



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Securing the long-term conservation of Timor-Leste's biodiversity and ecosystem services through the establishment of a functioning National Protected Area Network and the improvement of natural resource management in priority catchment corridor		
Country(ies):	Timor-Leste	GEF Project ID: ¹	9434
GEF Agency(ies):	CI (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):	Ministry of Agriculture and Fisheries (MAF), Ministry of Commerce, Industry & Environment (MCIE), and CI Timor-Leste	Submission Date:	04/08/2016
GEF Focal Area(s):	Multi-focal Areas	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	300,633

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) (select) SFM-1	GEFTF	556,728	2,350,000
(select) (select) SFM-2	GEFTF	556,728	2,350,000
BD-1 Program 1 (select) (select)	GEFTF	890,765	3,760,000
LD-1 Program 1 (select) (select)	GEFTF	668,073	2,820,000
LD-1 Program 2 (select) (select)	GEFTF	668,073	2,820,000
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
Total Project Cost		3,340,367	14,100,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To establish Timor-Leste's National Protected Area Network and improve the management of forest ecosystems in priority catchment corridors						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Component 1: Establishment of a National Protected Area Network	TA	Outcome 1.1: National Protected Area network established and implementation initiated Targets: a. A comprehensive National Protected Area Network strategy developed and adopted	Output 1.1.1: Current Protected Area Network Gap Analysis completed and validated by the government Output 1.1.2: National Protected Area Network strategy completed and	GEFTF	848,347	5,000,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

		<p>by the government (covering at least 17% of the country's territory -approximately 255,100 ha, to be refined during the PPG phase)</p> <p>b. National Protected Area Network legislation (and associated laws) drafted and submitted to Parliament for approval</p> <p>c. Two priority Protected Area's management plans developed and under implementation</p>	<p>approved by the government</p> <p>Output 1.1.3: National Protected Area Network legislation gap analysis completed</p> <p>Output 1.1.4: Updated legislation is drafted and submitted to Parliament for approval</p> <p>Output 1.1.5: Two priority Protected Areas with management plans developed in a participatory manner and being implemented</p> <p>Output 1.1.6: National Protected Area Network long-term financial needs assessed and business plans approved by the government</p> <p>Output 1.1.7: National level management plans are developed for remaining Key Conservation Forests</p>			
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<p>Component 2: Improvement of community-based natural resource management systems in priority catchments corridors</p>	<p>TA</p>	<p>Outcome 2.1: Land degradation drivers halted and/or minimized in key catchment areas covering approximately 224,000 ha.</p> <p>Targets: a. 10 Sucos Natural Resource Management (NRM) plans including no-take zones or seasonal closures under traditional law developed and under implementation</p> <p>b. 10 Sucos adopted NRM guidelines into their regulations</p> <p>c. 10 Sucos establish Conservation Groups to oversee the implementation of NRM plans</p> <p>d. Average household income increased by at least 5% over the baseline</p> <p>Outcome 2.2: Capacity for communities to manage their natural resources substantially increased</p> <p>Targets: a. 100 unemployed youth are trained and graduate per year</p> <p>b. 10 Community Conservation Groups participate in field exchange visits</p> <p>c. 100 adults participate in NRM training</p>	<p>Output 2.1.1: Sucos designed and adopt NRM plans into both traditional and national systems</p> <p>Output 2.1.2: Suco regulations to improve natural resource management approved and implemented</p> <p>Output 2.1.3: Average household income improved through the implementation of sustainable use of natural resources practices</p> <p>Output 2.2.1: Youth training program for environmental management designed and implemented</p> <p>Output 2.2.2: Exchange visits to promote learning and sharing of lessons learned among communities completed</p> <p>Output 2.2.3: Adult Education program for natural resource management designed and implemented</p>	<p>GEFTF</p>	<p>1,272,521</p>	<p>5,000,000</p>
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Component 3: Improvement of forest management and reforestation of degraded lands in priority catchment corridors	TA	Outcome 3.1: Sustainable forest management in priority catchment corridors substantially improved Target 3.1: At least 500 hectares of community forests under sustainable management	Output 3.1.1: Remaining forests are mapped and identified according to their conservation value Output 3.1.2: Community-based forest management plans developed and included into Suco NRM plans Output 3.1.3: Sustainable forest practices in priority community forests implemented	GEFTF	1,060,434	4,100,000
		Outcome 3.2: Priority degraded areas reforested Targets: a. At least 500 hectares of degraded land reforested b. 10 community nurseries established and functioning c. 10 community-based Conservation Groups participate in nursery and reforestation training	Output 3.2.1: Community tree nurseries established Output 3.2.2: Priority restoration areas identified and approved by communities and government Output 3.2.3: Restoration plans implemented			
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					3,181,302	14,100,00
Project Management Cost (PMC) ⁴				GEFTF	159065	
Total Project Cost					3,340,367	14,100,00

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	Conservation International	Unknown	400,000
Recipient Government	Ministry of Agriculture and Fisheries	In-kind	1,000,000
Others	Center for Biodiversity and Climate Change – University of Timor Leste	In-kind	400,000
NGO	Permatil	In-kind	400,000
Recipient Government	Ministry of Environment (National Directorate of Environment; National Development Agency/Integrated Regional Development; National Directorate of Planning & Tourism Development)	In-kind	10,000,000
Others	Local governments (municipalities / Suco)	In-kind	500,000
Others	development Partners (TBD)	Unknown	1,000,000
Beneficiaries	Cooperatives / local stakeholders	In-kind	400,000
Total Co-financing			14,100,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
CI	GEFTF	Timor Leste	Biodiversity	(select as applicable)	890,764	80,169	970,933
CI	GEFTF	Timor Leste	Land Degradation	(select as applicable)	1,336,147	120,253	1,456,400
CI	GEFTF	Timor Leste	Multi-focal Areas	(select as applicable)	1,113,456	100,211	1 213 667
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total GEF Resources					3,340,367	300,633	3,641,000

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

Is Project Preparation Grant requested? Yes No If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$100,000					PPG Agency Fee: 9,000		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
CI	GEF TF	Timor Leste	Biodiversity	(select as applicable)	26,667	2,400	29,067
CI	GEF TF	Timor Leste	Land Degradation	(select as applicable)	40,000	3,600	43,600
CI	GEF TF	Timor Leste	Multi-focal Areas	SFM	33,333	3,000	36,333
Total PPG Amount					100,000	9,000	109,000

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>PAN</i> = ~255,100 ha <i>Suco NRM plans</i> = ~ 224,000 ha <i>SFM</i> = 1,000 ha
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>Hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>2,745,910.68 metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>metric tons</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

Background information

1. Timor-Leste (8°50 S and 125°55 E) formerly known as East Timor, covers the eastern half of the Timor Island, sharing its border with Indonesia and the north-west boundary of Australia. Timor-Leste also includes the islands of Atauro and Jaco, and covers an area of 15,007 km², with a coastline of 706 km. The lowest points are the Savu, Timor, and Banda Sea's, and the highest is Foho Tatamailau (2,986 masl). The capital of Timor-Leste is Dili. The country is divided into 13 municipalities of which one, Oecusse, is a coastal enclave sitting within the western part of the Timor island, in Nusa Tenggara Timur, Indonesia.

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

⁸ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.



Figure 1: Map of Timor-Leste

2. After declaring independence from Portugal in November 1975, Timor-Leste was invaded and occupied by Indonesian forces nine days later. Over the next two decades an ultimately unsuccessful campaign of pacification followed during which an estimated 100,000 to 250,000 individuals (approximately 20% of the population of Timor-Leste) lost their lives. Both the military action as well as substantial commercial exploitation by Indonesian interest during this period contributed to the significant destruction of local ecosystems and natural capital.
3. In August 1999, in a popular referendum supervised by the United Nations (UN), an overwhelming majority of the people of Timor-Leste voted for independence from Indonesia. In the three weeks that followed anti-independence militias, organised and supported by the Indonesian military, commenced a large-scale, scorched-earth campaign of retribution. The militia killed approximately 1,400 Timorese and created hundreds of thousands refugees. In September 1999, Australian-led peacekeeping troops were deployed to the country and brought the violence to an end. However, most of the country's infrastructure - homes, irrigation systems, water supply systems, schools and the country's electrical grid – were already destroyed. Unfortunately, in addition to this, any government records, socio-economic information and scientific data that had not been destroyed was now held in Jakarta and so it remained virtually inaccessible to those tasked with the responsibility of rebuilding the new country.
4. In May 2002, Timor-Leste was internationally recognized as an independent state. While the last decade has seen continued internal tensions (most notably at the time of the 2006 elections, which saw the installment of an International Stabilization Force and UN Security Council Mission). Security forces were withdrawn in 2012. Timor-Leste now has its 6th government in place in 12 years.
5. Timor-Leste has a relatively small population of 1.2 million but with a staggering 65% of the population under 25 years of age Timor-Leste is one of the youngest countries in the world. Life expectancy is around 68 years, but infant mortality is still just under 40 deaths/1,000 live births, and 45% of children under the age of five are underweight. Population growth rate remains high at 2.44%. The majority of children attend school for 12 years, but only half (48%) the population can read and write. Over 70% of the population resides in rural areas, and

over half the urban population resides in Dili. Despite strong economic growth over the last decade, the World Bank estimates the poverty level has increased from 36% in 2001 to almost 50% in 2015. This dichotomy is mainly attributed to the oil and gas extraction off shore that has impacted the country's macro-economic figures but has had very little impact on the economic situation for the Timorese people and their living standards. The increase in poverty underscores a very strong need for the nation to address the pressing issue of a growing and predominantly young population placing more pressure on ecosystems as they look for employment opportunities and to support their families.

