in all areas during design, construction and operation.	Pre and during construction	All Personnel	Daily and maintain records
	A1.2: Install dust gauges at locations identified for construction lay down and stockpiling within the project footprints.	During construction	Site Supervisor	Daily and Weekly Reports
	A1.3: Manage dust/particulate matter generating activities to ensure that emissions do not cause an environmental nuisance at any sensitive locations	During construction	Site Supervisor	Daily and maintain records
	A1.4: Construction activities should minimising risks associated with climatic events.	During construction	Site Supervisor	Daily and maintain records
	A1.5: Implement scheduling/staging of proposed works to ensure major vegetation disturbance and earthworks are minimised.	During construction	Contractor	Daily and maintain records
	A1.6: Ensure that materials to be stockpiled onsite are not ordered and/or purchased until they are required for works.	During construction	Contractor	Daily and maintain records
	A1.7: Locate material stockpile areas as far as practicable from sensitive receptors.	During construction	Site Supervisor	Daily and maintain records
	A1.8: Source sufficient water of a suitable quality for dust suppression activities complying with any water restrictions.	During construction	Site Supervisor	Daily and maintain records
	A1.9: Schedule revegetation activities to ensure optimum survival of vegetation species.	During construction	Site Supervisor	Maintain records
	A1.10: Ensure an air quality management plan is developed and implemented.	Pre and during construction	Contractor	Maintain records
	A1.11: Rubbish skips and receptacles should be covered and located as far as practicable from sensitive locations.	During construction	Site Supervisor	Maintain records
	A1.12: Restrict speeds on haul roads and access tracks.	During construction	Site Supervisor	Daily and maintain records
	A1.13: Cover loads of haul trucks and equipment and plant when not in use and in transit.	During construction	Site Supervisor	Daily and maintain records

## Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
A2. Increase in vehicle emissions (including odorous and fumes)	A2.1 Ensure construction vehicles are switched off when not in use.	During construction	Site Supervisor	Daily and maintain records
	A2.2 Ensure only vehicles required to undertake works are operated onsite.	During construction	Site Supervisor	Daily and maintain records
	A2.3 Ensure all construction vehicles, plant and machinery are maintained and operated in accordance with design standards and specifications.	During construction	Site Supervisor	Daily and maintain records
	A2.4 Develop and implement an induction program for all site personnel, which includes as a minimum an outline of the minimum requirements for environmental management relating to the site.	Pre and during construction	Contractor	Daily and maintain records
	A2.5 Locate construction car park and vehicle/plant/equipment storage areas as far as practicable from sensitive locations.	During construction	Site Supervisor	Daily and maintain records
	A2.6 Direct exhaust emissions of mobile plant away from the ground.	During construction	Site Supervisor	Daily and maintain records
	A2.7 Rubbish skips and receptacles should be covered and located as far as practicable from sensitive locations.	During construction	Site Supervisor	Daily and maintain records

