



**REQUEST FOR MSP APPROVAL
(1-STEP PROCEDURE)
TYPE OF TRUST FUND: GEF TRUST FUND**

PART I: PROJECT IDENTIFICATION

Project Title:	Integrated Environmental Management of the Fanga'uta Lagoon Catchment		
Country(ies):	Tonga	GEF Project ID:¹	5663
GEF Agency(ies):	UNDP	GEF Agency Project ID:	5219
Other Executing Partner(s):	Ministry of Lands, Environment, Climate Change and Natural Resources (MLECCNR)	Submission Date: Resubmission Date:	December 23, 2013 7 March 2014
GEF Focal Area (s):	Multi-focal Areas	Project Duration (Months)	42
Name of parent program (if applicable):	Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store carbon, Improve Climate Resilience and Sustain Livelihoods	Agency Fee (\$):	158,120

A. FOCAL AREA STRATEGY FRAMEWORK²:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Co-financing (\$)
BD-1	1.1 Improved management effectiveness of existing and new protected areas	1. New protected areas (no.) and coverage (ha) of unprotected ecosystems	GEFTF	537,720	2,225,000
BD-2	2.2 Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks	1. Policies and regulatory frameworks (no.) for production sectors	GEFTF	213,482	550,000
LD-1	1.3 Sustained flow of services in agro-ecosystems	1.3 Suitable SL/WM interventions to increase vegetative cover in agro-ecosystems	GEFTF	486,468	1,675,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the reference attached on the [Focal Area Results Framework](#) when filling up the table in item A.

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Co-financing (\$)
LD-3	3.2 Integrated landscape management practices adopted by local communities	3.2 INRM tools and methodologies developed and tested	GEFTF	275,000	250,000
IW-3	3.2 On-the-ground modest actions implemented in water quality, quantity (including basins draining areas of melting ice), fisheries, and coastal habitat demonstrations for “blue forests” to protect carbon	<ul style="list-style-type: none"> Demo-scale local action implemented, including in basins with melting ice and to restore/protect coastal “blue forests” 	GEFTF	160,550	1,600,000
Subtotal				1,673,220	6,300,000
Project management cost				83,660	350,000
Total Project Cost			GEFTF	1,756,880	6,650,000

B. PROJECT FRAMEWORK

Project Objectives: To conserve the ecosystem services of the Fanga’uta Lagoon through an integrated land, water and coastal management approach thereby protecting livelihoods and food production and enhancing climate resilience

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. Appropriate Governance of Fanga’uta Lagoon Catchment Areas and Integrated Management of Lagoon Ecosystems	TA	1.1 Multi-stakeholder management system established to guide EMP FLS updating and IEMP implementation 1.2 Completed participatory updating of the Plan and subsequently	1.1.1 Capacity of NECC and FLC Stakeholders enhanced to more effectively plan and implement an integrated lagoon ecosystem management approach 1.1.2 Measures delivered to fully engage the Fanga’uta Lagoon Catchment (FLC) communities in lagoon ecosystem management 1.2.1 FLC IEMP prepared and completed; establishing technical, biophysical, oceanographic, socioeconomic and	GEFTF	375,000	775,000

		adopted, endorsed and budgeted for	<p>demographic baselines; updating the EMP completed in 2001 with additional parameters to be established</p> <p>1.2.2 FLC IEMP adopted, mainstreamed and funded</p> <p>1.2.3 Multi-stakeholder participatory mechanisms conducted to ensure adaptive management through monitoring and evaluation of FLC IEMP development and implementation</p>			
2. Implementation of the Integrated Environmental Management Plan for the Fanga'uta Lagoon Catchment	TA	2.1 Improved conditions of critical lagoon habitats, productivity and fish production through the implementation of priority interventions identified in the Plan	<p>2.1.1 Areas of approximately 50 ha of the lagoon's major coastal habitats (mangroves stands) restored</p> <p>2.1.2 Mechanisms set up to guarantee participatory fishing area and sustainable fisheries resources management by the FLC communities</p> <p>2.1.3 Eco-tourism awareness to FLC community conducted and local initiatives demonstrated</p> <p>2.1.4 Activities based on sustainable land and forest management demonstrated in the catchment areas</p> <p>2.1.5 Capacity for Fanga'uta Lagoon water quality control strengthened and on-site activities demonstrated</p>	GEFTF	1,248,220	5,350,000
3. Knowledge Management	TA	3.1 Increased awareness and appreciation of the ecosystem services of the Fanga'uta lagoon	3.1.1 Awareness programs conducted through the production and distribution of awareness materials; lessons learned shared with the PICs through the regional program support project	GEFTF	50,000	175,000
Subtotal					1,673,220	6,300,000

Project Management Cost ³		83,660	350,000
Total Project Cost		1,756,880	6,650,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Cofinancing	Name of Co-financier	Type of Cofinancing	Amount (\$)
National Government	Ministry of Lands, Environment, Climate Change and Natural Resources (includes all projects implemented through MLECCNR from various development partners)		
		In-kind	650,000
Other Multilateral Agencies	ADB, Government of Germany, AusAID	In-kind	5,500,000
GEF Agency	UNDP	In-kind	500,000
Total Co-financing			6,650,000

D. GEF/LDCF/SCCF/NPIF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY

GEF Agency	Type of Trust Fund	Focal Area	Country Name/Global	Grant Amount (a)	Agency Fee (b)	Total c=a+b
UNDP	GEFTF	Biodiversity	Tonga	834,862	75,138	910,000
UNDP	GEFTF	Land Degradation	Tonga	211,009	18,991	230,000
UNDP	GEFTF	Climate Change	Tonga	550,459	49,541	600,000
UNDP	GEFTF	International Waters	Global (Tonga)	160,550	14,450	175,000
Total Grant Resources				1,756,880	158,120	1,915,000

E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	113,900	1,675,000	1,788,900
National/Local Consultants	292,943	550,000	842,943

F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

³ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

PART II: PROJECT JUSTIFICATION

A. Project Overview

A.1. Project Description. Briefly describe the project, including ; 1) the global environmental problems, root causes and barriers that need to be addressed; 2) the baseline scenario and any associated baseline projects, 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, 4) incremental cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing; 5) global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF); 6) innovativeness, sustainability and potential for scaling up.

Global Environmental Problems, Root Causes and Barriers

1. Globally, concern for the health of coastal ecosystems involves the increase in human activity not only along the coastal zones, but also significant impacts of human activities carried out in further inland areas on the health of coastal ecosystems. Activities carried out upstream or in the catchment bear consequences downstream or the low lying coastal areas. Agriculture, fertilizer and pesticide use, deforestation in the hills, land development and construction of infrastructure ultimately end up affecting overall coastal ecosystem health. The excess nutrients and chemicals associated with sediment enter into the coastal water, causing profound and often damaging changes to the quality of coastal receiving waters and fish habitats, resulting in important losses of ecosystem services which are essential for human well-being. The main response to loss of natural habitat has been the establishment and extension of protected areas. In many cases, inappropriate management and shortage of manpower with adequate competencies, as well as lack of financial support and weak law enforcement, are common problems in protected areas, resulting in encroachment by human activities and settlements.

2. In Tonga, the shallow and semi-enclosed Fanga'uta Lagoon is located in the northern coastline of the Tongatapu Island, where most of Tonga's people reside. Nuku'alofa, the capital, borders the lagoon on the west. The Fanga'uta Lagoon is an important breeding ground for birds and fish as they live within the mangroves growing around the lagoon shores. The lagoon supports several types of very diverse and productive ecosystems, including mangroves, mudflats, seagrass beds, and coral patch reefs. The lagoon also contributes to the sustainability of the Tongatapu Island's coastal fisheries. Since early 1970s, fishery resources in the Fanga'uta Lagoon has been substantially declining due to increased demands for fish and effects of nearshore development on the lagoon's water quality and habitats. Years of chronic overfishing, pollution, and habitat destruction have stripped the lagoon of much of its vitality and productivity.

3. To protect the lagoon's ecosystem with sustainable use of its natural resources, the Government has designated the Fanga'uta Lagoon as the national Marine Reserve since 1974. The commercial fishing in the lagoon was banned in 1975 to reduce fishing pressure. As part of the activities implemented under the Tonga Environmental Management and Policy Planning (TEMPP) Programme (1997-2000), a series of studies on the decline of the health of the Fanga'uta Lagoon were undertaken by the government through AusAID support. Due to the lack of enforcement and implementation, according to information gathered during the household surveys in 2001, quantity and quality of fish and shellfish catches in the lagoon had declined over the years and were continuing to decline rapidly. There has still been a dramatic decline over the past years with fishers near the mouth of the lagoon reporting a decrease in both sizes and weights of catches. In response to increasing pollution and continuously decreasing of marine resources as observed by communities and through rigorous scientific inquiry, the Environmental Management Plan for Fanga'uta Lagoon System (EMP FLS) was developed and approved by the Cabinet in 2003. However, no details on implementation (including financial and administrative commitments) were outlined in the plan. Due to serious budgetary constraints and other circumstances (i.e., lack of a coherent management approach, insufficient skilled manpower and unclear institutional arrangement), implementation of the EMP FLS has been a challenge.

Baseline Scenario and Any Associated Baseline Projects: National Contexts

4. The Fanga'uta Lagoon encompasses an area of 28.35 km² with a mean depth of about 1.4 m and a maximum of 6 m, excluding the entrance channel, and the total volume of the lagoon is 38,000 megalitres. The shallow, almost completely closed Fanga'uta Lagoon supports several types of very diverse and productive ecosystems, including mangroves, mudflats, seagrass beds, and coral patch reefs. The lagoon also contributes to the sustainability of the Tongatapu Island's coastal fisheries. The fauna and flora of the Fanga'uta Lagoon system is relatively diverse: 96 species of fishes; 9 species of large algae (macroalgae); 2 species of seagrasses; 16 species of near-shore plants; 1 species of jellyfish; 1 species of sea anemones; 30 species of hard and soft corals; 40 species of mollusks (including octopus, clams and other shellfish); over 13 species of crustaceans; and over 11 species of echinoderms (starfish, cucumbers and urchins). According to Tonga's National Biodiversity Strategy and Action Plan (NBSAP, 2006), the Kingdom has approximately 1,000 hectares (10 km²) of mangrove area with the largest area, of 50 hectares (5 km²), located in the Fanga'uta lagoon. A recent report reveals that only 3.36 km² of mangroves remain in the Kingdom. Tonga has eight (8) mangrove species; two of the most common species in Tonga and on the main island of Tongatapu are *Rhizophora samoensis* and *Rhizophora stylosa*. The mangrove areas have significant uses for local people, providing nursery ground for many fish and

crustaceans as well as being traditionally exploited for construction wood, the gathering of crabs, fish and fuel wood, and used for local medicines, dyes and tannins.

5. In the baseline scenario, whereas the establishment of the EMP FLS is a significant accomplishment of the Kingdom, a number of challenges and constraints have been identified as the principal impediments to the realization of the EMP FLS objectives and the ultimate goal of sustainable services of the lagoon ecosystems, resulting in continuous decline in the abundance and diversity of the lagoon species and their habitats.

6. Sufficient baseline studies are taken to show that the biodiversity and water quality in the lagoon is diminishing. For effective management of the lagoon protected area, there is a need to mainstream environmental issues of the Fanga'uta Lagoon and its catchment that have contributed to sustainable development of the Kingdom into the national strategy development plans as well as in each institutional stakeholder operational plans.

7. Implementation and enforcement of the EMP FLS has been a major problem which is due to:

- The lack of clear and direct mandate or ToR defining the roles, responsibilities and functions of 'a Lagoon Management Task Force' as recommended in the EMP FLS – however, since a task force is ad hoc and only exist until a specific goal is reached, to ensure sustainable management of the lagoon and its catchment, it is recommended that the Fanga'uta Lagoon Management Committee (FLMC) should be established with clearly defined mandate and appropriate representation from government, NGOs, private sector and communities; and,
- The lack of staffing and financial resources for operations – to ensure continuous management and protection of the FLC, there is a great need to deploy and maintain qualified staff and sufficient budget for implementation of the EMP FLS or the upgraded management plan, as well as for capacity building of governments at all levels and the FLC communities.

8. The lack of functional enabling environments for conservation and integrated management of the lagoon and catchment areas and the lack of measurable key indicators for regular monitoring of the status of the lagoon environment and ecosystem services have further constrained the effort to *'improve the existing conditions in the lagoon and ensure that it can provide the maximum use of goods and services in the future'* as outlined in the EMP FLS.