6. Of the total population, 80% are rearing livestock and 63 % are directly engaged with agricultural production, mainly subsistence farming. Agriculture provides livelihoods for more than 80% of the Timorese population, and accounts for 30% of the GDP⁹. Main crops are rice, maize and coffee. The industry/manufacturing sector is underdeveloped and the non-oil and gas sector contributes little to the GDP.
7. The development of oil and gas resources in offshore waters has greatly supplemented government revenues. This technology-intensive industry, however, has done little to create jobs for the unemployed, in part because there are no production facilities in Timor-Leste. Gas is piped to Australia. In June 2005, the National Parliament unanimously approved the creation of a Petroleum Fund to serve as a repository for all petroleum revenues and to preserve the value of Timor-Leste's petroleum wealth for future generations. The Fund held assets of US\$9.3 billion as of December 2011. Benefitting from high global oil prices, Timor-Leste achieved lower middle-income status in 2011, but this growth has not been accompanied by a reduction in poverty which remains persistently high, particularly in rural areas, where the majority of the population lives. With the drop in oil prices in 2015, Timor-Leste came to the realization that overnight the Fund lost around US\$15 million in value, seriously reducing the life span of the fund.
8. The Wallacea Biodiversity Hotspot, to which Timor-Leste belongs, is situated between the Sunda and Sahul continental shelves and includes a large part of the Indonesian archipelago. The land area is therefore fragmented into thousands of islands covering an area of 33.8 million hectares and separated by deep oceanic trenches. Wallacea is comprised of three biogeographic sub-regions: Maluku, Sulawesi and Lesser Sundas (of which Timor-Leste is a part). This Biodiversity Hotspot has a total 560 species classified as threatened with extinction by IUCN in the critically endangered, endangered, or vulnerable categories, and of these threatened species 308 are terrestrial or freshwater while 252 are marine. As of 2011, forests covered 17.7 million hectares (only approximately 50%) of the Wallacea land surface: Sulawesi contributes the largest forest cover with 56%, while Maluku has 24%, and the Lesser Sundas 19% (of which Timor-Leste contributes 4%).
9. Timor is a mountainous island surrounded by a narrow band of coastal plain, reef and seagrass. Timor-Leste covers the entire eastern half of the island of Timor and the rest belongs to Indonesia except for the Timor-Leste enclave of Oecussi. The country's closest neighbors are Indonesia to the west, north, and east; Australia to the south; and Papua New Guinea to the far-east. The climate is tropical with a great deal of local variations as is common in small islands with steep topography.
10. The majority of Timor-Leste is steeply sloped (gradients greater than 40%). The country extends East to West and is very narrow from North to South. Three sides are surrounded by sea with a mountainous central ridge where the elevation rises to almost 3,000 meters above sea level at Tatamailau (Mount Ramelau).
11. Limestone and metamorphosed marine clay are the basis from which Timor-Leste's thin soils are derived which means that they tend to have low to medium fertility and are typically fragile and highly susceptible to erosion (especially with the heavy rainfalls experienced during the rainy season). The country's significant altitudinal range plays an important role in modifying soil formation through temperature and rainfall variation leaving four major soil units and creating five distinct forest areas:
 - a. The Eastern region contains the majority of primary forest within the Nino Konis Santana National Park.

⁹ Ministry of Finance (2010), Population and Housing Census

- b. The Northern area contains mainly drought-resistant tree species and is also where the widest stretches of mangrove are located.
 - c. The Central area is dominated by coffee plantations, sparse, dry forest and mosaic land-use (remaining mountain forests here are located in steep gullies or rocky locations).
 - d. The Western region contains smaller areas of primary forest.
 - e. The Southern area contains mostly coastal forest including swamp and mangrove.
12. Timor-Leste holds a large number of globally significant ecosystems including tropical rainforests, mangroves, wetlands as well as agricultural areas and remarkably rich marine ecosystems. The Lesser Sundas, in particular, also offer large areas of seagrass beds (covering more than 700,000 hectares) concentrated in shallow coastal waters free from intense wave action and sedimentation. Seagrass areas function as a nursery for many invertebrate and fish species and provide rich feeding grounds for fish, mollusks, green turtles and dugongs. In addition they stabilize offshore sand reservoirs, act as sediment collectors and prevent coastal erosion.
 13. Timor-Leste as part of the Coral Triangle offers the richest marine biodiversity on earth. The Coral Triangle holds some 76% of the world's coral species, six of the world's seven marine turtle species, more than 3,000 species of reef fish and a wide diversity of marine mammals (including whales and 22 species of dolphin). The marine basins between the island arcs may be several thousand meters deep and are swept by powerful currents forming a barrier to the dispersal of terrestrial species and an obstacle to the dispersal of marine species.
 14. Timor-Leste's mostly mountainous environments have experienced significant destruction of natural capital and ecosystem services caused variously by deforestation, poor farming practices, wildfires and overgrazing. Most worryingly the country now experiences extended periods during which water is not available to rural communities. In total only three of the 29 main river catchments in Timor-Leste are now considered to be perennial. This lack of water flow, over already shallow soil, is directly influenced by the reduced vegetative cover which would otherwise allow for deeper permeation of water into the shallow soils.
 15. As a signatory to the UN Convention on Biological Diversity (2007), UN Framework on Convention on Climate Change (2007), Kyoto protocol to the UNFCCC (2009) the government of Timor-Leste is aspiring to fulfill its commitments to address the environmental challenges facing the nation. The importance to protection of the environment is also highlighted in the constitution and as such these aspirations are also highlighted in the National and Sectoral Plans and Programmes of Timor-Leste (2011-2030) where economic growth is achieved in tandem with an environmentally sustainable society. The responsibility for the governance of biodiversity and natural resource management sits with three Ministries: the Ministry of Economy and Development; the Ministry of Agriculture, Forestry and Fisheries; and the Ministry of Commerce, Industry, and Environment, and their respective directorates.
 16. National regulations to protect and safeguard natural resources are covered by laws and regulations, but the majority of these laws are still in draft form, such as the Law on Protected Areas No.2000/19 (in 2000) and the Biodiversity Decree Law. In 2011 Timor-Leste enacted the Environmental Licensing Decree to manage private and public projects that are likely to have an environmental and social impact on the environment, however without the ability to enforce this legislation there is still ongoing environmental destruction.
 17. As of January 2015 the World Database on Protected Areas listed Timor-Leste as having 10 Designated PA and 19 Proposed PA, which contain most of the remaining primary forest cover in the country¹⁰. These areas also have the most extensive montane forests and high species endemism. However, the areas are at this point only parks on paper as there are no management plans in place and no legal monitoring or enforcement to ensure these areas are adequately protected. Currently, the Nino Konis Santana National Park, the country's only national park, which encompasses three protected areas, namely, Jaco Island Marine Protected Area, Lake Iralalaru Protected Area, and the vicinity of Com, are the only legally reinforced protected areas¹¹.

¹⁰ WDPA Data Status Report, Timor-Leste January 2015

¹¹ The National Biodiversity Strategy and Action Plan of Timor-Leste (2011-2020), The Government of Timor-Leste, 2011.

Environmental problems and root causes

Overexploitation of Natural Resources

18. Over-exploitation and unsustainable use of the forests were key drivers to the deforestation that took place in Timor-Leste during the era of Indonesian government rule. Large areas of forest were destroyed through unsustainable harvesting of forest resources, as well as an intentional forest clearing regime in the fight against FELANTIL, the Timorese resistance. Up to one third of the forests were cleared which caused an increase in grass and shrub-lands of more than 200,000 hectares.
19. After 1975, deforestation has continued to be a prominent land problem in Timor-Leste, particularly in upland areas on the steep slopes of the valleys. The major driver has been the need for fuel wood for an ever growing population. Nine out of 10 household's use firewood as their main cooking fuel¹², which is at odds for a country that has an offshore oil and gas agreement with Australia which generates substantial revenues and could potentially provide cooking gas to the country. The current rate of fuel wood consumption is ±600,000 tons/year, which is adding to the 1.73% deforestation rate. The preferred fuel wood species are Ironwood (*Casuarina equisetifolia*, *Casuarina junghuhniana*), Kou (*Cordia subcordata*), Hawaiian giant (*Leucaena leucocephala*), Mesquite (*Prosopis pallida*), Mangrove (*Rhizophora*, *Sonneratia alba*) and Ai-nitas (*Sterculia foetida*), although all species are at risk. Fuel wood collection and sales are a key income generating activity for families and in some instances it is the only source of income available.
20. The fragmentation of the forests has caused not only an isolation of species and loss of biodiversity but also a reduction in the forest ecosystems ability to maintain self-regulation, and this in turn has led to an increase in landslides, soil erosion, and sedimentation of the waterways.