### Flora and Fauna

127. It is known that the majority of the project areas have been previously disturbed although vegetation still exist in the upper catchment. Further, it is known that the project works will be located in areas that do not contain important terrestrial habitats.
128. The landscape of the Greater Apia Catchment generally consists of a narrow coastal plain, with rocky, rugged, volcanic terrains making up the inner parts of the islands. The vegetation in these areas is primarily composed of lowland and montane rain forests, with small areas of riverine, swamp, mangrove, and beach forest. The islands have undergone extensive deforestation, as a consequence of timber operations and clearance of land for agriculture. A large proportion of the lowland forest around Apia has been cleared or highly modified, but the montane forests are less disturbed and have a rich variety of endemic flora and fauna. The coastal plains of the City have historically accommodated urban development, however over the last 15 yrs there is a tendency to see urban drift through the mid-slopes and up into the elevated steep areas.
129. While no specific flora and fauna surveys have been undertaken of the project area, the literature suggests that there is a high diversity of flora specific that are natural and/or human plants. There
130. The avifauna of Samoa include a total of 82 species, of which ten are endemic, five exotic and 23 are rare or accidental. Seven species are globally threatened. There is anecdotal evidence to suggest that one of the rare species may occur in the catchment. There are nine mammal species of which 1 is endangered and 2 are vulnerable. The project is unlikely to have direct impacts on these species.
131. There are two national parks Mt Vaea and Lake Lanotoo and two reserves Malololelei reserve and Palolo deep reserve. The Mt Vaea Nature Reserve is located approximately 4km inland (south) of central Apia, on the south and east facing slopes of Mt Vaea, an ancient volcano from the Fagaloa volcanics. The total area of the reserve is approximately 79.6ha (196.6 acres). It should be noted that the boundaries of the Mt Vaea Nature Reserve shown in thie Operational Plan are only approximate and are soon to be re-surveyed. Notwithstanding, the project will not impact on these locations.
132. With respect to aquatic fauna, a 2008 study reported observing 30 species of fish and 17 species of macro- crustaceans. Three of the fish species observed and eight species of crustaceans were new records for Samoa. Up to six fish species observed are endemic, and one endemic crustacean; however these remain to be confirmed. Result from the study suggested that there were approximately 86 species of fresh and estuarine fish species; and an aggregated total of 22 crustaceans. Further, there are 16 species in two genera of freshwater snails, these being twelve species of Neritidae and four of Neritiliidae. Freshwater flora remains unstudied.
133. There is one introduced species of freshwater prawn (*Macrobrachium rosenbergii*), while there are numerous fish species including two Tilapia species (*Oreochromis mossambicus* and *O. Niloticus*), a goldfish species (*Carassius auratus auratus*), the mosquito fish (*Gambusia affinis*) and one species of shortfin molly (*Poecilia reticulata*).

### Performance Criteria

134. The following performance criteria are set for the construction of the projects:
  - a. no clearance of vegetation outside of the designated clearing boundaries;
  - b. no death to native fauna as a result of clearing activities;
  - c. no deleterious impacts on aquatic environments and terrestrial habitats;
  - d. no introduction of *new* weed species as a result of construction activities;
  - e. no increase in *existing* weed proliferation within or outside of the corridor as a result of construction activities; and
  - f. successful establishment of rehabilitation works incorporating species native to the local area.

## Monitoring

135. A flora and fauna monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor will when undertaking clearing works, will compile a weekly report to MNRE and UNDP staff outlining:
- a. any non-conformances to this ESMF and MP;
  - b. the areas that have been rehabilitated during the preceding week; and
  - c. details of the corrective action undertaken.

## Reporting

136. All flora and fauna monitoring results and/or incidents will be tabulated and reported as outlined in the ESMF and MP. The MNRE must be notified immediately in the event of any suspected instances of death to fauna and where vegetation is detrimental impacted.

**Table 5: Flora and Fauna Management Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
FF1. Habitat loss and disturbance of fauna	FF1.1 Limit vegetation clearing and minimise habitat disturbance through adequate protection and management of retained vegetation.	During construction	Site Supervisor	Daily and maintain records
	FF1.2: Minimise noise levels and lighting intrusion throughout construction and operation in the vicinity of any sensitive locations.	During construction	Site Supervisor	Daily and maintain records
	FF1.3: Ensure that all site personnel are made aware of sensitive fauna/habitat areas and the requirements for the protection of these areas.	During construction	Contractor	Daily and maintain records
	FF1.4 Minimise disturbance to onsite fauna and recover and rescue any injured or orphaned fauna during construction and operation.	During construction	Contractor	Daily and maintain records, report to MNRE
FF2. Introduced flora and weed species	FF2.1: Implement an EDSCP to reduce the spread of weeds through erosion and sediment entering any waterways and therefore spreading.	Pre and during construction	Contractor	Maintain records
	FF2.2: Revegetate disturbed areas using native and locally endemic species that have high habitat value.	During construction	Site Supervisor	As required and maintain records
	FF2.3: Minimise disturbance to mature remnant vegetation, particularly canopy trees.	During construction	Site Supervisor	Daily and maintain records
	FF2.4: The removal of regrowth native trees should be minimised particularly where the width of a forest is narrow.	During construction	Site Supervisor	Daily and maintain records
	FF2.5: Small trees and shrubs shall be removed in preference to large trees.	During construction	Site Supervisor	Daily and maintain records
	FF2.6: Vegetation to be removed shall be clearly marked using paint or flagging tape.	During construction	Site Supervisor	Daily and maintain records
FF2. Introduced flora and weed species	FF2.7: Environmental weeds and noxious weeds within the project footprints shall be controlled.	During and post construction	Site Supervisor	Weekly and maintain records