9. The MLECCNR will contribute US\$650,000 In kind in the efforts to assist in land allocation and management, urban and land use planning, environment and climate change related activities. MAFFF especially, Fisheries, Agriculture and Forestry divisions engaged in activities in the catchment area as part of their normal mandate and duties. Fisheries activities including the enforcement and compliance work, research and development and such. Forestry engaged with various land holders in various programme trying to replant trees such as coconut, sandalwood, various fruit trees and various forest trees for timber and wind breaker.

10. Although the initiatives by the Government of Tonga are extensive, they are insufficient to adequately conserve terrestrial and marine biodiversity and manage land resources across the length and breadth of the Fanga'uta Lagoon and its catchment areas. The current major gaps which this project will address are: i) inadequate rehabilitation of damaged lagoon ecosystems that is critical for biodiversity conservation, soil and water management and ensuring sustainable livelihoods in the face of demand growth and climate change; ii) minimal initiatives for developing and strengthening protected areas, especially those in the water bodies; iii) poor recognition within governments and communities of the need for active measures to conserve ecosystems through integrated approaches; and iv) an inadequate capacity within the government and civil society sectors for ecosystem conservation tasks and inefficient use of the current capacity due to inadequate communication and cooperation within different sectors, especially within those of government working in terrestrial and marine ecosystems.

11. The following projects financed by Tonga's development partners are addressing the issues surrounding the lagoon. Each baseline project is briefly described below.

12. UNDP has supported governance and promote democracy in Tonga particularly through the AusAID-funded Tonga Governance Strengthening Programme. As an integrated programme, the main strategy is to work with the Tongan Parliament, the Electoral Commission and civil society to increase their effectiveness and build community understanding of their roles. The AU\$3.8 million programme for duration of 3 years (2013-2016) will develop the skills of parliamentarians to improve lawmaking processes and strengthen the ability of the Electoral Commission to manage free and fair elections. A key element of the integrated approach is to ensure consistency in the development of civic education materials to provide a better understanding in the community about the workings of Parliament, the Electoral Commission and elections as well as responsibility of civil society to help promote democracy in Tonga. Some of these activities are relevant to environment and the project is counting \$500,000 as cofinancing. The Tonga Governance Strengthening Programme is directly implemented by UNDP and managed under the guidance of a Programme Board co-chaired by the Permanent Secretary for Foreign Affairs and UNDP's Resident Representative.

13. Under the International Climate Initiative, the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) support a US\$10.6 million regional project on Marine

and Coastal Biodiversity Management in Pacific Island Countries and Atolls (MacBio) as part of its international cooperation in the field of biological diversity. The MacBio Project will undertake economic valuations of marine and coastal ecosystems in the five project countries in order to contribute to national development planning. The project also aims to support current efforts to extend national Marine Protected Area networks through seascape-level planning and promoting effective approaches protected area management, including the recognition of locally managed marine areas and community-based conservation efforts through payments for ecosystem services. For this MSP, \$300,000 is counted as cofinancing. The project duration is 5 years (2013-2018) and the implementation agency is GIZ in cooperation with SPREP and IUCN.

14. The *Mangrove Ecosystems Climate Change Adaptation and Livelihoods (MESCAL) Project* has assisted Tonga with effective management of mangrove and associated coastal ecosystems to support livelihoods and build climate change resilience. The Fanga'uta Management Plan was drafted based on mangrove surveys followed by planting and conserving of mangroves in selected sites. MESCAL is funded by Germany, under the International Climate Protection Initiative through the International Union for Conservation of Nature (IUCN) for US\$ 350,000 during 2009-2013.

15. The proposed MSP, particularly efforts to update the existing EMP FLS, will benefit from the findings and recommendations of the *Water Monitoring Component, Integrated Urban Development Sector Project* in Nuku'alofa, which is funded by the Asian Development Bank. The goal of the Water Monitoring Component of the IUDSP is to assess the level of nutrient and bacteriological pollution of the groundwater in selected parts of Nuku'alofa and in the adjacent western part of Fanga'uta Lagoon. The water monitoring activities has collected water quality data in the Lagoon over the three year period June 2010 to May 2013. The data sets involve (a) three years of monthly water quality monitoring at 21 selected sites including nine monitoring pipes around the edge of Nuku'alofa, ten sites at the edge and within the Fanga'uta Lagoon and two Tonga Water Board wells and (b) a year and a half of monitoring at six additional sites including four Nuku'alofa wells and two nearby village wells. About \$1.5 million is counted as cofinancing for this project.

16. The *Pilot Program for Climate Resilience* is the only adaptation funding from the Climate Investment Fund (CIF) from the multilateral development banks (MDBs) to finance climate change support for developing countries and assist transformation to a climate resilient development path, consistent with poverty reduction and sustainable development. The Asian Development Bank (ADB) is assisting Tonga to formulate the Strategic Program for Climate Resilience (SPCR) and implement this program in Phase 2, with a budget of US\$ 750,000 starting in 2013. Full implementation is planned for 2014-2018 with an anticipated budget of US\$ 15 million. To implement the SPCR under the PPCR (Phase 2), the *Climate Resilience Sector Project* (Project Number: 46351-002) is being prepared and will be implemented for the period of with a grant equivalent to \$19.25 million. Under Output 4: Ecosystem Resilience and Climate-Resilient Infrastructure Investments Developed, the project will (i) identify potential mangrove planting sites to provide shoreline protection, and (ii) develop best practice guidelines and support field demonstrations on the use of mangroves as natural infrastructure in areas identified for investment. The field demonstrations will raise community awareness, and include training on mangrove planning and provision of mangrove seedlings. Approximately 126 hectares of mangroves will be rehabilitated, partly in Fanga'uta lagoon. About \$1.5 million is counted as cofinancing for this MSP.

17. The GIZ Project is focused on land based activities and mainstreaming to develop be national strategies for adapting to climate change in agriculture, forestry, land use planning with courses mainstreamed into school curriculum. The total budget for the Pacific from Germany is approximately US\$ 20 million with most activities conducted during 2009-2012. For this MSP, \$1.5 million is counted as cofinancing.

Proposed Alternative Scenario, Expected Outcomes and Components of the Project

18. The proposed GEF MSP builds on the Pacific Island Ridge-to-Reef approach and the conceptual framework outlined in the Program Framework Document (PFD) of the programmatic approach entitled "*R2R Pacific Islands Ridge-to-Reef National Priorities – Integrated Water, Land, Forest and Coastal Management to Preserve Biodiversity, Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods*" under GEF support. The project development has also benefited from a number of completed and existing initiatives/processes related to biodiversity conservation and adaptive management.

19. The project seeks to conserve the ecosystem services of the Fanga'uta Lagoon Catchment on the Tongatapu Island of the Kingdom of Tonga in the South Pacific through an integrated land, water and coastal management approach thereby protecting livelihoods and food production and enhancing climate resilience. The project will maintain and enhance the ecosystem goods and services of Tonga's main lagoon catchment and marine reserve areas through integrated approaches to land, water, forest, biodiversity and coastal resource management that contribute to poverty reduction, sustainable livelihoods and climate resilience. It will also make a stronger linkage between sustainable development of freshwater catchment and coastal areas and promotes the implementation of holistic, integrated management of natural resources at the catchment level.

20. The project objective is to conserve the ecosystem services of the Fanga'uta Lagoon through an integrated land, water and coastal management approach thereby protecting livelihoods and food

production and enhancing climate resilience. This will be achieved through interventions at two interconnected levels: national (Outcome 1.1, 1.2, and 3.1) and site level (Outcome 1.1, 1.2, 2.1, and 3.1). Targeting to achieve an integrated management and conservation of the lagoon ecosystem services, the project devises and implements creative ways to address the critical gaps in environmental and ecosystem services conservation in the Fanga'uta Lagoon catchment through the establishment of an effective governance system and sustainable management of the lagoon ecosystems (Component 1); implement integrated environmental management approaches for improving conditions of critical habitats, productivity, water quality and fisheries in the lagoon catchment (Component 2); and strengthen knowledge and awareness of the Fanga'uta Lagoon ecosystem functions and associated socio-economic benefits within the national stakeholders and local communities (Component 3). Project interventions, which is structured according to these three interconnected components, have been designed and developed through a participatory process facilitated by the Pacific Islands R2R PFD stage and subsequent consultations with the Tongan Government and other stakeholders.

Component 1 Appropriate Governance of Fanga'uta Lagoon Catchment Areas and Integrated Management of Lagoon Ecosystems:

21. Under this component, an enabling environment for governance of Fanga'uta Lagoon Catchment Areas will be created and integrated management approaches will be delivered. The focus will be on ensuring that effective governance of ecosystem structure and functions in the Fanga'uta Lagoon is in place and sustained. The aim of integrated management is to improve decision making to ensure that decisions: a) are more effective in the long term; b) are not conflicting; c) are built upon a common knowledge base; and d) take into consideration the needs of the lagoon ecosystem as well as the needs of humankind. By implementing an integrated-management approach, the Fanga'uta Lagoon Catchment Management Committee will be established and will ensure that it: a) maintains the health of our marine ecosystems; b) addresses user conflicts; c) limits the cumulative effects of human activities within a defined ocean space; and d) maximizes and diversifies sustainable use of the lagoon and catchment ecosystems. This is a challenge that requires innovative and adaptive institutional approaches, which the project will devise, develop and demonstrate in the FLC. The **key outcomes of Component 1** comprise:

Outcome 1.1 (Multi-stakeholder management system established to guide the updating of the EMP FLS and implementation of the FLC Integrated Environmental Management Plan): To set the stage within which integrated management occurs, as an enabling condition, a governance process of interactions and decision-making among the actors involved in the management of the Fanga'uta Lagoon must be created and sustained to address key environmental issues and problems. The outcome will provide “institutional arrangements” within which the interaction between the governing bodies (i.e., the Fanga'uta Lagoon Catchment Management Committee and the ‘Council’) and other stakeholders including local communities and private sector helps identify key issues and acceptable/appropriate solutions.

22. The outputs under Outcome 1.1 are as follows:

Output 1.1.1 Capacity of NECC and FLC Stakeholders enhanced to more effectively plan and implement an integrated lagoon ecosystem management approaches, with activities to be implemented: a) Creation of a multi-stakeholder Fanga'uta Lagoon Catchment Management Committee with representations from the government, local communities, private sector, NGOs/CSOs to guide updating and implementation of the FLC IEMP; b) Conversion of the FLC Management Committee into a ‘Tongan Interagency Council on FLC’ assessed by year 3 and if appropriate, implemented before the end of the project; and c) Trainings on IEM conducted to capacitate the members of the FLC Management Committee.

Output 1.1.2 Measures delivered to fully engage the Fanga'uta Lagoon Catchment (FLC) communities in lagoon ecosystem management, with activities to be implemented: a) Participation of communities in EMP updating and implementation enhanced through their direct engagement; and b) Communities empowered through capacity building on integrated natural resources management.

Outcome 1.2 (Participatory updating of the Fanga'uta Lagoon Catchment IEMP completed, adopted, endorsed and budgeted for): This outcome will strategically position the FLC for the future by maximizing ecosystem services efficiency and management effectiveness, as well as conserving the ecological and economic health, of the FLC through integrated environmental planning and management approaches. A review and update of the existing Environmental Management Plan for Fanga'uta Lagoon System (EMP FLS) is necessary so that the FLC Management Committee can make informed decision about environmental investments, and is prepared to meet future demand for ecosystem services in FLC. To promote flexible decision making that can be adjusted in the face of uncertainties resulting from management actions and other events such as climate variability and change, this outcome focuses specifically on an adaptive, learning-based process to reduce management uncertainty and improved management effectiveness as a result of learning and careful monitoring of the impacts of management. This adaptive management approach will help meet environmental, social, and economic goals, increases scientific knowledge, and reduces tensions among stakeholders in FLC.

23. The updating process will be initiated in Year 1, whereby sustainability issues across the FLC are identified and assessed, and the document updated and revised as necessary to address new developments on the basis of adaptive change and priority. The EMP FLS Update (or FLC IEMP) is anticipated to conclude by Year 2 and will include a process of robust community and stakeholder engagement coupled

with a subsequent public comment period provided the Management Committee with the feedback necessary to strengthen and refine the proposed set of emerging FLC sustainability issues and associated solutions. The FLC IEMP is to be adopted by the Management committee and endorsed by the National Environment Coordinating Committee in Year 3, with available funds for implementation.

24. The outputs under Outcome 1.2 are as follows:

Output 1.2.1 FLC IEMP prepared and completed; establishing technical, biophysical, oceanographic, socioeconomic and demographic baselines; updating the EMP completed in 2001 with additional parameters to be established. Activities to be implemented are: a) FLC IEMP Baseline Review; and b) IEMP Target Setting – Identification of Priorities and Actions.