Habitat Degradation

21. Studies show that in 1972 approximately 25% of the land area was covered in primary forest, and a further 26% was secondary. By 1999 only 12% of Timor-Leste's land area was forest and dense forest but 24% was agricultural land, 22% degraded woodland and 19% woodland¹³. During almost 30 years of Indonesian occupation, much of the country's most valuable timbers such as sandalwood, mahogany, ebony and redwood were cut and exported. The ongoing clearing regimes saw a loss of up to one third of the forests, which caused an increase in grass and shrub-lands of more than 200,000 hectares. The fragmentation of the forests, caused not only isolation of species and loss of biodiversity, but also a reduction in the forest ecosystems ability to maintain self-regulation, and therefore there has been an increase in landslides, soil erosion, and sedimentation of the waterways. The global average for deforestation during this era was around 0.3%. In Timor-Leste it was calculated at a staggering 1.1% per year.

Pollution, Erosion and Sedimentation

22. The loss of vegetation is a main contributor to the pollution, erosion and sedimentation that is taking place in Timor-Leste. The topography of Timor-Leste makes the country particularly vulnerable to erosion as deforestation and slash and burn activities are leaving the soil exposed and prone to erosion during heavy rains. In addition, the soils have low fertility, so agricultural productivity remains very low which in turn increases the need for larger land masses in order to meet the demands of a growing population.
23. Forests around highly populated areas such as Dili, Baccau, and Ermera are particularly targeted and therefore diminishing at a higher rate than that seen in the remainder of the country. The remaining forests are subjected to frequent burning as the herdsmen are looking to increase grass cover for the free ranging stock. Unfortunately the fires soon spread and race up the steep slopes into the remaining forest cover on the exposed areas. Soils on these steep slopes are left exposed to the elements and become vulnerable to landslides and erosion, especially during the rainy season. The actions coupled together expose the land to massive erosion events during the wet

¹² Ministry of Finance (2010), Population and Housing Census

¹³ Bouma, G.A and Kobryn, H.T 2004. Change in vegetation cover in East Timor, 1989-1999. National Resources Forum, 28 1-10

season, and the runoff pollutes the fishing grounds and reefs of the marine areas up and down the coastline. During the dry season, the land is left exposed to the high temperatures, and wind, destroying its structure and leaving it with little ability to absorb water. This damage to the soil is most obvious in the deep gullies and along the waterways such as rivers and streams where the scars from landslides, and erosion can be clearly seen.

24. The upland erosion contributes to sedimentation downstream, affecting the river systems and the coastal areas. Sedimentation of the rivers and streams has an adverse effect on water quality which in turns has a negative effect on life in the rivers and coastal areas. This then has a direct impact on the food security for people in Timor-Leste. Other factors affecting rivers are the discharge of sewage and disposal of solid wastes into waterways, and non-sustainable fishing methods.

Invasive Species

25. Communities report that once the forest has been removed the land is overtaken by Siam weed (*Chromolaena odorata*)¹⁴. Siam weed is one of the leading invasive species of the world. Its attack on farming lands and deforestation areas in Timor-Leste has become widespread since its introduction from Indonesia in 1975. It has been predicted to now negatively impact 90% of the total land of Timor-Leste. Its ability to spread rapidly and cover large areas of land quickly, means it is also has the potential to be a huge fuel load for bush fires during the dry season. This in turn reduces ground vegetation cover and exacerbates the risk of soil erosion on hillsides.
26. Among other invasive plants are the fast-growing tree/shrub Hawaiian giant (*Leucaena leucocephala*), cultivated for fodder, for green manure, for reforestation and so forth. Hawaiian giant has been widely introduced and has become an aggressive invader and is listed as one the most invasive species in the world. This thorn less tree form dense monospecific thickets and is a threat to native plants. Another significant weed in Timor-Leste is the Yellow oleander, (*Thevetia peruviana*), a shrub native to tropical America. Its fruit, seeds, foliage or sap are poisonous to man and animals. It is a significant weed in Timor-Leste and is listed as a Category 1 weed in South Africa (prohibited and to be controlled).

Climate Change

27. Timor-Leste is very vulnerable to the negative impacts of climate change. To-date, approximately 64% of the rural population is food insecure, relying heavily on natural resources, with agriculture and (semi-)subsistence fisheries being the major sources of income for the population. Long periods of drought seriously impacts access to fresh water and during the dry months when waters becomes scarce the water shortage has severe implications also for irrigation and hence the agricultural output. The combination of environmental circumstances and limited economic resources, in addition to increasing pressure on available natural resources, will continue to increase Timor-Leste's vulnerability to climate change and natural disasters.

Barriers

Barrier 1: Knowledge gaps

28. A major barrier that this project will address is the limited data available related to environment and biodiversity such as forest cover, hydrology, water catchment and wetland areas. This hinders well-informed decision making and hampers management and conservation activities. This project will map the remaining forest and assess its conservation value and the outcome of this exercise will guide which areas should be included under the protected area network.
29. The National Ecological Gap Assessment (NEGA, 2010) report made a number of recommendations highly relevant for this proposed program. The number one priority highlighted in the report is for the Department of Protected Area and National Parks to develop management plans for the suite of protected areas. These sites

¹⁴ Alongi D, et al, (2012) *River Catchments and Marine Productivity in Timor-Leste: Caraluan and Laçlo Catchments: South and North Coast's Final Report*. Project 6 of the Timor-Leste Coastal-Marine Habitat Mapping, Tourism and Fisheries Development Project, Ministry of Agriculture & Fisheries, Government of Timor-Leste

contain high value conservation areas, relatively high representations of ecosystems, and contain valuable watersheds that are critical for downstream communities. Also highlighted in the report was the importance of the connectivity between the protected areas, which should also be considered a high priority.

30. A key recommendation in the NEGA report is to clearly identify the boundaries of the declared protected areas, as this is still not accurate. It also suggests the use of the Locally Managed Marine Area (LMMA) model of marine conservation. Conservation International introduced this model into Nino Konis Santana National Park, as a management tool in 2009 with great success. This Community-based approach could be just as successful in a terrestrial setting, as it complements the protected area system, particularly where there is overlay on community and private land.
31. The Government will need to place more effort in finding a funding solution for the Protected Areas Network (PAN). Currently the national budget does not assign any funds to the protected areas, for management, maintenance, research, education, enforcement, or protection. If the network is to be successful the available funding needs to reach at least US\$500,000 per annum. Sources of potential funding include sustainable financing option such as Entrance Fees for protected areas; Conservation Fee paid as a yearly fee by all visitors to Timor-Leste; Payment for Ecosystem Services; or Conservation Agreements, as well as increasing the current government budget; looking at long term donor funding, or potentially the carbon market.
32. There is also an immediate need to strengthen policies, laws and regulations, including enforcement of existing regulation so that the protected area network will function effectively. All policies and laws on protected areas, threatened species, wildlife trade and national parks should be reviewed and updated to meet standards set by the international community. This work should also include strengthened and increased coordination between government ministries and agencies, and between the government and non-governmental organisations.

Barrier 2: Institutional coordination

33. Historically each government has created or developed its own guidelines and not necessarily adopted those of its predecessor. This has left gaps in implementation of legislation, and also loss of knowledge about legislation, plans, and projects underway. Coordination between the ministries is improving but each ministry still tends to only focus on its own work and not identify the linkages across the departments or mandates.
34. In some instances the legislation is at odds and it is difficult to identify which ministry or department is responsible for which action. Currently terrestrial Protected Areas fall under Forestry (MAF), marine PA's under Fisheries (MAF), and biodiversity under Environment (MCIE). In PA such as Nino Konis Santana National Park which has both terrestrial and marine protected areas, each department operates independently for their areas and not in cooperation. This becomes confusing for the communities and stakeholders, and reduces the ability of the park to function properly. Currently there is no formal or informal coordination across these sectors to manage the PA which has left the country with a list of paper parks and no formal PA network.
35. There are still communication and coordination problems being experienced between government agencies. Some of this still sits within confusing mandates and responsibilities spread across ministries.
36. In 2007, Birdlife International identified Important Bird Area's (IBAs) in Timor-Leste to support the development of a Protected Area Network. This was carried out in conjunction with the New South Wales government of Australia. The IBA report noted that the new government had little capacity, had not clearly identified the protected areas to be included in the network, and was still working through establishing legislation. It also noted that there was no in-country organisation that could support the government in the ongoing development of the protected area network, as there was no national or international organisation that had biodiversity conservation as its primary mission. The ways in which this project will incorporate lessons learned and avoid past pitfalls, are summarized under paragraphs 56 and 57 of this PIF.

Barrier 3: Financial limitations

37. Poverty and the lack of alternative livelihoods are contributing factors to the ongoing environmental threats to Timor-Leste's natural resources. Despite the country's rich oil reserves and exportation of gas to Australia, the number of people living below the poverty line has increased over the last two decades and is now close to 50%. The economy on the other hand has been expanding, GDP growth in Timor-Leste was 7.10% in 2014. GDP Annual Growth Rate in East Timor averaged 6.61% from 2001 until 2014, mainly due to the exploration of oil and gas.
38. Investments in industry and manufacturing is lagging behind which has a negative impact on employment opportunities for the country's young work force. Other socio-economic factors such as quality and access to education constitute additional obstacles towards economic growth in the non-oil/gas sector. Subsistence farming is the main livelihood for 80% of the population and with low soil productivity many resort to collecting fire wood or fishing to eke out a living.
39. Population growth, currently 2.5% per year (2013 World Bank), puts additional pressure not only on the social infrastructure but further exacerbates the environmental threats Timor-Leste is poised with. With few alternative employment opportunities this growing population is increasingly dependent on natural resources for its survival at the same time as the available resources are becoming more scarce and threatened.
40. A limiting factor in developing a Protected Area Network has been the limited flow of funding from the Timor-Leste government. Although Timor-Leste has US\$9 billion Oil Fund, no funds have been assigned for protected area maintenance, management, or development in recent years. In 2010 US\$50,000 was assigned to the entire network and in 2015 only US\$5,000 was assigned to the national park alone.