### Waste Management

137. The MNRE advocates good waste management practice. The preferred waste management hierarchy and principles for achieving good waste management is as follows:
- waste avoidance (avoid using unnecessary material on the projects) ;
  - waste re-use (re-use material and reduce disposing);
  - waste recycling (recycle material such as cans, bottles, etc.); and
  - waste disposal (all petruscible and used sterilisation and purification filters to be dumped at approved landfills).
138. The key waste streams generated during construction are likely to include residual sediment from both the river and drainage works, vegetation, construction materials and materials from the replacement of the Lelota Bridge. This will include, but not limited to, shrubs/trees, pavements, power poles etc. The wastes to be generated will mostly be vegetation-based and also include:
- the excavation wastes unsuitable for reuse during earthworks;
  - wastes from construction equipment maintenance. Various heavy vehicles and construction equipment will be utilised for the duration of the construction phase. Liquid hazardous wastes from cleaning, repairing and maintenance of this equipment may be generated. Likewise leakage or spillage of fuels/oils within the site needs to be managed and disposed of appropriately;
  - non-hazardous liquid wastes will be generated through the use of workers' facilities such as toilets; and
  - general wastes including scrap materials and biodegradable wastes
139. Contractors involved in construction and operational activities should be familiar with methods minimising the impacts of clearing vegetation to minimise the footprint to that essential for the works and rehabilitate disturbed areas. By doing these activities, the projects should minimise the impact of waste generated by the project.

### Performance Criteria

140. The following performance criteria are set for the construction of the projects:
- waste generation is minimised through the implementation of the waste hierarchy (avoidance, reduce, reuse, recycle);
  - no litter will be observed within the project corridor or surrounds as a result of activities by site personnel;
  - no complaints received regarding waste generation and management;
  - any waste from on-site portable sanitary facilities will be sent off site for disposal by a waste licensed contractor; and
  - waste oils obtained from the oil separator will be collected and disposed or recycled off-site, local oil companies or shipped for recycling.

### Monitoring

141. A waste management monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue.



### Reporting

142. The MNRE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level with respect to waste is exceeded.

**Table 6: Waste Management Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
WT1: Production of wastes and excessive use of resources	WT1.1: Preference shall be given to materials that can be used to construct the project that would reduce the direct and indirect waste generated.	Pre and during construction	Contractor	Maintain records
	WT1.2: Consideration shall be given to the use of recycled aggregates and fly-ash cement mixes for construction of the river works and bridge.	Pre and during construction	Contractor	Maintain records
	WT1.3: Daily waste practices shall be carried out unless these are delegated to the activities of external waste management bodies.	During construction	Site Supervisor	Daily and maintain records
	WT1.4: The use of construction materials shall be optimised and where possible a recycling policy adopted.	During construction	Site Supervisor	Weekly and maintain records
	WT1.5: Separate waste streams shall be maintained at all times i.e. general domestic waste, construction waste and contaminated waste. Specific areas on site shall be designated for the temporary management of the various waste streams. Adequate signage and colour coded bins will be used for each waste streams.	During construction	Site Supervisor	Weekly and maintain records
	WT1.6: Any contaminated waste shall be disposed of at an approved landfill.	During construction	Site Supervisor	Weekly and maintain records
	WT1.7: Recyclable waste (including oil and some construction waste) shall be collected separately and disposed of correctly.	During construction	Site Supervisor	Weekly and maintain records
	WT1.8: Waste sites shall be sufficiently covered daily to ensure that wildlife does not have access.	During construction	Site Supervisor	Daily
	WT1.9: Disposal of waste including all filters shall be carried out in accordance with the Government of Samoan requirements.	During construction	Site Supervisor	Weekly and maintain records
	WT1.10: Fuel and lubricant leakages from vehicles and plant shall be immediately rectified.	During construction	Site Supervisor	Daily and maintain records
	WT1.11: Where possible, concrete batching plants shall be centrally located to minimise the occurrence of concrete batching at individual construction locations.	Pre and during construction	Contractor	Maintain records
	WT1.12: Major maintenance and repairs shall be carried out off-site whenever practicable.	During construction	Site Supervisor	Weekly and maintain records
	WT1.13: Remnants of concrete shall not be left at any location along the corridor.	During Construction	Site Supervisor	Weekly and maintain records