Output 1.2.2 FLC IEMP adopted, mainstreamed, and funded. Activities to be implemented are: a) Fanga’uta Lagoon Catchment IEMP adopted by the Management Committee and endorsed by the National Environment Coordinating Committee; b) Multiple-uses of the lagoon are recognized and balanced in the FLC IEMP; c) Responsibilities in FLC IEMP implementation clearly delineated across government agencies, private sector, communities and other stakeholders; and d) FLC IEMP is mainstreamed into development plans at the community, provincial and national levels and budgets allocated by relevant branches of government by year 3 for implementation and monitoring.

Output 1.2.3 Multi-stakeholder participatory mechanisms are conducted to ensure adaptive management during preparation, implementation, monitoring and evaluation of FLC IEMP. Activities to be implemented are a) Engage concerned government ministries and statutory authorities in identifying related issues and priorities, as well as adaptation options, to address climate change in the FLC IEMP (during the EMP FLS updating processes); b) Develop monitoring and evaluation procedures; planning for implementation; c) Confirm commitments to schedule and allocate resources for timely monitoring and assessment of the status of the Fanga’uta Lagoon and catchment areas; d) Identify key monitoring indicators and locations; e) Implement community-based activities to conduct regular monitoring of the status of the Fanga’uta Lagoon and catchment areas; and f) Produce annual reports on FLC IEMP implementation and progress; communicate M&E results through the FLCMC and project-related meetings. It is emphasized that multi-stakeholder participation will cover gender through the encouragement of women, youth and marginalized groups in the preparation of the IEM and in the subsequent implementation.

Component 2 Implementation of the Integrated Environmental Management Plan for the Fanga’uta Lagoon Catchment:

25. The **key outcome of Component 2** (*Outcome 2.1*) will be *improved conditions of critical lagoon habitats, productivity, water quality and fish production through the implementation of priority interventions identified in the Integrated Environmental Management Plan*. The focus of this outcome will be on ensuring successful rehabilitation of degraded critical lagoon habitats and restoration of ecosystem productivity, while improving water quality, fish production, as well as conservation of marine reserve areas in the Fanga’uta Lagoon. Key intervention to be delivered include prioritizing the improvement of FL’s ecosystem and human health, strengthening enabling framework conditions including institutional and social capacity, and efficient collaboration and coordination across sectors and communities. Based on the existing EMP FLS, mangrove areas in the Fanga’uta Lagoon is the largest area in Tonga which functions as the sanctuary and breeding ground for lagoon organisms and species. The lagoon’s mangrove areas and their ecosystem services have been destroyed and degraded by developments, mainly dredging and land reclamation. To improve the condition of mangrove ecosystems in the lagoon, based on the EMP FLS which prescribes both conservation and sustainable use targets with specific recommendation for area management, the project will address five major issue areas facing the lagoon (i.e., mangrove destruction, fisheries decline, sustainable use for supporting livelihoods – eco-tourism, land use and deforestation, and water quality and pollution) through integrated management approaches that balance multiple uses for the sustainability of the lagoon ecosystems and their services.

26. The outputs under Outcome 2.1 are as follows:

Output 2.1.1 Areas of approximately 80 ha of the lagoon’s major coastal habitats (mangroves stands) restored, with activities to be implemented: a) Mangroves stands improved covering 3 ha (Zone 3: Mangrove Conservation Area); about 50 ha (Zone 8: Special Public Use Area); about 30 ha (Zone 4: Sustainable Mangrove Use Area); and b) Technical and financial support provided to mangrove nursery established by MESCAL project.

Output 2.1.2 Mechanisms set up to guarantee participatory fishing area and sustainable fisheries resources management by the FLC communities, with activities to be implemented: a) Consistent with the FLC IEMP and taking into account its status as a marine reserve, areas for conservation and subsistence or semi-commercial fisheries are reviewed and/or delineated inside the lagoon; and b) Existing fisheries regulations reviewed and refined for implementation, including but not limited to closed seasons, closed areas and mesh size regulations.

Output 2.1.3 Eco-tourism awareness to FLC community conducted and local initiatives demonstrated, with activities to be implemented: a) Public-private partnerships are forged to promote eco-tourism such as kayaking and nature walks through mangrove boardwalks, among

others; and b) Communities (including women and youth) engaged and benefitting from eco-tourism activities.

Output 2.1.4⁴ Activities based on sustainable land and forest management demonstrated in the FL catchment areas, with forest belts are put in place in selected areas as a means to control coastal erosion and reduce sediment flow into the lagoon; fruit-bearing trees included in these belts. Activities to be implemented are a) Commission community surveys to identify areas and methods of tree planting along the lagoon's shores and watershed areas; b) Organize an annual campaign to plant trees and raise public awareness and soil conservation; c) Conduct biannual trainings on sustainable land management practices to minimize pollution loadings into the lagoon targeting villagers and landowners living in the lagoon watershed areas; and d) Evaluate the results and define limits of sustainable land management practices in space, method and time

Output 2.1.5 Capacity for Fanga'uta Lagoon water quality control strengthened and on-site activities demonstrated, with activities to be implemented: a) Control of pollution from domestic sources; b) Enforcement of regulations, including EIA, to control effluents and discharges from industrial and commercial sources, e.g., including monitoring discharges of cooling water from the power plant; moratorium on reclamation until completion of coastal zoning; and c) Land-use planning/zoning in the lagoon catchment taking into account surface runoff, drainage design, etc., to control sedimentation and pollution.

Component 3 Knowledge Management: This component will improve awareness, communications, and education of FLC communities on IEMP and ecosystem services for promoting sustainable development in the Fanga'uta Lagoon Catchment. The FLC communities will be supported to gain knowledge and understanding to help them integrate environmental concern and low impact development approaches into their community development plans and actions. The efforts will ensure that the FLC communities and stakeholders are well-informed of the current issues of environmental degradation in the lagoon ecosystems, and that they are part of the process to formulate solutions to alleviate the problems.

27. The **key outcome of Component 3 (Outcome 3.1)** will be *increased awareness and appreciation of the ecosystem services of the Fanga'uta Lagoon*. The focus of this outcome will be interventions working in partnership with authorities and civil society to engage them in the design and production of awareness improvement activities targeted at a wide audience of FLC communities. The means of communication of the essential information to the authorities, villagers and different stakeholders concerning sitting, design, maintenance and monitoring of the ecosystem services of the Fanga'uta Lagoon and implications of IEMP for public health and wellbeing will be determined and implemented and key messages transmitted at both national and local level. Local experts and volunteers will be explored, trained and utilized to work with the project team to determine a communication strategy of the awareness programs and to design, produce, and maintain learning and communication materials for the target audiences. Briefings, short training and focused meeting will be conducted to plan and implement the strategy as well as to build the team capacity.

28. The main output under Outcome 3.1 involves awareness programs conducted through the production and distribution of awareness materials; Production of project briefs, videos in local dialect and disseminated to various media. Activities to be implemented to achieve this output are: a) Setting an Awareness and Communication Strategy; b) Production, Distribution, and Utilization of Awareness Materials; and c) Assessment of Production and Distribution of Awareness Materials. The lessons learned from this MSP will be shared with the PICs through the regional program support project "Testing the Integration of Water, Land, Forest and Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries".

Incremental Cost Reasoning and Expected Contributions from the Baseline

29. The proposed MSP will build on and complement the efforts of the Kingdom of Tonga to conserve and sustain the ecosystem services of the Fanga'uta Lagoon and its catchment through integrated land-water-coastal management, while contributing to implementation of Pacific Island Multi-focal Area R2R approaches. Building up on the efforts in lagoon environmental management and planning for ecosystem health and human well-being, the GEF MSP will provide incremental funding for the provision of technical support to the government and other stakeholders including local communities to create an enabling environment for effective governance through integrated environmental planning and reduce anthropogenic pressure on the lagoon from unsustainable agriculture/land use and competing resource uses through catalysing sustainable agricultural, water/land use, pollution reduction and habitat conservation. Technical assistance for the application of integrated environment management and awareness communications will catalyze the up-take of ecosystem protection and adaptive resource management methods resulting in a significant improvement of management effectiveness in marine protect areas and governance in managing ecosystem services of the lagoon and catchment ecosystems in Tonga.

Global Environmental Benefits

⁴ The project will work with the FAO R2R project which focuses on agroecosystems to also address the agriculture-related work in the lagoon catchment.

30. This proposed MSP will deliver global environmental benefits by supporting the Kingdom of Tonga in the transition towards mainstreaming biodiversity conservation and sustainable use into production landscapes and sectors. The project will promote cooperative action among agencies concerned, thereby combining sustainable use and conservation with economic development objectives, and fostering joint planning of the sustainable use of the globally and nationally significant lagoon ecosystems. The project will contribute to enhance enabling environment for integrated landscape management in the Fanga'uta Lagoon and catchment areas while facilitating the adoption of integrated and adaptive management approaches by the government as well as the local communities. By increasing public awareness and understanding of the importance of lagoon's ecosystem services, by reducing conflicts among resource users through a ridge-to-reef approach, and by creating an environment for integrating protected areas and ecosystem conservation into development planning, the project will mainly contribute as a case study for efforts at improving global environmental governance as well as to the ultimate objective of the CBD, which is to promote the conservation of biodiversity and the sustainable use of its components. The project will also contribute to the realization of the UNCCD objective through application of "long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources, leading to improved living conditions, in particular at the community level." The proposed MSP will contribute to demonstrate results that flow of ecosystem services increased and maintained leading to improved the livelihoods of FLC communities.

Innovativeness, Sustainability and potential for Scaling Up

31. The proposed MSP is innovative and demand-driven, linking to positive changes in efficiency of policy measures for conservation and sustainable use of the lagoon ecosystems under pressure, enabling governmental organizations to translate innovative activity into tangible performance improvements, as well as rehabilitation of damaged landscapes and seascapes. The project will apply integrated approaches to improve, maintain and enhance the ecosystem services of the Fanga'uta Lagoon Marine Reserve by supporting sustainable fishery practices, coastal habitat (mangroves) conservation, sustainable agricultural practices and agro-ecosystem activities through appropriate extension and training, water quality improvement, and eco-tourism that creates awareness and provides income opportunity for local communities particularly women and young people. The model of working with local communities to identify common resource requirements (e.g., fisheries, water quality, erosion control) for conservation and community development needs and focusing investment on those common needs is one which may have broader application for conservation outside of traditional protected areas.

32. Sustainability and replicability are inherent to project design. The project will promote cooperative action among agencies concerned, thereby combining sustainable use and conservation with economic development objectives, and fostering joint planning of the sustainable use of the globally and nationally significant lagoon ecosystems. On-the-ground activities, promoting integrated sustainable use of biodiversity as well as conservation of ecosystem services of the Fanga'uta Lagoon Marine Reserve, will build on community knowledge and awareness providing the opportunity for continued grassroots support and partnerships, involving participation of local people (including women and youth groups) and traditional leaders, with local and national governments as well as the private and non-profit sectors. Thus, the widespread adoption of integrated sustainable practices in the communities living adjacent to the lagoon and their continued application beyond the life of the project are envisaged.

A.2. Stakeholders. Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and others as relevant) and describe how they will be engaged in project and/or its preparation:

33. The primary level stakeholder in the implementation of this proposed project is the Ministry of Land, Environment, Climate Change & Natural Resource (MLCCNR) and key policy/legislative drivers. As the core government agency responsible for providing *'the fundamental basis for the achievement of high standard of living and quality of life for the people of Tonga at present and into the next generation, through sustaining the integrity of the ecosystems of Tonga to support life and livelihoods,'* MLCCNR will play a role of bridging and ensuring the collaboration and close communication between ministries and public entities having the mandate for biodiversity conservation and sustainable management of ecosystem services in the Fanga'uta Lagoon and catchment areas. Main activities will include: a) consultation with relevant stakeholders, as well as seeking financial assistance (co-financing), for updating the EMP FLS and for implementation of the FLC IEMP; b) information sharing and collaboration with concerned Cabinet members, relevant national committees and authorities on mangrove, fisheries, agriculture, land use, water quality and pollution, eco-tourism, marine and coastal resource conservation and management, either directly or through a project advisory body; and, c) exchanging best practices and lessons learned with other projects under the Pacific Island R2R Program at appropriate occasions as well as with other stakeholders at regional, national and local levels.