Barrier 4: Legal gaps and weak enforcement

41. Timor-Leste still works under a Portuguese Legal Framework which includes that all the legislation is designed and written in Portuguese. The majority of the Timorese population does not speak or read Portuguese – including government staff – so implementing the existing legislation is very difficult due to the administrative language barrier. In addition, there are a number of legislative documents that are still in Draft form and therefore not enforceable.
42. Inadequate allocation of resources, and conflicting mandates for implementation and enforcement of existing laws and regulations renders government officers ill equipped to act. In some cases national laws and regulations are inadequate and sometimes in conflict with traditional laws.
43. Weak enforcement of existing laws exemplified by country's largest protected area, Nino Konis Santana National Park which covers both terrestrial and marine areas. This area is currently managed by six community forest guards under one manager. With 10 Designated Protected Areas and 19 Proposed Protected Areas, resources will need to be scaled up for these PAs to be properly managed and enforced¹⁵.

Barrier 5: Capacity limitations

44. The 13 municipalities of Timor-Leste all have their own languages. In addition to the local languages, both Portuguese and Bahasa Indonesian were introduced. Today the education institutions of the country all teach in different languages. This makes it very difficult to gain an education, or to be able to continue your education as different levels of institutions also vary in languages. Rural communities especially struggle to have training or mentoring programs implemented locally due to the need for the trainers to have local language skills.
45. Under USAID funding the Coral Triangle Support Partnership (CTSP) program was established in Timor-Leste from 2009 to 2013. The focus area was Timor-Leste's only national park, Nino Konis Santana. During this time the project team piloted several novel tools for Timor-Leste. This project piloted the Co-Management model that was identified and adopted in 2015 by the government as by-law for anyone working with communities on their natural resources. The first community based and managed marine "No Take Zones" were established combining

¹⁵ WDPA Data Status Report, Timor-Leste January 2015.

both local and scientific knowledge, and adopted into Timorese legislation through the traditional and national systems. The marine area of the national park has been zoned and is still in effect today. The success of the program was due to the heavy engagement with the community all through the process. The community drove the direction of the management plans, its adoption at Suco level, and the ongoing enforcement of its protection. The lessons learned from this project will be applied in improving local stakeholders capacity and in actively involving them in protected areas management initiatives.

1.2. The baseline scenario and any associated baseline project:

a) Baseline scenario:

46. Without the implementation of this project it is likely that the establishment of protected area network will be delayed and this will have serious environmental and socio-economic consequences. Economic pressures and population growth are likely to continue fuelling deforestation and degradation, and the demand for agricultural land is likely to increase as the population grows. Un-sustainable agricultural practices in vulnerable areas will continue the ongoing deforestation in an effort to open new farm land and also allow for uncontrolled grazing. These slash and burn practices, along with free stock grazing, will remain the main farming methods. This has so far left more than half the island without natural vegetative cover, as the newly opened areas soon suffer from over grazing, and provide a perfect base for floristic invasive species such as Siam Weed (*Chromolaena odorata*).
47. Without a protected area network in place these practices are likely to continue, further exposing the land to erosion and sedimentation leading to further habitat loss, particularly devastating for endemic and threatened terrestrial and marine species.
48. The loss of vegetation and soil will continue the degradation of the catchment and a decrease in water quality and quantity in the water ways. This decline has a flow on effect for the agriculture sector as it reduces the land available for food production and thereby reduces the country food security. Additionally the loss of biodiversity, changes in micro climates, and damage to marine habitat's through this degradation also has major implications on the country's ability to feed itself into the future. The economic consequences due to a comprehensive lack of its natural resources for Timor-Leste will be long-term and it is the country's extremely poor who will face the brunt of this burden.
49. This downward spiral will directly impact the young population of Timor-Leste and will impact the possibilities for the young people of Timor-Lest to continue the nation building their parents started and the main focus in the future will a be a struggle to survive.

b) Associated baseline projects:

50. The Government budget for 2015 mentions the recent expansion of the electricity grid and that it may have a positive impact on the reduction of use of fuel wood. From 2008 to 2013 the largest amount of infrastructure spending was on electricity (\$896.2 million). This project sharply increased electricity generation, distribution and transmission. The Budget for 2015 also mentions a water master plan for all districts and latrines for 65,000 households by 2017. It also mentions reforestation actives but does not mention the size of the investment or the time period.
51. A number of non-government funded projects has been and are currently being implemented in Timor-Leste to address some to the identified issues above:

Table 1: Associated baseline projects

Project Name	Years (Start-End)	Budget (USD)	Donor(s)	Objectives/Brief description of how it is linked to this GEF project
OSRO/TIM/301/USA. Enhancing Food and Nutrition Security and Reducing Disaster Risk through the Promotion of Conservation Agriculture (CA) PHASE I_Research and testing	June 2013 – March 2017	2,387,455	USAID, OFDA	Adjustment of current cropping management towards conservation agriculture to increase biomass for purposes of reducing erosion and retaining soil moisture in small farming systems.
TCP/TIM/3502. Strengthening National Forest Policy and Participatory Forest Management in Timor-Leste	March – June 2015	34,532	FAO	Reviewed the National Forest Policy and the Community Forestry Guidelines
Toward Sustainable Watershed Management	March 2007 – March 2010	3,500,000	JICA	Pilot to develop an integrated community-based watershed management plan so that MAF could manage the basins in a proper and sustainable manner.
Project for Community-based Sustainable Natural Resource Management	Dec 2010 – Oct 2015	2,750,000	JICA	Replicate the Pilot project across two watersheds.
Developing Small Island Management Approaches in the Sunda Banda Seascape	March 2015 – Feb 2018	650,000	Margaret Ann Cargill Foundation (MACF)	This project is supporting the development of the Steering Committee for Nino Konis Santana National Park so that a draft management Plan can be developed.
Terrestrial Rapid Assessment Program for Atauro Island	May 2015 - August 2015	150,000	Regiao Administrativa Especial do Oe-cusse Ambeno, Zonas Especiais de Economia Social de Mercado (ZEESM)	Biological and Ecological survey to identify if the boundary of the current protected area (Mt Manocco) is incorporating all the critical species and habitat. The survey identified three new reptile species (current finalizing taxonomy) and is proposing the entire island and its waters, are placed under protection with appropriate zoning.

1.3. The proposed alternative scenario with the proposed project, with a brief description of the expected outcomes and components of the project:

52. This project aims to formally establish the Timor-Leste PA Network and strengthen the management of two key catchment areas as pilot sites to demonstrate how to manage protected areas and corridors outside PAs. The project also aims to build the understanding, ability, and capacity of the local communities, to manage their own resources in accordance with the collaborative management requirement of the country.
53. Component 1 of this project is consistent with the GEF-6 Objective 1 of the Biodiversity Focal Area (BD1: *Improve Sustainability of Protected Area Systems*). The project objective is to establish a formal PA Network which includes and conserves globally important biodiversity, and to improve the management of two key protected areas as demonstration sites. The project also aligns with Program 1: *Improving Financial*

Sustainability and Effective Management of the National Ecological Infrastructure through the development of a long-term financial plan for the PA Network.

54. Component 2 of this project will directly contribute to advance the GEF-6 LD-1 objective (*Maintain or improve flows of agro ecosystems to sustain food production and livelihoods*) through working with local communities in two priority catchment areas in developing and implementing natural resource management (NRM) plans, including sustainable use of natural resources into traditional Suco regulations, and building capacity of people to improve livelihoods.
55. Component 3 of this projects will contribute to the GEF-6 SFM 1 and 2 (*Maintained Forest Resources and Enhanced Forest Management, respectively*) through the sustainable forest management activities to be implemented with local communities and the reforestation of degraded areas within priority catchments.
56. The resources from the GEF will support Timor-Lestes´ advances to contribute towards the fulfillment of the Aichi biodiversity targets (in particular target 11[1]), and to progress towards the targets set out in the National Biodiversity Strategy and Action Plan for Timor-Leste 2011-2020:
 - a. Target 11 (Protected Areas, Landscapes and Seascapes) by establishing a formal PA Network and improving the management of key protected areas; and
 - b. Targets 5 and 7 (Reduction of Habitat Loss and Sustainable Management of Natural Resources) by developing and implementing community Natural Resources Management plans, incorporating sustainability concepts and practices into traditional Suco regulations and improving forest management in two priority catchment areas.
57. As described in the following paragraphs, this project was designed to address several of the key recommendations made in the NEGA report and the efforts of Birdlife International and the Government of Australia in establishing a network of protected areas in Timor Leste. The table below summarizes the main recommendations and lessons learned and the outcomes and outputs of this project that will address them:

Recommendations and lessons learned from previous efforts	Project outcomes/outputs addressing recommendations
Establishment of formal national protected area network based on a detailed gap analysis	Outcome 1.1 – Outputs 1.1.1 and 1.2.2;
Identification of the boundaries for each of the declared protected areas	Outcome 1.1 – Output 1.1.5
Strengthening the legal framework for the protected areas	Outcome 1.1 – Outputs 1.1.3 and 1.1.4
Improvement of key government and local stakeholder’s capacity to manage the country’s natural resources	Outcome 2.2 – Outputs 2.2.1; 2.2.2 and 2.2.3
Implementation of community-based mechanisms to manage and monitor the protected areas	Outcome 2.1 – Outputs 2.1.1; 2.1.2 and 2.1.3 Outcome 3.1 – Outputs 3.1.1; 3.1.2 and 3.1.3
Involvement of local communities in the rehabilitation of degraded forests	Outcome 2.1 – Outputs 2.1.1; 2.1.2 and 2.1.3 Outcome 3.1 – Outputs 3.1.1; 3.1.2 and 3.1.3 Outcome 3.2 – Outputs 3.2.1; 3.2.2 and 3.2.3
Improvement of financial resources to manage the network	Outcome 1.1 – Output 1.1.6

58. The Government of Timor-Leste has requested the support of Conservation International, the key conservation organization based in TL, in working with the relevant Government agencies to develop a scalable strategy for the establishment of a national protected area network. Representatives from two Ministry’s (MAF & MCIE) have come together through a series of workshops and meetings, to form a project design working group who identified the key problems, and the steps necessary to address them. The Government will be the lead

executing agency of this project and as such has an additional incentive to ensure its success. During the PPG, additional efforts will be made to ensure that the project appropriately incorporates lessons learned from previous experiences and that major measures are put in place to overcome barriers.

59. The selection of the two catchments identified for this project was based on government priorities, documented protected areas and accessibility. The selection team, made up of government officials from several ministries, NGOs, and other stakeholders based their decision on the following information;

- 10 critical catchments¹⁶ identified by the Timor-Leste government as in the most need of improvement and management to reverse the degradation they are experiencing
- 50 least developed Sucos as identified by the Asia Development Bank¹⁷
- All declared and proposed protected areas
- Forest cover
- Road access

60. Based on the above mentioned criteria, three catchments (see Figure 2) were originally identified (Irabere catchment, Viqueque; Comoro catchment, Dili; Carau-Ulun catchment, Ainaro). The project development committee decided to prioritize two catchments of high priority rather than three to avoid stretching resources thin and ensure substantial impact.

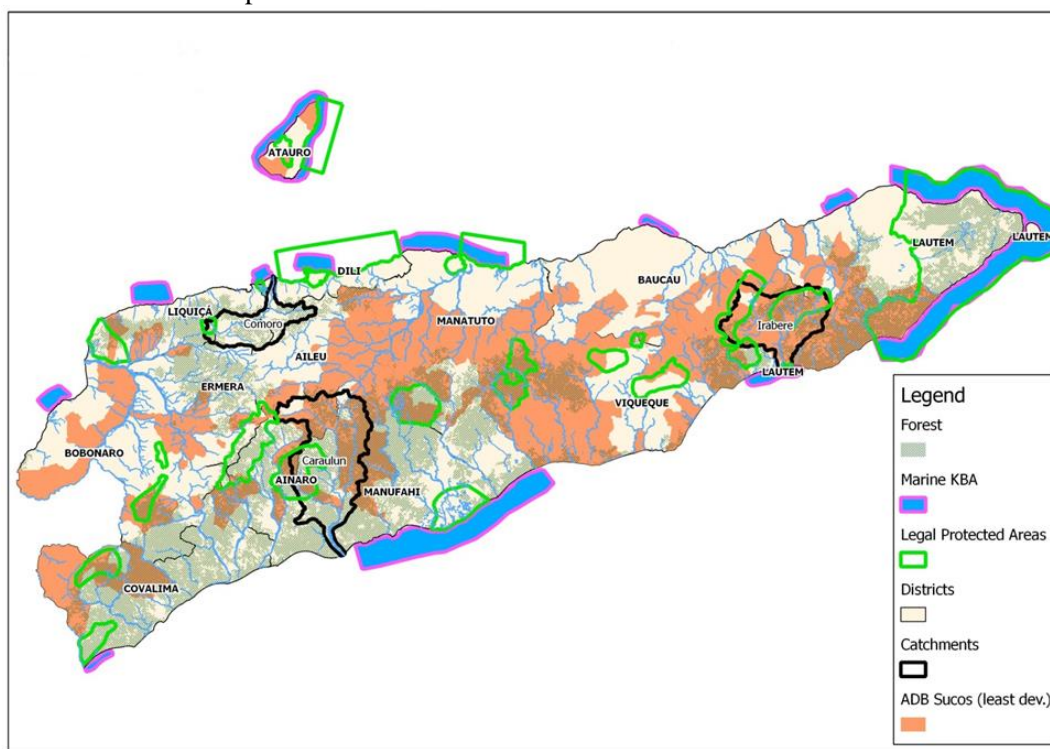


Figure 2: Map showing selection criteria and original three catchments outlined in black

61. The two catchments that fit within current programming priorities of the government are:

1) Irabere catchment, Viqueque/Lautem municipalities, south coast of Timor-Leste. Under the Timor-Leste Strategic Plan 2011-2020, Viqueque Municipality has been targeted for major road upgrades (2015-2020), investigation into alternative electricity production, the establishment of a regional airport facility to enable medical evacuations as well as domestic travel. It is one of the highest rice and cattle producing districts in the

¹⁶ Alongi D, Amaral A, de Carvalho N, McWilliam A, Rouwenhorst J, Tirendi F, Trott L, Wasson RJ. (2012). River Catchments and Marine Productivity in Timor Leste: Caraulun and Laclo Catchments; South and North Coasts – Final Report. Project 6 of the Timor Leste Coastal-Marine Habitat Mapping, Tourism and Fisheries Development Project. Ministry of Agriculture & Fisheries, Government of Timor Leste.

¹⁷ Asian Development Bank, Least developed sucos: Timor-Leste. Mandaluyong City, Philippines: Asian Development Bank, 2013

country. Under the tourism development plan, Viqueque has two key historical resistance sites identified that will be developed for visitors. The Irabere catchment is one of the ten major watersheds for Timor-Leste and straddles the border of Viqueque and Lautem Municipalities. This catchment has within its boundary part four declared or proposed protected areas;

- Mount Matebian
- Mount Legumau
- Mount Burabo
- Mount Maure

62. The Irabere catchment contains the Irabere estuary noted as an Important Bird Area (IBA) with 10 threatened and four near threatened species¹⁸. The National Ecological Gap Assessment for Timor-Leste identified three additional sites to aid the establishment and functioning of the protected area network. Two sites are to provide connectivity between existing sites (linking Mount Burabo to the river systems, and linking the river system to the estuary), and the third site is to expanding one protected area to include an important wetland (expanding Mount Maure to incorporate the entire estuary). This is the only catchment in Timor-Leste that has this many protected areas within its boundaries. This critical element along with fairly intact forest cover outside the protected areas, limited access to employment or income generating opportunities, and its relative closeness to Nino Konis Santana National Park which provides a critical opportunity to develop habitat corridors between these protected areas, made the selection committee recognize it as a prime project site.
63. All three Components will be applied to this catchment but there will be an emphasis on Outcome 1.1 (National Protected Area network established and implementation initiated), 2.2 (Capacity for communities to manage their natural resources substantially increased) and 3.1 (Sustainable forest management in priority catchment corridors substantially improved).
64. The second catchment area is;
- 2) **The Comoro catchment, Dili Municipality, north coast of Timor-Leste.** Dili municipality is the location of the capital city, Dili and forms the key economic and populous center for the country. It is the location of the Comoro Power Plant which is the centre for the National Electricity Grid. It is home to the main airport (Presidente Nicolau Lobato International Airport) and the along with the Dili Port is the main point at which all goods either enter or exit Timor-Leste. It is the strategic centre for all services provided by the government of Timor-Leste to its people.
- The Comoro river flows through Dili, the capital of Timor-Leste. The Comoro catchment is the main source of resources such as water, gravel, and firewood for the city, and as such has been targeted by the government for rehabilitation¹⁹. The Comoro estuary has had 24 threatened and 14 near threatened species identified using this area. The upper Comoro catchment includes part of the Mount Fatu-isin protected area within its boundary. This area is highly populated and has little survey work carried out for species or habitat assessment. There is enormous pressure on this catchment and its resources due to its close proximity to Dili, as well as the constant migration of the younger population to the center looking for work.
65. All three Components will apply to this catchment with an emphasis on Outcome 2.1 (Land degradation drivers halted and/or minimized in key catchment areas), 2.2 (Capacity for communities to manage their natural resources substantially increased), 3.1 (Sustainable forest management in priority catchment corridors substantially improved) and 3.2 (Priority degraded areas reforested).
66. The objective of the project is to establish Timor-Leste's National Protected Area Network and improve the management of forest ecosystems in priority catchment corridors. The project will pull together existing plans, legislation, and strategies related to protected areas, forest management, and land degradation, and implement the priority activities as they relate to the project objective. It will identify the gaps in legislation and make

¹⁸ The National Biodiversity Strategy and Action Plan of Timor-Leste (2011-2020)

¹⁹ Timor-Leste Strategic Development Plan 2011-2030, version submitted to the National Parliament.