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
WT1: Production of wastes and excessive use of resources	WT1.14: Disposal of trees shall be undertaken in accordance with one or more of the following methods: a. Left in place; b. Chipped and mulched; and c. Large trunk sections may be sold/passed on to a commercial mill.	During Construction	Site Supervisor	Weekly and maintain records
	WT1.15: Hydrocarbon wastes shall be stored in colour coded and labelled drums placed around fuelling depots.	During Construction	Site Supervisor	Daily and maintain records
	WT1.16: Where possible, fuel and chemical storage and handling shall be undertaken at central fuel and chemical storage facilities, such as petrol stations.	During Construction	Site Supervisor	Daily and maintain records
	WT1.17: On-site storage of fuel and chemicals shall be kept to a minimum.	During Construction	Contractor	Daily, maintain records and report any incidents
	WT1.18: Any waste oils and lubricants are to be collected and transported to recyclers or designated disposal sites as soon as possible.	During Construction	Site Supervisor	Daily and maintain records
	WT1.19: Any dangerous goods stored on site shall be stored in accordance with Samoan regulations.	During Construction	Contractor	Daily and maintain records

### Chemical and Fuel Management

143. The key types of chemicals and fuels likely to be stored on-site during construction include but are not limited to:
- diesel and unleaded petrol for the refuelling of plant equipment and generators;
  - grease etc used during construction; and
  - chemicals used in the construction process, although this is expected, based on the technology to be used, as extremely minimal if any.
144. If not handled, stored or used appropriately, contamination of land and the surface water and groundwater systems could occur. The accidental discharge of hazardous materials during construction and operation activities is a potential risk to the local environment. Accordingly, all oil, grease, diesel, petrol and chemicals should be stored off site within a bunded area.
145. Potential activities which could result in spills are:
- use of machinery and vehicles – potential for fuels, oils and lubricant spills;
  - transport, storage and handling of fuels, machinery oils, grease;
  - transport, storage and handling of cement/asphalt(bitumen) and other construction materials; and
  - impacts associated with hazardous materials will primarily be associated with the storage and handling during the construction and operation phase.

### Performance Criteria

146. The following performance criteria are set for the construction of the projects:
- ensure a Material Safety Data Sheet (MSDS) Register should be developed for all chemicals and fuels retained on site;
  - handling and storage of hazardous material is in accordance with the relevant legislation and best management practices;
  - all spills are reported to MNRE within **one hour** of occurrence; and
  - no spills enter the local aquatic environments; and
  - prevent the uncontrolled release of oil, grease and diesel to the environment;
  - no spills of hazardous materials;
  - no chemical spills into the groundwater aquifers; and
  - no contamination of land due to spills of hazardous materials.