34. Other stakeholders at the national level include NGOs, academic and research communities, and concerned business sector representatives or developers. At the division and local levels, stakeholders include the division, district and village government units, NGOs, churches, local business groups, community organizations and local associations or co-operatives of farmers, fishers, and other resident groups dependent upon the lagoon space, catchment, resources and processes (for ecosystem services) such as pig farms, aquaculture producers and processing, shellfish and jellyfish gatherers, mangrove bark

users, lagoon settlements, and tourism groups, particularly those are often operated by women and young people.

35. Whereas the main roles of the primary level stakeholder are to ensure political and executive support for the action strategy as well as to seek funding from all avenues, local stakeholders have become actively involved in planning and management of lagoon resources and ecosystems. Some local leaders and community representatives, including women and youth, have been trained and participated in the environmental monitoring exercises. The establishment of local environmental monitoring team in the FLC through the project training and capacity development activities will improve knowledge and awareness of local communities in the protection and conservation of the lagoon’s ecosystems and their services. The involvement of local stakeholders and FLC communities in management of ecosystem goods and services of the Fanga’uta Lagoon through integrated approaches is vital to the future of the lagoon.

A.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

36. The Government of Tonga has demonstrated a sustained commitment to coastal ecosystem and protected area conservation by including the Fanga’uta Lagoon within the system of national protected areas. Continuing commitment is demonstrated by the Environmental Management Plan (EMP) for the Fanga’uta Lagoon System to reduce existing and potential pressure on the ecosystems of the current protected lagoon. The EMP includes coastal area zoning that demonstrate Tonga’s commitment to sustainable land/water use and development planning to maintain the ecological integrity of the coastal lagoon region. Through EMP updates and improvement on implementation capacity, the proposed project will increase sustainable economic benefits from developments that are integral and compatible with conservation of ecosystems and ecosystem services in the coastal lagoon and catchment. Inclusion of environmental and public awareness mechanisms within this project as well as involvement of local communities in management and planning decisions concerning development within and adjacent to the project sites will develop a broader grass roots understanding of linkage between long-term economic prospects for the human populations, particularly women and young people, and ecological stability of the coastal lagoon ecosystems.

A.4 Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks:

37. Habitat Destruction / Fragmentation: Few areas of primary forest ecosystems remain on Tongatapu, but there are some primary forests on steep and inaccessible slopes on ‘Eua. These forests are threatened by fragmentation and habitat destruction due to the traditional system of land allocation which ‘guarantees’ parcel of land for all Tongan males. Thus there is an ongoing threat of encroachment from expanding agriculture and invasive species into forested areas. In addition there are risks of devastating damage from cyclones and tsunamis to coastal forests. The capital city of Nuku’alofa on Tongatapu is continually expanding along coastal areas and into the inland with significant habitat destruction of forests. Mangrove forests in particular have been severely reduced due to urban development, construction of rock walls and jetties, as well as being used for solid waste disposal. Sand mining has also contributed to coastal erosion and loss of mangroves.

38. Degradation of Land and Water Resources and Ecosystem Services: Terrestrial, coastal and marine ecosystems in Tonga are all threatened. The most significant threats to coral reefs are from: over-exploitation of fisheries resources (especially from traps and due to poor marketing practices); pollution (sewage seepage from poorly maintained septic systems and outflows from piggeries and other agricultural practices); nutrient overload (fertilizers) and sedimentation (construction, erosion from agriculture); damage from anchors, trampling at low tide while gleaning, and bashing corals during drive net fishing. Seagrass beds are also degraded from: poor fishing practices; pollution; and nutrient loading from the land. Poor agricultural practices are responsible for pollution from the land via groundwater, especially from: excessive application of fertilizer; harmful chemicals and pesticides; burning of agricultural waste; and setting of fires to clear land. Large volumes of POPs (persistent organic pollutants) and PCBs from electrical transformers have been dumped on land and these compounds are evident in Fagauta Lagoon. Finally, unsustainable beach sand mining has contributed to pollution and shoreline erosion.

39. Climate Change Impacts and Tsunamis: Tonga has already experienced climate change damage with increases in the intensity of tropical cyclones, some coral bleaching, coastal flooding due to sea level rise and loss of protective natural barriers. Further damage will occur to the coral reefs from increasing ocean acidification as CO₂ emissions continue to increase. Severe storms will cause significant damage to forests, coral reefs, mangrove forests, other coastal areas, human infrastructure and possibly human health in Tonga. The tsunami of September 2009 was a wake-up call for governments of the Pacific to implement disaster risk management and early warning systems. This will be a component of the proposed projects.

TABLE 1: Project Risks Assessment and Mitigation Measures

Risks	Rating	Risk Mitigating Measures
Systematic approach and mechanisms lacking for biodiversity conservation and sustainable land use	Low	The project will introduce Ridge-to-Reef training and implementation for sustainable land use and biodiversity conservation with the relevant sectors of government in cooperation with NGOs and community organisations. Involvement of the noble landowners will be essential as they are the largest holders of land and especially forests, and are also senior decision makers in government. A more systematic approach to forest and biodiversity conservation will be developed by all stakeholders and incorporated into national policy. Capacity building in ICM will be emphasized with government and NGO staff, and community representatives.
Lack of political support and community buy-in for biodiversity conservation and sustainable land management	Medium	Tonga is in transition between hereditary rule and a representative democracy with power shared between elected officials and nobles. The project will ensure that both groups are involved in project planning and implementation, and offered R2R training. Large area forest replanting and land rehabilitation will require involvement of the nobles; for smaller areas the project will demonstrate to landholders the economic advantages of replanting with fruit trees and more productive coconuts. Small scale nurseries will be established through the involvement of schools, NGOs and religious groups to stimulate land rehabilitation.
Complex land tenure arrangements will impede land rehabilitation	Medium	Land tenure on Tonga is unusual with virtually all land belonging to the King and nobles, with much of this is leased in small parcels for subsistence agriculture. This presents particularly difficult challenges for conserving existing forests and rehabilitating agricultural lands. Broad scale tree planting on land held by nobles can be negotiated; however activities on land leased by individual land holders could be delayed. The project will emphasize economic benefits of land rehabilitation and develop demonstration farms. The same constraints do not apply for coastal lands and the marine environment which belong to the national government.
Lack of capacity in government staff and community groups to undertake project activities.	Low	The total population in Tonga is just over 100,000 with about 70% living on Tongatapu. There are insufficient people trained and employed in the ministries and departments for many of the land management tasks required in Tonga. There are even fewer on the outer islands. Similarly there are few effective community based NGOs able to unite communities for environmental management. The R2R project will provide post-graduate certificate level training and short course training for people involved in the project and in NGOs. Also qualified Tongans living out of the country will be notified of employment possibilities in project activities.
Climate change and tsunami/volcano threats to terrestrial and marine resources.	High	Climate change poses major long-term risks to all resources in Tonga with potentially stronger cyclones, changes in rainfall, sea level rise and coral bleaching plus ocean acidification. Similarly a repeat of the tsunami of September 2009 is possible, but not envisaged in the short-term of the project. The main objective of the proposed project is to build resilience in the islands and people to 'protect, retreat and accommodate' to these threats in the longer term.

A.5. Explain how cost-effectiveness is reflected in the project design:

40. In the baseline scenario, whereas the formulation of the EMP FLS completed in 2001 was a significant accomplishment of the Government of Tonga, a number of challenges and constraints have been identified as the principal impediments to the realization of the EMP objectives and the ultimate goal of sustainable services of the lagoon ecosystems, resulting in continuous decline in the abundant and diversity of the lagoon species and their habitats. In terms of legal, policy and institutional framework development, enforcement is a major problem due to lack of staffing and financial resources for operations. For effective management of the lagoon protected area, there is a need to mainstream environmental issues of the Fanga'uta Lagoon and its catchment that have contributed to sustainable development of the Kingdom into the national strategy development plans as well as in each institutional stakeholder operational plans. The lack of functional enabling environments for conservation and integrated management of the lagoon and catchment areas and the lack of measurable key indicators for regular monitoring of the status of the lagoon environment and ecosystem services have further constrained the effort to 'improve the existing conditions in the lagoon and ensure that it can provide the maximum use of goods and services in the future' as outlined in the EMP FLS.

41. The over-riding gaps that this proposed GEF support seeks to fill reflect underlying conditions of governance and resource management to conservation of the lagoon habitats and sustainable use of the natural ecosystems and their services. This includes the lack of an integral approach to environmental planning and management, ineffective or lack of collaboration among relevant government offices and community involvement, the lack of management scheme to regulate and/or monitor unsustainable practices, and the lack of public awareness and communication materials on integrated lagoon conservation and management. Therefore the focus of this proposed project is through implementing a ridge-to-reef approach that instills holistic and integrated management into government and community groups such that conservation is recognized as an integral component of their activities. The essential manifestation will be an integrated national system of terrestrial, coastal and marine managed areas that

will follow active rehabilitation of damaged habitats and areas as well as recognition of the need for sustainable ecosystem services management.

A.6. Outline the coordination with other relevant GEF financed initiatives [not mentioned in A.1]:

42. The proposed project will build on and coordinate with other relevant GEF and non-GEF financed initiatives, as outlined below, aiming to ensure the continuity of actions taken so far via separate projects/initiatives, and avoid a disruption of the services that have been developed and deployed until now. Foremost of these are all the projects under the Pacific R2R Program as mentioned earlier, including the regional program support project “Ridge to Reef: Testing the Integration of Water, Land, Forest & Coastal Management to Preserve Ecosystem Services, Store Carbon, Improve Climate Resilience and Sustain Livelihoods in Pacific Island Countries”.

43. The *GEF/UNEP Integrated Island Biodiversity Project* being executed by SPREP to assess species composition and ensure the sustainable use of biodiversity throughout Tonga during 2012-2015 with a budget of US\$ 350,000.

44. The *Tonga Pacific Adaptation to Climate Change (PACC) Project* is part of a Pacific regional project with 13 countries, which aims to improve the response effectiveness to climate change and disaster risks to water resource management, coastal management and infrastructure as well as food production and food security. Tonga is focusing on adaptation in the water resources sector to improve water management in six communities in western Tongatapu. Budget allocated to the project is US\$ 0.75 million from GEF/UNDP/SPREP for 2008-2012.

45. The *Japanese Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)* has been providing technical and financial support to Tonga to enhance human and institutional capacity base for sustainable Solid Waste Management in Tonga’s Vava’u island group. Expected outputs of the project are the improvement of the existing solid waste disposal facility (landfills) and operation and solid waste collection service, as well as the establishment of a framework and system for long term solid waste management in Vava’u. The agencies in charge of project implementation are the Ministry of Health and the Ministry of Environment and Climate Change with local stakeholder involvement. The project period is 2011-2015 (5 years).

46. The Australian development support for Tonga is approximately \$32.1 million in 2012-13 with activities to improve governance, health and education. AusAID funding for the environment has particularly focused on adaptation for climate change through assistance to develop climate change strategies and to fund the establishment and ongoing support for the Joint National Action Plan Task Force Secretariat. AusAID added to the PACC project through International Climate Change Adaptation Initiative (ICCAI) specifically to implement climate change adaptation for the Water Resources and Coastal Zone Management sector with a budget of approximately US\$ 1.7 million for 2010-2013. Also AusAID is funding components of the GEF/UNDP Pacific Integrated Water Resource Management project in 2013-2014 for approximately US\$ 1 million. Another AusAID project on the Pacific Risk Resilience Program is being implemented by UNDP during 2012-2016 for approximately US\$ 4 million. The major activities are to strengthen mechanisms for climate change adaptation and disaster risk reduction throughout Tonga.

47. The Government of New Zealand supports a project on Tongatapu Market Gardens aiming to increase food security to 300 households (approximately 1,200 people) in three villages located on the Nuku’alofa Branch of the Fanga’uta Lagoon (Pea, Sopa, and Popua). The project will tailor land, crop and livestock management to the specific needs of their locations namely coastal erosion. The households will use self-sufficiency and permaculture methods to provide themselves with much needed fresh fruit and vegetables and livestock produce all year round. As planned, the project will contribute to replenishing fish stocks by repairing damaged coastlines through mangrove regeneration. The project covers the period of 2 years (2013-2015) with the budget of NZD 301,037.