¹⁹ McIntyre, M.A., 2011. Strategic Action Plan for the Programme of Works on Protected Areas

recommendations to government if needed to meet national or international requirements. The project will support communities and stakeholders to develop and action their own plans ensuring ongoing management beyond the projects lifetime.

COMPONENT 1: ESTABLISHMENT OF A NATIONAL PROTECTED AREA NETWORK

67. Fundamental to the long term health of humans is the existence of vast areas of natural capital. An important tool to ensure that these areas of natural capital are protected so that future generations can also reap the benefits is the establishment of a Protected Area Network. This aligns with the Timor-Leste Programme of Work on Protected Areas (PoWPA), Strategic Action Plan²⁰ of which there are seven Goal's:

Goal 1: Establish and Strengthen National Systems of Protected Areas

Goal 2: Establish and Strengthen Networks and Improve Collaboration

Goal 3: Build Capacity for the Planning, Establishment and Management of Protected Areas

Goal 4: Prevent and Mitigate Negative Impacts of Key Threats to Protected Areas

Goal 5: Promote Equity and Benefit Sharing to ensure socio-economic benefits and Financial Sustainability

Goal 6: Enhance Involvement of Local Communities and Relevant Stakeholders through improved Communication, Education and Public Awareness

Goal 7: Provide Enabling laws, Policy, Institutions and Systems for Protected Areas.

This project aims to address six out of the seven goals.

68. In Timor-Leste the majority of protected areas exist on paper only, so they are having little influence in protecting the natural capital of the country. Component 1 will pinpoint those protected areas that are strategically placed to best protect the natural capital, develop and pilot management plans in two of these areas, and support the long term commitment of these areas by ensuring the correct legislation is in place.

Outcome 1.1: National PA network established and implementation initiated

69. The combined Outputs under this Component will provide the necessary basis upon which the Protected Area Network can be established. This Outcome will specifically address Goal 1 of the PoWPA which has five Objectives:

Objective 1: Ensure full representation across biological scales and biological realms

Objective 2: Protection of all critical habitats for endemic, migratory and threatened species

Objective 3: Ensure that protected areas are the right size to ensure the persistence of biodiversity

Objective 4: Ensure that protected areas play a role in mitigating climate change

Objective 5: Design protected areas so that they are resilient and able to withstand stresses and changes such as human-forced climate change²¹

70. The National Protected Area Network strategy will guide the development and long term management of the network and combined with the relevant legislation to support the strategy will provide the basis for overseeing the development and implementation of pilot management plans for two key areas within the network. The selection of the two protected areas for the development plans will be finalized during the PPG stage, but suggested areas are:

²⁰McIntyre, M.A., 2011. Strategic Action Plan for the Programme of Works on Protected Areas, Timor Leste, 2011. Prepared for the Department of Protected Areas and National Parks, Ministry of Agriculture and Fisheries, Government of Timor Leste with the assistance of United Nations Development Program, Timor-Leste and the Global Environment Facility. Planning for Sustainable Development Pty Ltd, Landsborough, Queensland, Australia

²¹21 Grantham, H.S., Watson, J.E.M., Mendes, M., Santana, F., Fernandez, G., Pinto, P., Riveiro, L., and C. Barreto, 2011. National Ecological Gap Assessment for Timor-Leste 2010. Prepared on behalf of the United Nations Development Program and the Department of Protected Areas and National Parks of Timor-Leste by CNRM Solutions Pty Ltd, Byron Bay, New South Wales. Trainor, C. R., Santana, F., Rudyanto, Xavier, A. F., Pinto, P. and de Oliveira, G. F. (2007) Important Bird Areas in Timor-Leste: Key sites for conservation. Cambridge, U.K.: BirdLife International.

- a. Nino Konis Santana National (~ 123,600 hectares) Park due to its status as the only national park within Timor-Leste, and is a focal point for tourists. Tourism is an industry the government would like to see developed as a non-oil revenue alternative. Without a management plan the park is at risk of being over utilized, or under resourced to cope with an increase in tourism or population;
- b. Mount Legumau (~ 10,000 hectares) which has virtually no people living within its boundary and could potentially be the only protected area in Timor-Leste to achieve Category I or II under the IUCN;
- c. Mount Matebian (~ 10,300 hectares) which is highly populated and provides an opportunity to develop a management plan based on protecting human needs in conjunction with biodiversity.

71. Targets:

- a. A comprehensive National PA Network strategy developed and adopted by government (covering at least 17% of the country's area, 225,100 ha). The area of the Network will be refined during the PPG phase.
- b. National PA Network legislation (and associated laws) drafted and submitted to Parliament for approval
- c. Two priority PAs management plans developed and under implementation

Output 1.1.1: Current PA Network Gap Analysis completed and validated by the government

72. The current list of declared PA's were developed and proclaimed as "Protected Wild Areas" under United Nations Transitional Administration in East Timor (UNTAET) before the country was handed over to the new independent government . These areas were identified solely based on the existing maps of the time and not with the full support of on-ground surveys. Three of the areas were incorporated into Nino Konis Santana National Park in 2008 (Jaco Island, Lore reserve, Tutuala beach), leaving 12 declared protected areas outside the national park. Five of these areas have also been identified by Bird-Life International as Important Bird Areas (IBAs), but they have not yet had full biological or ecological surveys carried out to assess their conservation value. In addition, the government of Timor-Leste has also identified a further 17 landscapes for protection, which have not yet been gazette as protected areas.

73. It is important to the longevity and development of the protected area network, that those areas critical to the protection of biodiversity and ecosystem services are identified and categorized according to importance. Objective 5 under Goal 1 of the PoWPA identifies three clear targets that will be the guiding principles behind this Output. That is to ensure that protected areas are as large as they can possibly be; ensure that protected areas connect protected areas, especially along elevation gradients for terrestrial protected areas; and where there is areas that represent major geological features in the protected area system, to ensure climate refugia are protected. To support this, in some areas on-ground surveys such as the Rapid Assessment Program (RAP) will be undertaken, while for other areas desk top studies and collation of existing data will support these decisions.

Output 1.1.2: National PA Network strategy completed and approved by the government

74. The Vision of the PoWPA is the "Creation of areas of conservation that guarantee equilibrium between ecological, socio-cultural and economic values, where sustainable, for community prosperity". To provide guidance to the stakeholders, particularly the national level government, it is vital to develop a strategy that is not only applicable, but also possible to be implemented in Timor-Leste. It is therefore critical that the all relevant stakeholders participate in the development of this strategy, to ensure inclusion of views and needs as they pertain to the people who depend on, or interact with, the protected areas.

75. One of the key activities in developing the strategy will be to develop guides and a set of criteria to determine classification of nominated and future protected areas to achieve Goal 1 of the PoWPA. Without a clear set of criteria to guide the identification and designation of proposed protected areas, the country is open to any area being nominated on grounds that may not fully meet IUCN categories, take into consideration traditional principles or practices, or provide more than one benefit to the environment or community. The government's agreed to and approved criteria, will then be proposed to form part of the ByLaw system which provides the building blocks to implement the Laws. Without this clarification it is difficult for government agents to manage or implement legislation due to its unclear nature.

Output 1.1.3: National PA Network legislation gap analysis completed

76. In 2008 the only national park for Timor-Leste was created and as a result legislation and policy specific to protected areas was nominated to be developed. A number of those policies and laws exist today only in draft form and have not yet been implemented. To date no coordinated attempt has been made to review the current policy and legislation for protected areas and identified the gaps, if any. It is the intention of this project to undertake a full gap analysis of the current legislation related to PA's and provide recommendation based on priorities to meet international best practice as well address local needs such as collaborative management. This Output, along with Output 1.1.4 will have an expert in Legislation lead a team of national and international staff and interns, in coordination with ministry staff, to undertake the assessment. Very few opportunities are available to national tertiary level students to participate in this type of analysis, so this project will provide a forum in which they can be involved.

Output 1.1.4: Updated legislation is drafted and submitted to Parliament for approval

77. Based on the assessment carried out under Output 1.1.3, the legislation still in Draft form such as the Draft Biodiversity Decree Law; Draft Environmental Framework Law; and Draft Community Forestry Policy will be reviewed and recommendations made. The team leading the gap analysis will also undertake a review of the current Draft legislation, update it according to international best practice and national priorities, and resubmit the documents to the Council of Minister via the mandated ministry, for approval to move them from DRAFT form into gazette. This Output as well as Output 1.1.3 will require the team to work closely with ministry staff and legal teams to ensure the structure of the proposed legislation meets the judicial standards.