### Monitoring

147. A chemical and fuel management program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the site supervisor should:
- conducted daily chemical and fuel assessments as part of their daily check procedure;
  - manage the selection, purchase, storage, handling and disposal of chemicals to ensure minimal environmental impact;
  - regularly inspect equipment that uses fuel, lubricants and/or hydraulic fluid;
  - develop procedures and install equipment to contain, minimise and recover spills; and
  - provide staff with procedures and training in spill prevention and clean up.



### Reporting

148. The MNRE must be notified immediately in the event of any suspected instances of material or serious environmental harm, or if a determined level as a result of a chemical or fuel leak or spill.



**Table 7: Chemical and Fuels Management Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
C1 Poor management of chemicals and fuels	C1.1: Prepare spill management plan addressing measures	Pre-construction	Contractor	Maintain records and weekly reporting
	C1.2: Store and handle all chemicals, fuels, oils and potentially hazardous materials as specified in relevant standards and guidelines. All hazardous materials to be approved for use onsite. All hazardous materials and construction fuel will be stored in appropriate storage facilities (e.g. fuel and chemicals will be stored in a bunded area).	During Construction	Site Supervisor	Daily and maintain records
	C1.3: Hydrocarbon wastes shall be stored in colour coded and labelled drums placed around fuelling depots and disposed of.	During Construction	Site Supervisor	Daily and maintain records
	C1.4: Where possible, fuel and chemical storage and handling shall be undertaken at central fuel and chemical storage facilities, such as petrol stations/site depot.	During Construction	Site Supervisor	Daily and maintain records
	C1.5: Onsite storage of fuel and chemicals shall be kept to a minimum.	During Construction	Site Supervisor	Daily and maintain records
	C1.6: Emergency clean up kits for oil and chemical spills will be available onsite and in all large vehicles.	During Construction	Site Supervisor	Daily and maintain records
	C1.7: Refuelling activities to preferentially occur off site however if required onsite ensure refuelling activities occur in designated areas of the site where appropriate temporary protection measures have been designed/located and are no less than 20 metres from surface waters and drainage lines.	During Construction	Site Supervisor	Daily and maintain records

### Social Management

149. The project has been designed with the assistance of stakeholders and aims to provide benefits to the broader community. Notwithstanding, as with any project that involves construction, some dissatisfaction can occur and conflicts may arise. It is important that potential areas of tension are recognised early and appropriate actions taken to avoid or minimise conflict.
150. The project and its sub-projects do not require involuntary resettlement or acquisition of land although they may impact on land during construction activities which will be temporary in nature.

### Performance Criteria

151. The following performance criteria have been set for the project:
  - a. the community has been consulted and project elements have been designed with their informed consultation and participation throughout the project;
  - b. all stakeholders are appropriately represented;
  - c. avoid adverse impacts to local community during construction and operations and where not possible, minimise, restore or compensate for these impacts;
  - d. cultural heritage is not adversely impacted;
  - e. community health and safety is protected and overall well-being benefits derived from the project;
  - f. complaint and grievance mechanisms are put in place and proactively managed; and
  - g. long-term social benefits are achieved.

### Monitoring

152. Local stakeholders and community members have a key role to play in the implementation and monitoring of the project.
153. Consultation with stakeholders will continue. This will help ensure that stakeholders continue to be aware of the project, its progress and any changes in the project. It will also assist in identifying any issues as they arise.
154. MNRE will be responsible for advisory support and extensions services to local beneficiaries along with being responsible for distributing material inputs and providing technical training and backstopping in the implementation of programme activities.

### Reporting

155. Records of all consultations are to be kept and reported on monthly basis.
156. The MNRE must be notified in the event of any individual or community complaint or dissatisfaction and ensure the Grievance Redress Mechanism is complied with.