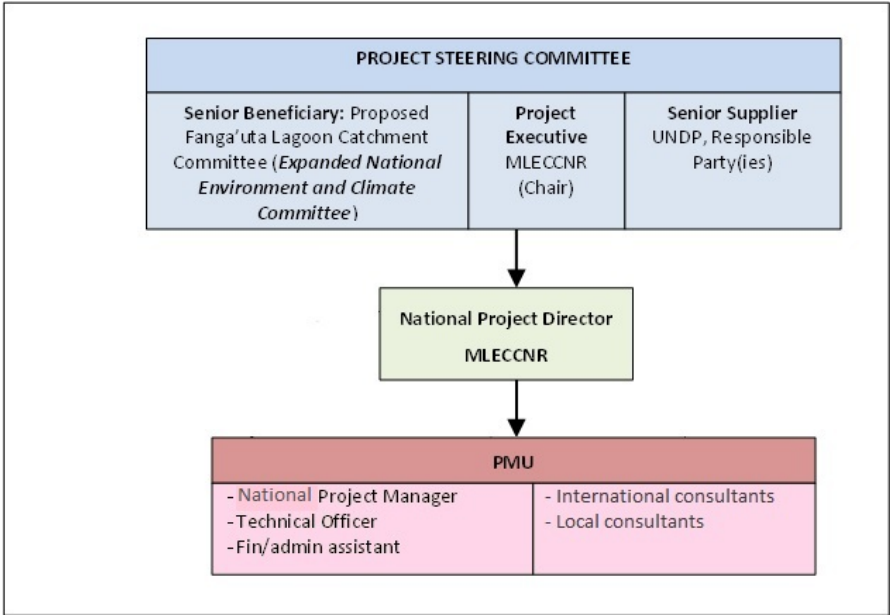
48. The *Tonga Global Climate Change Alliance Project* is trialing coastal protection measures in Eastern Tongatapu around the capital Nuku’alofa where sea level rise has resulted on coastal erosion. The project is attempting to correct piecemeal and inadequately engineered attempts to protect the land. This is a priority area under the Joint National Action Plan for Climate Change Adaptation and Disaster Risk Management for 2010. UK Consultants have assessed the feasibility of various options and the project will provide protection for villages on eastern Tongatapu and develop best practice examples for engineered coastal protection systems elsewhere in Tonga. The budget from EU is approximately US\$ 0.8 million for 2011-2014.

49. The GIZ Project is focused on land based activities and mainstreaming to develop be national strategies for adapting to climate change in agriculture, forestry, land use planning with courses mainstreamed into school curriculum. The total budget for the Pacific from Germany is approximately US\$ 20 million with most activities conducted during 2009-2012. The proposed project will also build on the *GEF/UNEP Integrated Island Biodiversity Project* being executed by SPREP to assess species composition and ensure the sustainable use of biodiversity throughout Tonga during 2012-2015 with a budget of US\$ 350,000.

A.7 Describe the institutional arrangement for project implementation:

50. The Project will be implemented through UNDP’s National Implementation Modality (NIM), with the Ministry of Land, Environment, Climate Change and Natural Resources (MLECCNR) serving as the designated national executing agency (“Implementing Partner”) of the project. MLECCNR will have the technical and administrative responsibility for applying GEF inputs in order to reach the expected Outcomes/Outputs as defined in this project document. MLECCNR, together with the Project Steering Committee (PSC), is responsible for the timely delivery of project inputs and outputs, allocating resources in an effective and efficient manner, and in this context, for the coordination of all other responsible parties, including other line ministries, local government authorities and/or UN agencies.
51. A Project Steering Committee (PSC), responsible for approving key management decisions of the project and will play a critical role in assuring the technical quality, financial transparency and overall development impact of the project, will be established as soon as this project is approved. The PB will comprise of the MLECCNR, UNDP and the proposed Fanga’uta Lagoon Catchment Management Committee as articulated in the Output 1.1.1 in section 2.2.
52. MLECCNR will appoint the National Project Director (NPD) and will be responsible for ensuring the overall smooth implementation of the project in line with planned project objectives and outcomes as identified in this project document. The NPD will provide strategic support as needed to the project, particularly to ensure strong engagement from key national and local stakeholders and ensure that members of National Environment Climate Change Committee (NECCC), comprised of CEOs of line Ministries, are fully informed of the high-level policy objectives of the project. The costs of the NPD role will be borne by the Government of Tonga as in-kind contribution to the project.
53. National Project Manager (NPM) will be a dedicated professional designated for the duration of the project and report to NPD. The NPM’s prime responsibility is to ensure, under the overall guidance from the PB, that the project produces the results specified in the project document to the required standard of quality and within the specified constraints of time and cost.
54. The NPM will be supported by a core team of technical and support staff forming the Project Management Unit (PMU) located within the MLECCNR to execute project activities, including day-to-day operations of the project, and the overall operational and financial management and reporting. Supporting the PMU will be a team of consultants that will be hired in the course of project implementation.
55. Project assurance: The UN Joint Presence Office in Tonga headed by the Country Development Manager (CDM) located in Nuku’alofa, Tonga and the UNDP Multi-Country Office located in Suva, Fiji will support project implementation by assisting in the monitoring of project budgets and expenditures, contracting project personnel and consultancy services, and subcontracting and procuring equipment at the request of the MLECCNR. On the technical side, the CDM, UNDP Fiji MCO and UNDP-GEF RTA will monitor progress of project implementation and achievement of project outcomes/outputs as per the endorsed project document. A designated Programme Officer will be assigned in the MCO to provide financial and technical monitoring and implementation support services. The UN Joint Presence Office is shared by a number of UN offices, including UNDP.
56. Audit Requirements: The project will be audited on a yearly basis for financial year January to December as per NEX procedures and Global Environment Facility requirements. The audit will be conducted by the National Auditor or any other local auditor recognized by both GOT and UNDP Fiji MCO.

Figure 1: Project Management Structure and Organigram



57. Key stakeholders and their Involvement in the Project are as follows:

- a) Relevant government agencies: the Ministry of Lands, Environment, Climate Change and Natural Resources functions as the GEF Focal Point and hosts and chairs the National Environment and Climate Change Committee with representation from the planning and implementing sectoral departments, specifically Agriculture, Fisheries, Forestry, Tourism, Lands, PUMA, and NGOs. They were all involved in developing the project. Also consulted were the Ministry of Foreign Affairs and the Aid Management Division of the Ministry of Finance and National Planning.
- b) The Tonga Trust, a coordinating body for many NGOs, the Civil Society Forum of Tonga, an umbrella group for other NGOs, particularly representing women's organizations and the Tonga National Youth Groups, which is a youth coordinating network, are members of the NECCC. Their role will be to ensure that the voices of communities, especially women, are heard in project determination and in participation to gain benefits from the project. Many of the NGOs will be involved in working with communities on aspects of this project. Tonga Trust provides community-based research and extension support to current activities; and Civil Society provides community assistance in allocating financial assistance to national projects under the Small Grants Programme.
- c) Tonga National Fisheries Association is an umbrella NGO for fisheries. Their role is to advocate and assist in the public awareness through all members (subsistence, artisanal, and commercial fishermen. They will be involved in working with communities on aspects of this project.
- d) International organizations: UNDP, the GEF Implementing Agency, is strengthening regional governance of coastal and marine resources through its support for Pacific countries. The UNDP role is to ensure that the GEF Secretariat is continually informed of activities and progress through M&E via an Annual Monitoring Report. The UNDP coordinates with UNEP and UNFAO for the implementation of the Ridge-to-Reef and IWRM projects in all 14 Pacific countries. FAO will be consulted on fisheries aspects, especially in the implementation of alternative fishing industries to reduce pressure on coastal fisheries. In addition, UNDP will coordinate with the SPC, especially with the technical arm SOPAC, and with ADB and SPREP on technical and coordinating matters and involving contacts with Pacific country governments.
- e) International NGOs and Agencies: UNDP will involve key NGOs and other CROP agencies during the negotiation phase and then later during implementation in some aspects of the design of the project and in implementing specific themes. Specifically the IUCN, WWF, WCS and the University of the South Pacific will assist in implementing some aspects.
- f) The business community/corporate sector: where appropriate UNDP and the Tongan Environment and Climate Change Committee will request the assistance of the corporate sector in those aspects requiring special expertise, such as the design and construction of engineering features as water and sewage treatment systems, and hard structures to combat rising sea levels.
- g) The major donors and implementing agencies involved in parallel projects in Tonga will be consulted regularly to ensure maximal benefits are derived from the GEF funds by avoiding overlaps and selecting from gaps identified by these agencies. Principal amongst these are: the EU and GIZ, AusAID, Governments of Japan and USA.
- h) FLC Communities will be contacted through NGOs and church groups with one group on Tongatapu running a trust fund for land rehabilitation.

The details about the nature of the involvement of the stakeholders during project implementation will be prepared and drafted in the process of preparing the FLC IEMP. Agreement will be sought from the various stakeholders through various mechanisms such as formal TORs, MOUs and the like.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAs, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, etc.

58. The main baseline activities by the Government of Tonga are through the Ministry of Land, Environment, Climate Change & Natural Resource (MLCCNR) acting with the Joint National Action Plan Task Force Secretariat (JNAP). The other key ministries and departments are Agriculture, Food, Forests and Fisheries, Finance and National Planning, and Tourism. The development of the *Joint National Action Plan on Climate Change Adaptation and Disaster Risks Management 2010–2015* complies with Tonga's National Strategic Development Framework 2009–2014, the Pacific Islands Framework of Action on Climate Change 2006–2015, the Pacific Disaster Risk Reduction and Disaster Management Framework for Action 2005–2015, the International Decade for Natural Disaster Reduction (IDNDR), the Yokohama Plan for Action and the Hyogo Framework for Action 2005–2015, and the United Nations Framework Convention on Climate Change. Their current budget is approximately US\$ 1.6 million from a total government budget of US\$ 113.6 million per annum with US\$ 0.65 million allocated for environmental and cultural matters. JNAP and MLCCNR are also the coordinating agencies for other GEF projects as well as those funded by the EU, AusAID, Japan and others. This linkage will ensure that the proposed project is coordinated with similar projects in Tonga.

59. The Government of Tonga is committed to the implementation of the CBD, including PoWPA, and has statutory laws that have provisions for biodiversity conservation. Tonga's vision for biological diversity and natural resources are to protect, conserve and enrich; and to be enjoyed by present and future generations. This will be achieved by fulfilling national targets for Target 11 in thematic areas of forest and marine ecosystems, species conservation, and agro-biodiversity, and strengthening local communities and civil society engagement, financial resources and mechanisms, economic valuation and building climate resilience through protected area integration and mainstreaming. The Kingdom has submitted to the Secretariat of the Convention on Biological Diversity in 2011 the *Action Plan for Implementing PoWPA 2013-2020* which covers 14.5% of Tonga's protected terrestrial surface and 2.5% territorial waters (as of 2010) including the Fanga'uta and Fangakakau Lagoon Marine Reserve. Tonga's implementation of PoWPA are guided the NBSAP and the outcomes of the Initial PoWPA Analysis. Priority actions outlined in the implementation plan are as follows: assessing gaps in the protected area network; establishing transboundary protected areas and regional networks; assessing the values of protected areas; sustainable financing and mechanism; assessing management effectiveness for both government and communities; establishing an effective PA monitoring system; and developing a research program for protected areas.

B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities

60. The project is consistent with the GEF 5 Focal Area Strategies, in particular the Biodiversity Strategy and two of its objectives, the Land Degradation Strategy and two of its objectives, and the International Waters Strategy and one of its objectives, which are:

- BD Objective 1: Improve Sustainability of Protected Area Systems;
- BD Objective 2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors;
- LD Objective 1: Maintain or Improve Flows of Agro-Ecosystem Services to Sustain Livelihoods of Local Communities;
- LD Objective 3: Reduce Pressures on Natural Resources from Competing Land Uses in the Wider Landscape; and,
- IW Objective 3: Support Foundational Capacity Building, Portfolio Learning, and Targeted Research Needs for Ecosystem-based, Joint Management of Transboundary Water Systems

61. The project focuses on Tonga's national priorities as described in the Tonga's National Biodiversity Strategy & Action Plan (2006) to promote the conservation and sustainable utilization of the country's biodiversity. The project shall implement an integrated approach with regards to land-water-coastal management to enhance ecosystem services and improve sustainability of the Fanga'uta Lagoon Marine Reserve, and to promote the positive impacts and mitigate the negative impacts of land-use systems and agricultural practices on biological diversity in agro-ecosystems and their interface with other ecosystems. It will use the 'adaptive management' approach to explore and develop an integrated management system to interact with the biophysical specificities of the lagoon in order to maintain the biodiversity and cultural values of agro-ecosystems and other ecosystems. Ultimately, the integrated environmental management and adaptive management approaches will help the people and communities living in and around the Fanga'uta Lagoon to establish strengthened socio-political (governance) and economic processes (alternative livelihood opportunities) that help them effectively address the challenges of biodiversity loss and habitat degradation, as well as reduce climate-related uncertainty over time via an integrated planning and monitoring system.