Output 1.1.5: Two priority PAs with management plans developed in a participatory manner that are being implemented

78. The current list of designated PA's are without management plans or strategies. They exist only on paper and are without any formal legislative support to ensure their management aligns with international best practice, collaborative management being practice in Timor-Leste, or the needs of the country. During the PPG phase, the project will identify the two priority PA's for which management plans will be developed and implemented. The design of the plans will be supported by the gap analysis undertaken under Output 1.1.1, and the legislative framework under Output 1.1.3 and 1.1.4. The plans will be developed in conjunction with stakeholders, government agencies and communities, and implementation plans agreed to. The implementation of the plans will be carried out under the collaborative management model designed in Timor-Leste through the Coral Triangle Support Partnership (CTSP) and adopted by government. It will not be possible within the lifetime of this project to complete the implementation of the two management plans it is therefore a critical part of the project to continuously build the capacity of the people of Timor-Leste to under their own management of the resources including the protected areas.

Output 1.1.6: National PA Network long-term financial needs assessed and business plans approved by the government

79. The Long-term Goal 5 of the PoWPA identifies the need for the protected area network to be financially sustainable. It will be vital to the long term protection and management of the protected area network, that it remains financially viable and able to support itself. With the country relying on depleting oil funds to support itself, the protected areas are at risk of being dropped from budget needs in favor of more pressing social development areas such as health and education. There is a very strong need for the protected area network to develop a sustainable self-financing model that will provide at least 50% of the funds needed for the long term protection of the network. There are a number of examples of sustainable financing for protected areas in existence. One in particular for which the government of Timor-Leste has shown some interest is the Raja Ampat model from Indonesia. Current legislation allows for the development of an Environment Fund, which if implemented, could be utilized to support this type of sustainable financing mechanism. Currently Raja Ampat is experiencing an average revenue of over USD1 million per year through the collection of Visitor Fees. This revenue is shared between the communities and government to provide long term security to the protected areas. Alternative examples of shared payments are the Conservation Agreements being implemented by Conservation

International in several countries. Communities reap the benefits of conserving the biodiversity and its habitat through a shared payment system.

80. Development of a sustainable long term financial and business plan will assist the government in its future planning in sectors such as tourism, which will help address the financial gap. It will also assist in identifying potential areas for overseas investments. Under this output is the opportunity to pilot one sustainable self-financing model that can contribute over the long term to the protection and management of the protected areas.

Output 1.1.7: National level management plans are developed for remaining Key Conservation Forests

81. Mapping of the national forests will enable the government to identify not only their location but also the value of these forests and ultimately the management needs. Of particular note are the key conservation forests that fall outside the protected areas and therefore are at risk. In 2010 it was identified that around 10% of the forest cover was included in the protected areas²². This project will revisit that assessment and through on-ground RAP assessments and GIS imagery ascertain the current level of forests and their conservation status existing outside of the protected areas.
82. Ownership of the forested land areas needs to be clarified and as Timor-Leste undergoes a land ownership project during 2015 to 2017 to simplify ownership. This project will work with the Ministry of Forestry staff on prioritizing sites using current legislation, strategies and plans, categorize the forests with government and communities, and then develop the collaborative management plans to ensure ownership and preservation of this key genetic resource.

COMPONENT 2: IMPROVEMENT OF COMMUNITY-BASED NATURAL RESOURCE MANAGEMENT SYSTEMS IN PRIORITY CATCHMENTS CORRIDORS

83. Deforestation is directly related to erosion and loss of productive land for agriculture, as well as loss of biodiversity and ecosystem services. Timor-Leste has a collaborative management policy for its natural resource management and therefore it is imperative that the communities develop natural resource management plans to guide the national level land use plans, and to create ownership within the communities for the management of its resources. Component 2 will focus on expanding the current community based natural resource management planning as established by the JICA²³ project in the Comoro catchment. The NRM planning will be expanded into 10 Sucos across both catchments to provide scaling up of the previous work in addition to larger scale protection.
84. Sucos are a level of government based on the traditional “clan” boundaries, and are made up of several villages. Suco level governance falls between district/municipality and village (Aleada). There is a direct link between Sucos’ and national government which allows the collaborative management model to work. They are important governance systems whose leaders (chefe du suco) are elected from the Suco by its people every 5 years.

Outcome 2.1: Land degradation drivers halted and/or minimized in key catchment areas

85. Through the development of the natural resource plans the communities will identify the threats and drivers of the current land degradation processes. It is through understanding these issues that the communities can then develop strategies to halt the drivers, and address the threats behind the actions.
86. **Targets:**
 - a. 10 Sucos Natural Resource Management (NRM) plans (covering at least 224,000 ha) including no-take zones or seasonal closures under traditional law developed and under implementation
 - b. 10 Sucos adopted NRM guidelines into their regulations

²² Grantham, H.S., Watson, J.E.M., Mendes, M., Santana, F., Fernandez, G., Pinto, P., Riveiro, L., and C. Barreto, 2011. National Ecological Gap Assessment for Timor-Leste 2010. Prepared on behalf of the United Nations Development Program and the Department of Protected Areas and National Parks of Timor-Leste by CNRM Solutions Pty Ltd, Byron Bay, New South Wales.
²³ ²³²³ Toward Sustainable Watershed Management (March 2007 to March 2010)

- c. 10 Sucos establish Conservation Groups to oversee the implementation of NRM plans
- d. Average household income increased by at least 5% over the baseline

Output 2.1.1: Sucos design and adopt NRM plans into both traditional and national systems

87. Each of the 10 Sucos will be guided to develop their own NRM plans using the co-management model, to address the current deforestation and land degradation processes. These plans will form the basis of a long term route upon which the communities can direct their activities. The co-management model guides the participants through a participatory planning process that ultimately reaches incorporation into Suco regulations and tara bandu. Tara bandu is a traditional law in which the community requests the chefe du suco and chefe aldeia (village chief) to perform a ceremony to “close out” or restrict activities in a certain area for a nominated period of time. Tara bandu cannot be invoked if the whole community does not agree. This law allows communities to manage their resources over time ensuring their availability for future generations. During the conflict in Timor-Leste this traditional system was lost as the Timorese did not have control over their own resources. The government of Timor-Leste is supportive of this traditional system being used again as it see it as a vital step in the collaborative management process.

Output 2.1.2: Suco regulations to improve natural resource management approved and implemented

88. Once the NRM plans have been designed and approved by the community, the next step is for them to be incorporated into the Suco regulations which provide direct recognition at national level. Without this level of recognition with the national government, the communities would continue to struggle with ministry planning activities that do not take into account local level planning. In order for the community-based plans to be owned by everyone, consensus is important. Using the approved and adopted co-management model as described in Output 2.1.1, consensus will be assured because the entire community has been engaged in the planning process and subsequent approval of the plans. In order for the plans to be adopted into the Suco regulations, it needs to be shown that the community owns and approves the plans; this is often achieved by carrying out the tara bandu ceremony prior to suco regulation incorporation.

Output 2.1.3: Average household income improved through the implementation of sustainable use of natural resources practices

89. During the PPG phase a set of income generating activities will be selected for implementation in each of the two catchments. The activities need to be dependent upon protecting or enhancing the forests or protected areas. An example would be to develop firewood plantations, rather than allow ongoing broad spectrum forest harvesting which occurs now. A second example is the development of eco-tourism related products such as Home Stays, Community Rangers that can undertake local guiding activities, or the production and sale of local handicrafts. As a measurement of the success of the NRM plans, communities should notice an increase in household income. This Output will link directly to the Youth, Community, and Adult training under Outcome 2.2 and community nursery development under Outcome 3.2. To provide an accurate evaluation at the end of the project in relation to improved household income, it will be necessary to carry out a Baseline, Midline and Endline surveys of selected households in the project areas.

Outcome 2.2: Capacity for communities to manage their natural resources substantially increased

90. Timor-Leste has virtually no formal and very little informal training or education related to the environment. This Outcome will be an example of the types of capacity building programs that could be implemented in the country. It will develop three specific training programs aimed at Adults, Youth, and Communities.

91. Targets:

- a. 100 unemployed youth are trained and graduate per year
- b. 10 Community Conservation Groups participate in field exchange visits
- c. 100 adults participate in NRM training

Output 2.2.1: Youth training program for environmental management designed and implemented

92. Only one education centre in Timor-Leste, the Universidade Oriental Timor Lorosa'e (UNITAL) is offering any level of conservation or environment training. The primary and secondary level education institutions do not include environmental studies in their curriculum unless it relates to agriculture. This component will design an appropriate training program to address this knowledge gap at pre-university level to provide alternative opportunities for youth in each of the chosen catchment sites. The program will be based on such successful programs as "Working on Country" in Australia where the protection and conservation of the environment is a shared responsibility between government and the people. The Working on Country program builds on local and traditional knowledge that eventually sees the participants graduate as Community Rangers. Timor-Leste already has a co-management model in place, and a Guardianship model whereby Forest, and Coastal Guards are employed through government programs. Community Ranger positions will fit into this model and thereby provide employment opportunities within the communities.

Output 2.2.2: Exchange visits to promote learning and sharing of lessons learned among communities completed

93. Peer learning, mentoring, and practical training has been identified by the government as the key ways for Timorese to develop their capacity, as a large proportion of the population have not attended formal education or share a common traditional language. This project will establish 10 Conservation Groups at Suco level who will be the key entry point for the project activities. These Conservation Groups, made up of members from the local communities, will engage in cross visits to other communities with Conservation Groups and environmental activities. One such example is the Conservation Group in Com, Lautem District, established by Conservation International under the CTSP. They have been instrumental in developing the Co-management Model for Timor-Leste, and have established and maintained a marine No Take Zone for the Com community. The success in the No Take Zone – protected under tara bandu – can be seen in the increased fish production in the fishing grounds outside of the zone. The group was established 5 years ago and is very active in sharing knowledge about their function, the types of programs they carry out, the benefits of co-management, and general community environmental education. The exchange visits planned under this project will take advantage of these experienced groups and are designed for communities to teach and learn from each other about how they manage their natural resources, and to develop a network across communities for ongoing support.