**Table 8: Social Management Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
SM1: Changes in riverbanks and loss of access	SM 1.1: Carry out community consultation on the purpose and benefits of making changes to land use	Pre-construction	MNRE	Maintain records
	SM 1.2: Get community buy-in on any change of land use	Pre-construction	MNRE	Maintain records
	SM 1.3: Ensure compliance with the Grievance Redress Mechanism process	Entire construction and operation phase	MNRE	Maintain records
SM42: Public nuisance caused by construction/operation activities (eg noise, dust etc)	SM 4.1: Carry out community consultation prior to undertaking activities	Pre-construction	MNRE	Maintain records
	SM 4.2: Implement appropriate management plans (refer to Noise, Air, ESCP, and Waste sections of ESMF and MP)	Construction and operation	Site supervisor and MNRE	Daily and maintain records
	SM 4.3: Ensure compliance with the Grievance Redress Mechanism process	All phases	MNRE	Maintain records

### Archaeological, Indigenous and Cultural Heritage

157. Cultural history, folklore, assets and places are important matters for future planning. There is a need to understand the implications of cultural heritage assets on affecting future urban structure and land uses. Cultural heritage sites, areas, places and practices should be protected and celebrated via subsequent planning tools as an important feature of local identity and sense of place.
158. There are a number of key known cultural heritage places, buildings and monuments within Apia more broadly. For many of the urban villages there is a mix of modern development and traditional 'fale' areas within the one village. There is little mapping of these important areas at this time and it is unlikely that this information can be distilled at the City wide scale.
159. While no cultural heritage places, buildings and monuments are known to exist in areas where the project will be undertaken, further investigation of places and practices of cultural and historic heritage significance should be undertaken as part of the preparation process.

### Performance Criteria

160. The following performance criteria are set for the project:
  - a. There will be no impact on any important Archaeological, Indigenous and/or Cultural Heritage sites;
  - b. Manage any specific sites of important Archaeological, Indigenous and/or Cultural significance (significant sites);
  - c. Where there is a mix of modern development and traditional 'fale' areas within villages use community engagement to confirm options of enabling future development as nominated by the participants and protecting culturally significant traditional areas and
  - d. Work with the village communities to differentiate between traditional village areas of cultural significance (uses and physical form) within each of the Village fono boundary areas during the construction phase of the project.

### Monitoring

161. An important Archaeological, Indigenous and Cultural Heritage monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, the plan should:
  - (a) provide cultural heritage awareness training to all construction site personnel (including contractors);
  - (b) identify and collect any cultural heritage items worthy of protection;
  - (c) consult with the relevant Museums about any important Archaeological, Indigenous and/or Cultural Heritage material discovered during construction; and
  - (d) cease work in the area where any human remains are discovered and consult with the UNDP, MNRE and relevant Museum.

### Reporting

162. The UNDP and MNRE must be notified immediately in the event of any suspected find related to important Archaeological, Indigenous and/or Cultural Heritage.

**Table 9: Archaeological and Cultural Heritage**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
<p>CH1: Damage or disturbance to significant important Archaeological, Indigenous and/or Cultural Heritage during the earth disturbances and land clearing activities</p>	<p>CH1.1: Should any important Archaeological, Indigenous and/or Cultural Heritage sites, immediately cease work within the area that the site has been observed and consult with the relevant Museum/traditional owner groups, UNDP, MNRE and archaeologist available for implementation during construction.</p>	<p>Pre and during construction</p>	<p>Contractor</p>	<p>Daily, maintain records and immediately notify UNDP and MNRE of any find</p>



### Emergency Response Plan

163. In the event of actions occurring, which may result in serious health, safety and environmental (catastrophic) damage, emergency response or contingency actions will be implemented as soon as possible to limit the extent of environmental damage.
164. It is known that there are residences located close to the majority of the infrastructure components of the project although less so for the revegetation activities.
165. The contractor will need to incorporate construction emergency responses into the project complying with the requirements under the Occupational, Health and Safety Policy of the contractor or the work related Government of the Samoa legislation.

### Performance Criteria

166. The following performance criteria are set for the construction of the projects:
  - a. no incident of fire outbreak during construction;
  - b. reduce the risk of fire by undertaking hot works as necessary within cleared locations (it is unlikely any hot works will be necessary; however the issue has been included as a matter of caution);
  - c. provide an immediate and effective response to incidents that represent a risk to public health, safety or the environment; and
  - d. minimise environmental harm due to unforeseen incidents.