62. The project fully fits with the Objective 1 of GEF-5 Biodiversity Focal Area: Improve Sustainability of Protected Area Systems and the BD Objective 2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors. The project address these BD Strategic Objectives of GEF-5 by improving management effectiveness of the Fanga'uta Lagoon Marine Reserve through policy/institutional development and management integration support for effective updating and implementation of the existing Environmental Management Plan for Fanga'uta Lagoon System (Outcome 2.2: Measures to conserve and sustainably use biodiversity incorporated in policy and regulatory frameworks); improving conditions of critical lagoon habitats, productivity, water quality and fish production (Outcome 1.1: Improved management effectiveness of existing and new protected areas); and support for an application of spatial land-use planning in the lagoon catchment that incorporates biodiversity and ecosystem service valuation (Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation).

63. While a site-based project focusing on a small area of the country, the project will indirectly support the Aichi targets, at least for the Fanga'uta lagoon. Target 8 is relevant through the reduction of excess nutrients that will improve the water quality of the lagoon and would also be beneficial to maintaining ecosystem function and biodiversity. Target 7 is also relevant as the project will work on sustainable land and forest management in the lagoon watershed. Target 4, through the creation of the multi-stakeholder FLC, is also relevant. The monitoring of the indirect contribution will be captured in the various tracking tools.

64. This project contributes to the Land Degradation Objective 1: Maintain or Improve Flows of Agro-Ecosystem Services to Sustain Livelihoods of Local Communities and LD Objective 3: Reduce Pressures on Natural Resources from Competing Land Uses in the Wider Landscape. The project shall develop an enabling environment that will place Sustainable Land Management (SLM) in the mainstream

of development policy and practices in the context of integrated environmental management in Tonga's priority lagoon catchment areas (Outcome 3.2: Integrated landscape management practices adopted by local communities), increase forest and tree cover in production landscapes (Outcome 3.1: Enhanced cross-sector enabling environment for integrated landscape management), and implementation of landscape approaches for assuring an improved flow of agro-ecosystem services (Outcome 1.3: Sustained flow of services in agro-ecosystems).

65. This project is also consistent with the GEF-5 International Waters Focal Area Objective 3: Support Foundational Capacity Building, Portfolio Learning, and Targeted Research Needs for Ecosystem-based, Joint Management of Transboundary Water Systems. As part of the Pacific R2R integrated management approach, complemented by a regional multi-focal project (consisting mostly of IW funding), the project addresses this IW objective through integrated and participatory approaches to enforce regulations on water quality of the Fanga'uta lagoon and catchment and to support of fisheries in the face of multiple stresses. The holistic approach applied by the project shall contribute significantly to foster approaches to IWRM and ICM for strengthening the likely achievement of the integrated Fanga'uta Environmental Management Plan developed for the environmental and economic health of Tonga's priority catchment (Outcome 3.2: On-the-ground modest actions implemented in water quality, quantity (including basins draining areas of melting ice), fisheries, and coastal habitat demonstrations for "blue forests" to protect carbon).

B.3 The GEF Agency's program (reflected in documents such as UNDAF, CAS, etc.) and Agencies comparative advantage for implementing this project:

66. UNDP has the required on-the-ground operational, financial and technical capacities to effectively manage and guide this proposed project in Tonga under the umbrella of the United Nations Development Assistance Framework, UNDAF (2008-2012 UNDAF for the Pacific Sub-region) and the planned extension UNDAF (2013-2017). The Tonga draft 2013-2017 UNDAF country results matrix indicates 4 priority outcomes, including 'National and local capacities ably respond to climate change and natural disasters, and sustainably manage and coordinate water resources.' The UNDP national level support to Tonga is detailed in the UNDP Sub-Regional Programme Document for Pacific Island Countries 2013-2017 with one focus being 'Environmental management, climate change and disaster risk management.' The Fiji Multi-country Office (MCO) based in Suva, will be the responsible UNDP unit for this project, and the office has the required capacity and staff in relevant areas: operational and financial services; and the Environmental Management & Financing Unit (6 staff). One staff member will function as the UNDP focal point for the project. The UNDP/GEF Regional Technical Advisor for International Waters in the Pacific in Bangkok, based at the UNDP Asia Pacific Regional Centre will oversee the project to ensure that it achieves its objectives in line with GEF guidelines.

C. DESCRIBE THE BUDGETED M & E PLAN:

67. The monitoring and evaluation (M&E) scheme will be applied in accordance with the established UNDP procedures throughout the project lifetime. As an implementing partner, MLECCNR, together with the UNDP Multi-Country office in Fiji will ensure the timeliness and quality of the project implementation. The M&E plan will be implemented as proposed in Table 6. Technical guidance and oversight will be also provided from the UNDP's Regional Bureau for Asia Pacific, as well as the Project Steering Committee (PSC).

68. **Project start:** A Project Inception Workshop (IW) will be held within the first 2 months of project start with those with assigned roles in the project management, AF, UNDP CO and where appropriate/feasible, regional technical advisors as well as other stakeholders. The IW is crucial to building ownership for the project results and to plan the first year annual work plan.

69. **Quarterly report:** the progress made shall be reported to UNDP Multi-Country office in Fiji and be monitored in the UNDP Enhanced Results Based Management Platform. Based on the initial risk analysis submitted, the risk log shall be regularly updated in UNDP corporate system (ATLAS). Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

70. **Annual Project Review/Project Implementation Reports (APR/PIR).** This report combines both UNDP and GEF reporting requirements. It is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. This key report shall be prepared by the National Project Manager, shared with the Project Board and submitted to UNDP CO for comments, after finalized will send to RTA for clearance. . The APR/PIR will be prepared with progresses against set goals, objectives and targets, lessons learned, risk management and detailed financial disbursements.

71. **Periodic Monitoring through site visits:** UNDP CO will conduct visits to project sites based on the agreed schedule in the project's Annual Work Plan to assess, at first hand, project progress. Other members of the PB may also join these visits.

72. **Project Terminal Report:** During the last three months of the project, the Project Manager/PMU will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met and missed, structures and systems implemented, etc. and will be the definitive statement of the Project’s activities over the three-and-a-half-year duration. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project’s activities.

73. The budgeted M&E plan is as follows:

TABLE 2: M&E ACTIVITIES, RESPONSIBILITIES, BUDGET AND TIMEFRAME

Type of M&E activity	Responsible Parties	Budget US\$	Time frame
Inception Workshop (IW)	<ul style="list-style-type: none"> Project Manager UNDP CO 	8,000	Within first four months of project start up
Inception Report	<ul style="list-style-type: none"> Project Team UNDP CO 	None	Within one month from IW
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> Oversight by Project Manager Project team 	Included in PMU budget	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> Project manager and team UNDP CO UNDP RBAP (First PIR only) 	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> Project manager and team 	None	Quarterly/ Annually
Final Evaluation	<ul style="list-style-type: none"> Project team, UNDP CO Independent Consultant 	30,000	At least one month before the end of project implementation
Project Audits	<ul style="list-style-type: none"> UNDP CO Project manager and team 	14,000	Following UNDP finance regulations and rules
Visits to field sites	<ul style="list-style-type: none"> Project staff Government representatives 	Included in operational costs	At all stages of project implementation
TOTAL Indicative COST		US\$ 52,000	

Note: The costs indicated here do not include the costs associated with UNDP staff. Those UNDP related costs are covered by the MIE fee.

4.2 INDEPENDENT EVALUATIONS, AUDITS AND FINANCIAL REPORTING

74. **Terminal Evaluation and Project Closure:** An independent Final Evaluation will take place 3 months prior to the final PB meeting. The final evaluation will focus on the delivery of the project’s results as initially planned,. The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordination Unit and UNDP-GEF. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC). The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

75. **Project Audits:** The project will be audited on a yearly basis for financial year January to December as per NIM procedures and Global Environment Facility requirements. The audit will be conducted by the National Auditor or any other local auditor recognized by both GOT and UNDP Fiji MCO.


PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
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Mr. Asipeli Palaki	CEO/GEF OFP, Tonga	Ministry of Lands Environment, Climate Change and Natural Resources	DECEMBER 9, 2013
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B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Adriana Dinu, UNDP/ GEF Executive Coordinator and Director a.i		7 March 2014	Jose Erez Padilla, IW	+66 2 304 9100 ext 2730	Jose.padilla @undp.org

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

INDICATOR FRAMEWORK AS PART OF THE SRF

The performance indicators contained in the SRF below are all ‘SMART’ (Specific, Measurable, Achievable, Relevant and Time-bound). The choice of indicators is based on their pertinence to the underlying assumptions in the analysis of project objective and outcomes, while reflecting GEF’s Tracking Tools and UNDP’s IRRF indicators. Some process-oriented indicators have been selected from the IWRM Guidelines for SIDs⁵ and international guidelines for ICM⁶.

Goal: To maintain and enhance Tonga’s ecosystem goods and services (provisioning, regulating, supporting and cultural) through integrated approaches to land, water, forest, biodiversity and coastal resource management that contribute to poverty reduction, sustainable livelihoods and climate resilience.

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
Objective: To conserve the ecosystem services of the Fanga’uta Lagoon and Catchment (FLC) through an integrated land, water and coastal management approach thereby protecting livelihoods and food production and enhancing climate resilience	Status of completion and implementation of the FLC IEM Plan	The Fanga’uta Lagoon and Catchment faces two major barriers for its conservation and sustainable management at present: i) degradation of ecosystem services and ii) acquiring new approach, method, knowledge and tool.	FLC IEMP has been formulated by Year 2, accepted and implemented in Year 3, to recognize and promote the conservation and adaptive management of the ecosystem services of the FLC	Existence of a functional lagoon management authoritative body and meeting reports Government publications and communication materials from Outcome 3 Project Reports and publications	The Tonga Government is willing to designate, support, and promote IEM and ecosystem services concepts within FLC. MLECCNR is prepared to undertake efforts to coordinate and enhance its support to conserve and manage the ecosystems of FLC. Collaboration among concerned government

⁵ Chase, Vasantha, et.al. 2012. *Integrated Water Resources Management Planning Approach for Small Island Developing States*. UNEP, Nairobi

⁶ Cicin-Sain, Biliana and Robert Knecht. 1998. *Integrated Coastal and Ocean Management: Concepts and Practices*. Washington, DC: Island Press.

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
					agencies and other stakeholders is achieved in order to create a national policy environment conducive for integrated management of FLC.
	Tracking Tool BD 1: Improved management effectiveness of existing and new protected area	The Fanga'uta Lagoon marine reserve and catchment covers 2,835 ha of water and 8,000 ha of land having significant agricultural, coastal biodiversity, and other ecosystem services value	About 80 hectares of mangroves and other biodiversity resources in the FL protected areas conserved and managed mainly for the sustainable use of natural ecosystems	Reports from project annual M&E activities GEF BD Tracking Tool reports	There is effective involvement of all institutions and stakeholders who have a role to act in conserving and sustainable use of lagoon biodiversity and ecosystem services.
	Tracking Tool BD 2: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation		10,800 hectares of the FLC landscape / seascape directly or indirectly contribute to biodiversity conservation or sustainable use of its ecosystem services		
	Tracking Tool LD 1: Sustained flow of services in agro-ecosystems	The Fanga'uta Lagoon has been facing pressures on agro-ecosystems and natural resources from competing land uses in the wider landscape.	50 hectares of FLC area of production systems with increased vegetation cover	Reports from project annual M&E activities GEF LD Tracking Tool reports	Continued political commitment at the national and local levels in incorporating SLM into development plans and practices
	Tracking Tool LD 3:		Application of		

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
	Integrated landscape management practices adopted by local communities	No sustainable agricultural practices are currently implemented in the lagoon catchment areas.	enhanced capacity demonstrated (i.e., FLC IEMP, inter-agency governing body, awareness and communication strategy) Production of a series of FLC awareness and communication materials produced and disseminated A project website or webpage created & maintained	Reports from project annual M&E activities GEF TWs Tracking Tool reports	Government, private business, and local communities actively participate and contribute in capacity building activities as assumed.
	Tracking Tool IWs 3: IW portfolio capacity and performance enhanced from active learning/KM/ experience sharing	Limited local capacity exists for overseeing and monitoring of water quality in the lagoon	Water quality improved through small demonstrations and monitoring mechanisms in place for project related indicators		
Project Components/Outputs:					
Component 1:	Appropriate Governance of Fanga’uta Lagoon Catchment Areas and Integrated Management of Lagoon Ecosystems				
Outcome 1.1	Multi-stakeholder management system established to guide the updating of the EMP FLS and implementation of the FLC Integrated Environmental Management Plan (IEMP)				
Output 1.1.1	Capacity of NECC and FLC Stakeholders enhanced to more effectively plan and implement an integrated lagoon ecosystem management approaches				
Output 1.1.2	Measures delivered to fully engage the Fanga’uta Lagoon Catchment (FLC) communities in lagoon ecosystem management				
Outcome 1.2	Participatory updating of the Fanga’uta Lagoon Catchment IEMP completed, adopted, endorsed and budgeted for				
Output 1.2.1	FLC IEMP prepared and completed; establishing technical, biophysical, oceanographic, socioeconomic and demographic baselines; updating the EMP completed in 2001 with additional parameters to be established				