### Monitoring

167. An emergency response monitoring program has been developed for the projects. The program is subject to review and update at least every two months from the date of issue. Importantly, visual inspections will be conducted by site supervisor daily with reporting to MNRE and UNDP staff on a weekly basis (minimum) noting any non-conformances to this ESMF and MP.

### Reporting

168. The MNRE and UNDP staff must be notified immediately in the event of any emergency, including fire or health related matter including those that have resulted in serious environmental harm.





**Table 10: Emergency Management Measures**

Issue	Control Activity (and Source)	Action Timing	Responsibility	Monitoring and Reporting
E1. Fire and Emergency management and prevention strategies implemented	E1.1: Flammable and combustible liquids bunding/storage areas to be designed in accordance with appropriate international standards	Pre and during construction	Contractor	Daily and maintain records
	E1.2: Fire extinguishers are to be available within all site vehicle	During construction	Contractor	Daily and maintain records
	E1.3: No open fires are permitted within the project area	During construction	Site Supervisor	Daily and maintain records
	E1.4: No cigarette butts are to be disposed of onto the ground throughout the project area, all smokers must carry a portable disposal bin to reduce the risk of a spot fire starting and general litter	During construction	All Personnel	Daily and maintain records
	E1.5: Stockpiles of mulch are not to exceed two meters in height and width and must be turned regularly.	During construction	All Personnel	Daily and maintain records
	E1.6: Train all staff in emergency preparedness and response (cover health and safety at the work site)	During construction	Site Supervisor	Daily and maintain records
	E1.7: Check and replenish First Aid Kits	During construction	Site Supervisor	Daily and maintain records
	E1.8: Use of Personal Protection Equipment	During construction	All Personnel	Daily and maintain records



*Empowered lives.  
Resilient nations.*

## Guidance for Submitting a Request to the Social and Environmental Compliance Unit (SECU) and/or the Stakeholder Response Mechanism (SRM)

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### **Purpose of this form**

- **If you use this form, please put your answers in bold writing to distinguish text**
- **The use of this form is recommended, but not required. It can also serve as a guide when drafting a request.**

This form is intended to assist in:

- (1) Submitting a request when you believe UNDP is not complying with its social or environmental policies or commitments and you believe you are being harmed as a result. This request could initiate a ‘compliance review’, which is an independent investigation conducted by the Social and Environmental Compliance Unit (SECU), within UNDP’s Office of Audit and Investigations, to determine if UNDP policies or commitments have been violated and to identify measures to address these violations. SECU would interact with you during the compliance review to determine the facts of the situation. You would be kept informed about the results of the compliance review.

and/or

- (2) Submitting a request for UNDP “Stakeholder Response” when you believe a UNDP project is having or may have an adverse social or environmental impact on you and you would like to initiate a process that brings together affected communities and other stakeholders (e.g., government representatives, UNDP, etc.) to jointly address your concerns. This Stakeholder Response process would be led by the UNDP Country Office or facilitated through UNDP headquarters. UNDP staff would communicate and interact with you as part of the response, both for fact-finding and for developing solutions. Other project stakeholders may also be involved if needed.

Please note that if you have not already made an effort to resolve your concern by communicating directly with the government representatives and UNDP staff responsible for this project, you should do so before making a request to UNDP’s Stakeholder Response Mechanism.

**Confidentiality** If you choose the Compliance Review process, you may keep your identity confidential (known only to the Compliance Review team). If you choose the Stakeholder Response Mechanism, you can choose to keep your identity confidential during the initial eligibility screening and assessment of your case. If your request is eligible and the assessment indicates that a response is appropriate, UNDP staff will discuss the proposed response with you, and will also discuss whether and how to maintain confidentiality of your identity.



## Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

### Guidance

When submitting a request please provide as much information as possible. If you accidentally email an incomplete form, or have additional information you would like to provide, simply send a follow-up email explaining any changes.

### Information about You

Are you...

1. A person affected by a UNDP-supported project?

Mark "X" next to the answer that applies to you: Yes: No:

2. An authorised representative of an affected person or group?

Mark "X" next to the answer that applies to you: Yes: No:

*If you are an authorised representative, please provide the names of all the people whom you are representing, and documentation of their authorization for you to act on their behalf, by attaching one or more files to this form.*

3. First name:
4. Last name:
5. Any other identifying information:
6. Mailing address:
7. Email address:
8. Telephone Number (with country code):
9. Your address/location:
10. Nearest city or town:
11. Any additional instructions on how to contact you:
12. Country:

### **What you are seeking from UNDP: Compliance Review and/or Stakeholder Response**

You have four options:

- Submit a request for a Compliance Review;
  - Submit a request for a Stakeholder Response;
  - Submit a request for both a Compliance Review and a Stakeholder Response;
  - State that you are unsure whether you would like Compliance Review or Stakeholder Response and that you desire both entities to review your case.
13. Are you concerned that UNDP's failure to meet a UNDP social and/or environmental policy or commitment is harming, or could harm, you or your community? Mark "X" next to the answer that applies to you: Yes: No:
14. Would you like your name(s) to remain confidential throughout the Compliance Review process?

Mark "X" next to the answer that applies to you: Yes: No:

If confidentiality is requested, please state why:



## Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

15. Would you like to work with other stakeholders, e.g., the government, UNDP, etc. to jointly resolve a concern about social or environmental impacts or risks you believe you are experiencing because of a UNDP project?

Mark "X" next to the answer that applies to you: Yes: No:

16. Would you like your name(s) to remain confidential during the initial assessment of your request for a response?

Mark "X" next to the answer that applies to you: Yes: No:

If confidentiality is requested, please state why:

17. Requests for Stakeholder Response will be handled through UNDP Country Offices unless you indicate that you would like your request to be handled through UNDP Headquarters. Would you like UNDP Headquarters to handle your request?

Mark "X" next to the answer that applies to you: Yes: No:

If you have indicated yes, please indicate why your request should be handled through UNDP Headquarters:

18. Are you seeking both Compliance Review and Stakeholder Response?

Mark "X" next to the answer that applies to you: Yes: No:

19. Are you unsure whether you would like to request a Compliance Review or a Stakeholder Response? Mark "X" next to the answer that applies to you: Yes: No:

### Information about the UNDP Project you are concerned about, and the nature of your concern:

20. Which UNDP-supported project are you concerned about? (if known):

21. Project name (if known):

22. Please provide a short description of your concerns about the project. If you have concerns about UNDP's failure to comply with its social or environmental policies and commitments, and can identify these policies and commitments, please do (not required). Please describe, as well, the types of environmental and social impacts that may occur, or have occurred, as a result. If more space is required, please attach any documents. You may write in any language you choose



## Annex VI (b) – Environmental and Social Management Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

23. Have you discussed your concerns with the government representatives and UNDP staff responsible for this project? Non-governmental organizations?

Mark “X” next to the answer that applies to you: Yes:  No:

If you answered yes, please provide the name(s) of those you have discussed your concerns with

Name of Officials You have Already Contacted Regarding this Issue:

First Name	Last Name	Title/Affiliation	Estimated Date of Contact	Response from the Individual

24. Are there other individuals or groups that are adversely affected by the project?

Mark “X” next to the answer that applies to you: Yes:  No:

25. Please provide the names and/or description of other individuals or groups that support the request:

First Name	Last Name	Title/Affiliation	Contact Information

Please attach to your email any documents you wish to send to SECU and/or the SRM. If all of your attachments do not fit in one email, please feel free to send multiple emails.

### Submission and Support

To submit your request, or if you need assistance please email: [project.concerns@undp.org](mailto:project.concerns@undp.org)