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
Output 1.2.2	FLC IEMP adopted, mainstreamed and funded				
Output 1.2.3	Multi-stakeholder participatory mechanisms conducted to ensure adaptive management during the preparation, implementation, monitoring and evaluation of FLC IEMP development and interventions				
Component 2:	Implementation of the Integrated Environmental Management Plan for the Fanga’uta Lagoon Catchment				
Outcome 2.1	Improved conditions of critical lagoon habitats, productivity, water quality and fish production through the implementation of priority interventions identified in the IEMP				
Output 2.1.1	Areas of approximately 80 ha of the lagoon’s major coastal habitats (mangroves stands) restored				
Output 2.1.2	Mechanisms set up to guarantee participatory fishing area and sustainable fisheries resources management by the FLC communities				
Output 2.1.3	Eco-tourism awareness to FLC community conducted and local initiatives demonstrated				
Output 2.1.4	Activities based on sustainable land and forest management demonstrated in the FL catchment areas				
Output 2.1.5	Capacity for Fanga’uta Lagoon water quality control strengthened and on-site activities demonstrated				
Component 3:	Knowledge Management				
Outcome 3.1	Increased awareness and appreciation of the ecosystem services of the Fanga’uta Lagoon				
Output 3.1.1	Awareness programs conducted through the production and dissemination of awareness materials				
Outcome 1.1: Multi-stakeholder management system established to guide the updating of the EMP FLS and implementation of the FLC Integrated Environmental Management Plan (IEMP)	Functional enabling environments for conservation and integrated management of the Fanga’uta Lagoon Catchment (FLC)	Integrated multi-stakeholder mechanism is not established to the existing FLC management.	Creation of a nationally recognized FLC Management Committee by Year 1 By Year 3 the feasibility of conversion of a FLC Management Committee into a National Interagency Council with a statutory mandate has been assessed and implemented as appropriate	Existence of a functional lagoon management authoritative body and meeting reports Project reports and publications	IEM is based on long-term strategic visions and links different policies at different administrative and stakeholder levels to ensure coherency, this carries the risk that its application will be given different interpretation in each of the management systems and may cause conflicts in implementation.
Output 1.1.1: Capacity of NECC and FLC	Status of a multi-stakeholder FLC	Department of Environment and	Concerned departments,	Government reports and interagency	Clearly defined sets of key stakeholders and their

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
Stakeholders enhanced to more effectively plan and implement an integrated lagoon ecosystem management approaches	management authority with dedicated staff and sufficient budget	Climate Change (DECC) has been designated by the Cabinet to implement the EMP FLS, but no clear provision on financial and other commitments required for plan implementation.	ministries, partners and stakeholders have all set up contact points to implement IEM concept for FLC and have adopted ecosystem services consideration in key development policies and legislation. By the project end, establishment of a statutory mandate for the long-term management of FLC	communications FLC Management Committee meetings and reports Project reports and publications Existence of FLC Interagency Council Secretariat and office	engagement Political commitment to designate, support, and promote multi-stakeholder management system Potential local and international donors will engage in project implementation and provide necessary support to ensure long-term achievements.
Activities: <ul style="list-style-type: none"> <i>a) Establish a Project Management Unit (PMU) to execute all project activities at national and local levels and support the Fanga'uta Lagoon Catchment Management Committee (FLCMC) for the duration of the project; staff recruitment and hiring</i> <i>b) A review of FLCMC composition, mandates and functions; a ToR of FLCMC, with additional ToR for FLCMC as the Project Steering Committee, formulated and agreed during its first meeting; the FLCMC formally established to convene its duties within first three months of project and regular biannual scheduled</i> <i>c) Establish project advisory (or expert) groups or sub-steering committees as deem necessary and their ToR formulated, as needed</i> <i>d) PMU to assess and service national and local training needs in environmental policy, legislation, lagoon and catchment management, ecosystem services assessment, and communication skills</i> <i>e) Develop training courses and materials on Integrated Environmental Management (IEM) to improve awareness of IEM of FLCMC members and senior management in the government sector; trainings conducted within 6 months of project inception</i> <i>f) Formulate a draft statutory mandate of a 'Tonga Interagency Council on FLC' to be assessed by Year 3 and adopted before the end of the project</i> 					
Output 1.1.2: Measures delivered to fully engage the Fanga'uta Lagoon Catchment (FLC) communities in lagoon	Number of FLC villages and concerned entities involved in EMP updating and	The existing EMP FLS was prepared in collaboration with 11 government agencies, three NGOs, and more	By mid-term, all of FLC villages and concerned entities participate in EMP updating and implementation of	Lists of FLC community participants in project activity reports Stakeholder survey	Continued political support and commitment for engaging FLC communities into the planning and implementation processes. Land and lagoon resource

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
ecosystem management	implementation Number of individuals and/or organizations engaged in design and implementation of mini-projects from Outcome 2	than 20 communities around FL.	relating mini-projects.	demonstrates that FLC communities are fully engaged in the updating and implementation processes. Mid-term and Final project evaluation reports	tenure issues will not providing negative motivation discouraging active participation in IEM process. Clearly defined and recognition of stakeholder (FLC community) groups Sufficient interested, receptive individuals available for capacity building activities
<u>Activities:</u> <ul style="list-style-type: none"> a) <i>Consolidate identification of key FLC stakeholders</i> b) <i>Initiate the consultative process in FLC</i> c) <i>Develop a draft strategy for community action, approaches and functions</i> d) <i>Sponsor and organize bi-annual lagoon and catchment NGO and stakeholders forums</i> e) <i>Undertake a selection of demonstrations (or mini-projects) in FLC areas; mini-projects undertaken within 12-18 months of project inception to test replicability and for taking to scale during the FLC IEMP implementation (after Year 3)</i> f) <i>By Year 2, establish a FLC community-based research and knowledge management center to generate lagoon community action and positive social change through the use of multiple knowledge sources and networks</i> 					
Outcome 1.2: Participatory updating of the Fanga'uta Lagoon Catchment IEMP completed, adopted, endorsed and budgeted for	Amendments to the environmental management plan of the Fanga'uta Lagoon Catchment	The EMP FLS, a multi-zoning plan, was approved by the cabinet, but limited implementation due to administrative and budget constraints.	By mid-term, The existing EMP FLS has been updated incorporating IEM concepts and adaptive management approaches. By Year 3, updates/amendments to EMP FLS have been approved and adopted	Publication of the EMP FLS Update (or FLC IEMP) Government publications and communication materials from Outcome 3 Project Reports and publications	Continued political and administrative commitment for integrating IEM into medium- and long-term FLC planning as well as in national development planning Key stakeholders at the national and local levels maintain their support and involvement during plan updating, reviewing, and endorsement processes.

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
			By the end of the project, the concerned authorities will institutionalize integrated ecosystem management and conservation objective for the FLC within the national development system.		Institutions receptive to adaptive change
Output 1.2.1: FLC IEMP prepared and completed; establishing technical, biophysical, oceanographic, socioeconomic and demographic baselines; updating the EMP completed in 2001 with additional parameters to be established	Status of FLC IEMP baseline review and findings completed with key parameters described	The EMP FLS was prepared during 1988-2001 based on scientific information and community consultation.	By Year 1, updating on situation analysis of ecosystems degradation and ecosystem services management in FLC completed	EMP FLS Update reports Draft FLC IEMP (or EMP FLS Update) available for review and endorsement Preparatory Task Force meeting minutes and reports	Sufficient networking among regional, national and local experts for exchange of technical information, knowledge and experience across disciplines
Activities: <ul style="list-style-type: none"> <i>a) Conduct a detailed review on the existing EMP FLS, update data, and identify information gaps on demand for and supply of the key ecosystem services in FLC</i> <i>b) Consolidate the network of FLC environmental and socio-economic experts</i> <i>c) Link the FLC management initiative to national development planning and programs and the activities of national and local NGOs as well as the private sector</i> <i>d) Evaluate current national policy, legal, institutional and human resource arrangements and utilization in respect to FLC coordination and joint management</i> <i>e) Formulate national and local policy initiatives to facilitate FLC coordination and joint planning</i> <i>f) Compile demographic framework for FLC from published sources</i> <i>g) Commission socio-economic surveys in FLC areas to assess current and future patterns of demand for ecosystem services in FLC</i> 					

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
<i>h) Establish area-wide patterns of demand; assess opportunity costs of ecosystem services across FLC areas</i> <i>i) Produce working socio-economic framework to integrate demographic and demand characteristics</i> <i>j) Identify environmental hot spots and define environmental system limits and parameters; evaluate limits of sustainable use in space and time</i> <i>k) Convene expert group meetings on FLC environmental policy, legislation and management and publish the results</i> <i>l) Draft a detailed FLC IEMP setting strategic functional priorities and fostering multiple uses</i> <i>m) Present the final draft of FLC IEMP to local and national fora; dissemination of draft FLC IEMP to wider audiences</i>					
Output 1.2.2: FLC IEMP adopted, mainstreamed and funded	Status of adoption, endorsement and funding of the FLC IEMP	Implementation of the EMP FLS has been a challenge due to the lack of financial commitment and sectoral differences.	By Year 3, the FLC IEMP adopted By project end, an annual budget request of key concerned ministries has reflected the Administration's priorities in support of the FLC IEMP.	Notification of the Plan in Official Gazette or policy documents Minutes of meetings Project M&E reports	Continued political support and commitment to materialize the Plan Collaboration among concerned government agencies and other stakeholders is achieved.
<u>Activities:</u> <i>a) Prepare and negotiate an updated EMP FLS (FLC IEMP) on the basis of FLC community and stakeholder consultation</i> <i>b) Clearly delineate responsibilities in implementation of the FLC IEMP across government agencies and other stakeholders</i> <i>c) Solicit commitments from the government (national and local levels)</i> <i>d) Develop guidelines on implementing the FLC IEMP (an updated EMP FLS), including lagoon-specific and broader governmental policy commitments and financial obligations, with well-designed ecosystem service and sector indicators</i> <i>e) Organize biannual capacity building activities for development policy makers and the wider public on FLC IEMP mainstreaming</i> <i>f) Confirm government’s commitments</i> <i>g) Major agency-donor conference to discuss the final draft of the FLC IEMP and solicit support for implementation</i> <i>h) Consensus on timetable for FLC IEMP implementation</i> <i>i) Confirm donors’ commitments</i> <i>j) Present the Final Draft FLC IEMP to the FLCMC for adoption</i> <i>k) Prepare draft FLC management agreements and protocols for consideration by the FLCMC and concerned departments/ministries</i>					
Output 1.2.3: Multi-	Regular monitoring	There exists neither	By Year 2,	Project reports and	Adaptive Management is

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
stakeholder participatory mechanisms conducted to ensure adaptive management during the preparation, implementation, monitoring and evaluation of FLC IEMP development and implementation	of current status of lagoon environment and ecosystem services through a set of measurable key indicators and a response system established that enables modifying key indicators	clearly defined monitoring indicator nor response system in FLC management.	monitoring data and information prepared By mid-term, a monitoring plan developed and implemented to track FLC system status and uncertainties including climate change impacts By end of project, FLC system monitoring established and fully functioned	technical documents Annual monitoring reports Communication materials and website from Outcome 3	conceptually concerned with learning, knowledge integration, and experimentation. This requires from start improvement of the understanding of the lagoon system by initiating discussions among the concerned stakeholders and FLC communities. FLC communities and other stakeholders are ready and willing to participate in adaptive management activities.
Activities: <ul style="list-style-type: none"> <i>a) Engage concerned government ministries and statutory authorities in identifying related issues and priorities, as well as adaptation options, to address climate change in the FLC IEMP (during the EMP FLS updating processes)</i> <i>b) Develop monitoring and evaluation procedures; planning for implementation</i> <i>c) Confirm commitments to schedule and allocate resources for timely monitoring and assessment of the status of the Fanga'uta Lagoon and catchment areas</i> <i>d) Identify key monitoring indicators and locations</i> <i>e) Implement community-based activities to conduct regular monitoring of the status of the Fanga'uta Lagoon and catchment areas</i> <i>f) Produce annual reports on FLC IEMP implementation and progress; communicate M&E results through the FLCMC and project-related meetings</i> 					
Outcome 2.1: Improved conditions of critical lagoon habitats, productivity, water quality and fish production through the implementation of priority interventions identified in	Status of surrounding habitats and ecosystem services in the Fanga'uta Lagoon	Baselines to be quantified and updated per system in Year 1	By project end, key habitats (mangroves) and ecosystem services in FLC improved compared to baseline level	Field survey data and technical reports using rapid assessment of ecological change methods Activity reports and communication	Local communities and key stakeholders will actively engage in assessment and management of the target ecosystems and their services.

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
the IEMP				materials Reports from project annual M&E activities GEF TWs Tracking Tool reports	
Output 2.1.1: Areas of approximately 80 ha of the lagoon's major coastal habitats (mangroves stands) restored	Areas of mangroves in FL	Baselines to be quantified and updated in Year 1	About 80 hectares of mangroves and other biodiversity resources in the FL remained stable, protected areas conserved and managed mainly for the sustainable use of natural ecosystems	Technical reports and government publications	Awareness improvement activities conducted Political commitment at the national and local levels
<u>Activities:</u> <ul style="list-style-type: none"> a) <i>Develop criteria and indicators for sustainable management of mangrove resources and ecosystem services in FL</i> b) <i>Develop monitoring and evaluation procedures</i> c) <i>Identify key mangrove conservation hot spots and necessary actions to rehabilitate and maintain conditions</i> d) <i>Produce a Manual on Mangrove Nursery Techniques</i> e) <i>Organize biannual on-site trainings for ecological mangrove rehabilitation</i> f) <i>Sponsor and organize community-based mangrove restoration programs involving local youth and women in raising mangrove saplings and maintaining the mangrove nursery</i> g) <i>Evaluate the results and define limits of sustainable use in space and time</i> 					
Output 2.1.2: Mechanisms set up to guarantee participatory fishing area and sustainable fisheries resources management by the FLC communities	Status of lagoon fisheries (as contributing to increased fish harvests, improved livelihoods, and healthy lagoon ecosystems)	Quantity and quality of fish and shellfish catches in the lagoon have declined rapidly, leading to increasing conflict and social tension among different user	A total area inside the lagoon have been delineated for fisheries conservation and sustainable fisheries management (to be determined during	Stakeholder meeting minutes and reports Technical reports and government documents Project reports and communication	Government support and commitment to manage lagoon fisheries resources for sustainability of ecosystems and for livelihood improvement Local stakeholders are ready and willing to share

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
		groups	implementation)		information, discuss issues and agree on solutions
<u>Activities:</u> <ul style="list-style-type: none"> a) <i>Review of current status of supply of and demand for fisheries resources in the lagoon through participatory survey and assessment</i> b) <i>Review of existing legal frameworks that govern fisheries activities in the lagoon; consolidate expert opinions on sustainable fisheries management in FL</i> c) <i>Organize technical workshops and consultative meetings to be participated by concerned government agencies and local communities aiming to define and identify managed areas for fish conservation and sustainable utilization.</i> d) <i>Evaluate the results and define limits of sustainable use in space and time</i> 					
Output 2.1.3: Eco-tourism awareness to FLC community conducted and local initiatives demonstrated	Status of eco-tourism activities in FLC	Baselines to be quantified and updated in Year 1	At least 2 proposals to promote eco-tourism in FLC have been received from local tourism service providers At least 200 women and 200 youth have been engaged in eco-tourism activities	Business proposals Community surveys reports Project reports, publications, and communication materials from Outcome 3	The economy will support increased returns on investment in eco-tourism practices. Sufficient interested, receptive individuals and organizations available for training/capacity building
<u>Activities:</u> <ul style="list-style-type: none"> a) <i>Prepare a detailed report on the participatory FLC eco-tourism program development strategy and implementation plan</i> b) <i>Identify and execute demonstration and pilot projects to promote eco-tourism in FLC involving experienced tour organizers, local entrepreneurs and community association</i> c) <i>Organize and/or sponsor trainings, workshops, and awareness campaigns for engaging FLC communities in sustainable eco-tourism, focusing on female villagers and youth living in the FLC areas</i> d) <i>Evaluate the results and define limits of sustainable eco-tourism business practices</i> 					
Output 2.1.4: Activities based on sustainable land and forest management demonstrated in the FL catchment areas	Areas with improved vegetation in the lagoon catchment Number of trainings	There is no management scheme to regulate or monitor land use practices which	A total areas of 50 ha with improved vegetation cover in the FLC areas have been established or	Project reports, publications, and training materials	Land and resource tenure issues will not provide negative motivation discouraging adoption of improved practices.

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
	and participants	include cash cropping and free-ranging domestic animals developments.	replanted Biannual trainings on sustainable land management practices conducted and reported with at least a total of 60 participants attended		Sufficient interested, receptive individuals and organizations available for training/capacity building
<u>Activities:</u> <ul style="list-style-type: none"> <i>a) Commission community surveys to identify areas and methods of tree planting along the lagoon's shores and watershed areas</i> <i>b) Organize an annual campaign to plant trees and raise public awareness and soil conservation</i> <i>c) Conduct biannual trainings on sustainable land management practices to minimize pollution loadings into the lagoon targeting villagers and landowners living in the lagoon watershed areas</i> <i>d) Evaluate the results and define limits of sustainable land management practices in space, method and time</i> 					
Output 2.1.5: Capacity for Fanga'uta Lagoon water quality control strengthened and on-site activities demonstrated	Measures to control pollution discharged from domestic and other sources adopted and enforced Number of demonstration/pilot activities as well as on-site trainings and participants	Water quality in the lagoon has decreased and the amount of floating debris has increased over the years, potentially from agriculture, domestic sources, and other development activities in the surrounding lagoon catchment.	A set of recommendations for improvement of water quality in the lagoon have been prepared and adopted for FLC IEMP At least one training course on sanitation improvement and related technical knowledge targeting FLC communities conducted At least one on-site demonstration/pilot activity implemented	Technical review reports and fact findings Project reports, publications, and communication materials from Outcome 3	Collaboration among concerned government agencies and other stakeholders is achieved. Authorities, politicians, and land owners commit to support land-use planning/zoning methods as assumed Sufficient interested, receptive individuals and organizations available for training/capacity building

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
<u>Activities:</u> <ul style="list-style-type: none">a) <i>Review the current situation on the nature and extent of agricultural chemical fertilizer/pesticide usage and urban wastewater discharge (including domestic, commercial and industrial sources) in the FLC areas</i>b) <i>Select a methodology for identifying the nature and extent of pollution discharged into the Fanga’uta Lagoon, and issue scoping</i>c) <i>Analyze historical water quality monitoring data relative to prevailing environmental conditions to identify links between off-site movement of pollution and factors such as: vegetation cover (height and density of trees); landscape (soil, slopes, buffer strips); climatic conditions (rainfall events, soil dryness index); and methods of chemical pesticide/fertilizer application (broad-acre, point, aerial, ground based) as well as waste disposal from point sources and non-point sources; define information and data gaps</i>d) <i>Identify appropriate technologies and systems for controlling pollution from domestic sources in FLC areas</i>e) <i>Identify and execute demonstration and pilot projects to minimize impacts of domestic sources of pollution in target FLC villages</i>f) <i>Organize on-site trainings and workshops on sanitation improvement and related technical knowledge targeting key FLC communities</i>g) <i>Conduct a detailed review and evaluation of the use existing legal and institutional instruments for control of water quality in the lagoon; identify key compliance issues and constraints; and recommend appropriate ways to mitigating the existing and potential impacts of non-compliance</i>h) <i>Organize annual trainings for key concerned decision-makers and community leaders as well as other stakeholders on land-use zoning/planning</i>i) <i>Evaluate the results and define limits of sustainable land development in FLC</i>					
Outcome 3.1: Increased awareness and appreciation of the ecosystem services of the Fanga’uta Lagoon [Output 3.1.1: Awareness programs conducted through the production and dissemination of awareness materials; lessons learned shared with the PICs through the regional program support project]	Number of project brochures, media releases, video documentary in local dialect, feature press article, and website produced, distributed and used in training and capacity building activities concerning the ecosystem services of the Fanga’uta Lagoon	No awareness and communication materials in existence There is a need to involve stakeholder groups in all stages of FLC IEMP process; limited channels to educate people on benefits of improving FLC conditions.	Production of a series of selected awareness and communication materials, which have been disseminated in all relevant Agencies associated with the NECCC as well as in all lagoon villages and the nearby areas of Tongatapu	Project reports Reports from project annual M&E activities GEF TWs Tracking Tool reports Technical documents and communication materials produced and disseminated	Technical information, knowledge and experiences available from Outcome 1 and Outcome 2
<u>Activities:</u> <ul style="list-style-type: none">a) <i>Consolidate the network of key stakeholders in assessing the production and distribution of FLC awareness materials</i>					

Project Strategy	Objectively Verifiable Indicators			Sources of Verification	Risks and Assumptions
	Indicator	Baseline	Target		
<i>b) Commission stakeholder surveys and interviews to define needs and gaps</i>					
<i>c) Design key substances created for the FLC awareness and communication purposes</i>					
<i>d) Select and produce effective awareness and communication materials</i>					
<i>e) Publish and disseminate IEM and FLC IEMP information and communication materials and share these with the regional Pacific R2R program support</i>					
<i>f) Establish, update and improve web access</i>					
<i>g) Create public awareness and ecosystem services education campaigns</i>					
<i>h) Evaluate periodically the results and identify remaining needs and gaps</i>					

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Refer to attached responses to GEF Sec comments.

ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁷

Provide detailed funding amount of the PPG activities financing status in the table below:

NOT APPLICABLE

PPG Grant Approved at PIF:			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Total	0	0	0

⁷ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

NOT APPLICABLE



GOVERNMENT OF TONGA
MINISTRY OF LANDS, ENVIRONMENT, CLIMATE CHANGE & NATURAL RESOURCES
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9 December 2013

Akiko Fujii
Deputy Resident Representative
Fiji Multi-Country Office
United Nations Development Program
Suva, Fiji

Subject: Endorsement for Medium Size Project, "Integrated Environmental Management of the Fanga'uta Lagoon Catchment (Tonga R2R Project)."

In my capacity as GEF Operational Focal Point for the Government of Tonga, I confirm that the above medium size project proposal is (a) in accordance with my government's national priorities and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

I am pleased to endorse the preparation of the above project proposal which will be led by the UNDP. If approved, the proposal will be implemented by the Ministry of Lands, Environment, Climate Change and Natural Resources.

The total financing¹ being requested for this Program is US\$1,915,000 inclusive of GEF project grants and Agency fee. The fund requested for Tonga under the project is detailed in the table below with indication of the GEF Agency that will implement the project(s).

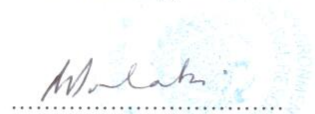
GEF Agency	Type of Trust Fund	Focal Area	Country	Project	PPG	Agency Fee	Total
UNDP	GEF TF	Biodiversity	Tonga	834,862	-	75,138	910,000
UNDP	GEF TF	Land Degradation	Tonga	211,009	-	18,991	230,000
UNDP	GEF TF	Climate Change	Tonga	550,459	-	49,541	600,000
UNDP	GEF TF	International Waters	Global (Tonga)	160,550	-	14,450	175,000
Total				1,756,880	-	158,120	1,915,000

I consent to the utilization of Tonga's allocations in GEF-5 as defined in the System for Transparent Allocation of Resources (STAR).

¹ "total financing" refers to funding from the GEFTF, LDCF, and/or SCCF.

The Government of Tonga also wishes to apply the STAR flexibility mechanism in order to maximize the use of GEF resource for this project, as the total country allocation is less than USD\$7million.

Yours Sincerely,

A handwritten signature in dark ink, appearing to read 'Asipeli', is written over a faint, circular blue official stamp. The stamp contains text in both English and Tongan, including 'Ministry of Lands, Environment, Climate Change & Natural Resources' and 'TONGA'.

.....
Mr. 'Asipeli PALAKI
CEO, Ministry of Lands, Environment, Climate Change & Natural Resources
GEF Operational Focal Point, Tonga.