Output 2.2.3: Adult Education program for natural resource management designed and implemented

94. In the rural communities, and in particular the women, have no access to formal education. In order to support these communities in developing their own natural resource management plans, they will need training in basic natural resource management. The training under Output 2.2.3 will be targeted to provide modules that will best support the Conservation Group as it progresses through the co-management model to develop their NRM plans. These modules will be implemented based on the groups needs. An example of the modules to be offered will be basic map reading. Applying local knowledge and understanding to a map image can be very difficult for some participants. It is vital to the success of the NRM plan that all the participants can read and apply knowledge to a satellite image, or be able to draw a simple map of the community grounds. A second module will be on data collection and completing data sheets. All NRM plans must include ongoing monitoring of the resource so that plans can be adjusted over time as the area improves, or actions need to be taken to restore an area that has been damaged.

COMPONENT 3: IMPROVEMENT OF FOREST MANAGEMENT AND REFORESTATION OF DEGRADED LANDS IN PRIORITY CATCHMENT CORRIDORS

95. The Timor-Leste National Action Programme to Combat Land Degradation (NAPCLD)²⁴ contains Action Programmes identifying key needs and activities to guide sustainable forest management, including: rehabilitation of degraded forests; soil conservation and rehabilitation to mitigate erosion; promotion of reforestation and agro-forestry on degraded lands; and developing the capacity of local communities for

²⁴ Timor-Leste National Action Programme to Combat Land Degradation, Draft, Dili, February 2009

reforestation initiatives. The project will support Draft Community Forestry Policy for Timor-Leste which aims at the devolution of authority for forest management from Government to community members for long term economic benefits and maintenance of ecosystem goods and services.

96. The NAPCLD also clearly outlines four projects through which these actions will be addressed. This Component directly addresses the Objectives and/or Activities under three of those Projects:
- a. 4.4.1 Capacity Building for sustainable land-use planning and management
 - i. Objective 1 (to strengthen capacity for land use planning), 2 (to strengthen capacity for monitoring and evaluation of plans), 4 (To develop management plans for major watersheds), and 6 (To develop capacity to implement plans)
 - ii. Activities 4 (Develop watershed management plans), and 6 (Develop local capacity to prepare and implement plans)
 - b. 4.4.2 Local capacity development for sustainable upland farming
 - i. Activities 2 (Targeting communities with high risk of land degradation), and 4 (training in communal land management through “learning by doing” approach)
 - ii. 4.4.4 Rural Renewable Energy Development Project
 - iii. Objective 2 (To reduce dependency on natural forests for fuelwood collection)
97. Component 3 is designed to address the ongoing deforestation and degradation threats of the catchments by building local capacity in planning and implementation of those plans. Degradation of forests and loss of biodiversity through unsustainable forest management urgently needs addressing if such livelihood staples as soil retention and water quality are to be improved. Although there is an existing Draft Community Forestry Policy, little has been done to develop community based management planning that would fall under the Policy. The JICA project²⁵ in the Comoro catchment built a solid foundation for community NRM plans, but this has only been implemented in three communities. In order to improve management of the forests and reduce the ongoing degradation of the lands, it is vital that the communities are engaged and own the process.

Outcome 3.1: Sustainable forest management in priority catchment corridors substantially improved

98. Increasing the community’s knowledge of the deforestation and reforestation processes is a crucial step in halting the drivers of forest loss. The project will use existing tools that provide a flexible and affordable approach to rapidly identify and analyze forest landscape restoration potential and identify areas of opportunity at subnational (catchment) level.
99. The IUCN and World Resource Institute: Restoration Opportunities Assessment Methodology (ROAM)²⁶ is a tool that will assist the project to integrate national and subnational objectives of forest land restoration (FLR). It will ensure that key partners are engaged at all levels of governances; problem definitions clearly articulated; outputs and scope of assessment identified and stratified; potential options discussed with clear assessment criteria and indicators.
100. This Component, which focuses on the physical loss of the forests by increasing the vegetative biomass through reforestation programs at community level, combined with Outcome 2.2 which focuses on capacity building of local communities, will provide an holistic approach to improving management of the corridors. Management of the forests will form part of the community NRM plans, which will have been developed using the co-management process. Although there are nine analysis available under ROAM; the project will utilize tools that provide three sets of key analytical information including (1) a list of priority restoration interventions, (2) spatial analysis of restoration potential, and (3) a diagnosis of the presence of key success factors for restoration, taking into account opportunities and challenges of prevailing institutional, policy, market and socio ecological conditions as well as implementation capacity among stakeholders.

²⁵ Toward Sustainable Watershed Management (March 2007 to March 2010)

²⁶ IUCN and WRI (2014). A guide to the Restoration Opportunities Assessment Methodology (ROAM): Assessing forest landscape restoration opportunities at the national or sub-national level. Working Paper (Road-test edition). Gland, Switzerland: IUCN. 125pp. http://cmsdata.iucn.org/downloads/roam_handbook_lowres_web.pdf

101. Priority restoration interventions will be widely discussed with all key stakeholders to ensure alignment with NRM plans at all levels of governance. Spatial analysis will identify priority areas for restoration potential and the communities whose involvement is crucial to ensure sustainable FLR in priority catchments. In addition, the spatial plan will categorize opportunity areas that will support establishment of the protected area network, as well as indicating and prioritizing interventions such as agroforestry on steep slopes, natural regeneration on forest land, or replanting on degraded landscapes. These indicators will inform community NRM plans, allowing clear definitions of expectations and commitment for co-management framework.

102. **Target 3.1:** At least 500 hectares of community forests under sustainable management.

Output 3.1.1: Remaining forests are mapped and identified according to their conservation value

103. Mapping the existing forests and categorizing them according to their conservation value will greatly increase the government's ability to effectively manage these areas. Knowing which forests are priority areas for protection due to genetic, cultural, and biodiversity values will greatly improve the shared manageability of these resources between community and government. Of particular note are the important conservation forests that fall outside the protected areas and are therefore at risk. In 2010 it was identified that only around 10% of Timor's forest cover was included within protected areas²⁷, so there is a large amount of forest – albeit fragmented – that falls outside of any protective mechanism. This Output will work in coordination with Output 1.17 so that data collected by this Output is used in developing management plans to ensure the sustainable management of the forests.

104. The concept of High Conservation Value (HCV) was developed by Forest Stewardship Council with six criteria that indicate forests with significant biological, environment and social values²⁸. The project will adopt conservation values that will be defined according to (1) areas containing globally, regionally or nationally significant biodiversity values (high endemism and refugia), (2) areas that contain rare, threatened or endangered ecosystems; (3) areas providing basic ecosystem services (watershed protection, erosion control) and (4) areas that meet the fundamental needs of local communities' subsistence livelihoods or their traditional cultural identity.

105. The project will use data layers of forest and habitat type available within the Ministry of Forestry (Timor Leste National Forest Inventory) and overlay with localized maps of known key biodiversity habitats that will be gathered via scientific papers, research documents and community reports that identify locations of globally threatened or endemic species. Resource based institutions in Timor Leste will be invited to contribute and share data layers that will further inform and map forest areas outside of the network of protected areas. Spatial identification of forest conservation values will provide impetus for co-management of forest resources. It will also support the implementation of Draft Community Forestry Policy through recognizing local customary claims to forest lands and supporting sustainable dependence on forest resources for livelihoods.

106. Rapid biodiversity assessments (RAPs) will be undertaken to (1) collect biodiversity data of flora and fauna where there are geographic or taxonomic gaps, as well as to (2) provide reconnaissance and ground-truthing of priority areas that are identified outside of the network of protected area in the preliminary maps. The RAP assessments will be undertaken by field specialists who are able to identify plants, reptiles, amphibians, insects, freshwater vertebrates and invertebrates, mammals and birds. In some RAP analyses, archeological assessments are also made to inform heritage and traditional values of forest areas. Results of the RAP assessments will be overlaid with GIS imagery to improve the conservation status of the forests of Timor-Leste. Staff from the Ministry of Forestry and the Ministry of Environment will work closely with Conservation International scientists to complete the valuation process.

²⁷ Grantham, H.S., Watson, J.E.M., Mendes, M., Santana, F., Fernandez, G., Pinto, P., Riveiro, L., and C. Barreto, 2011. National Ecological Gap Assessment for Timor-Leste 2010. Prepared on behalf of the United Nations

²⁸ Jennings, S., et al. 2004. The High Conservation Value Forest Toolkit. Edition 1, 2003. Proforest. Available at: www.fscoax.org/principal.htm (April 2004).

Output 3.1.2: Community-based forest management plans developed and included into Suco NRM plans

107. Following the co-management model for natural resources, this Output will build into the community-based NRM plans a forest management section for community owned or managed forests. The inclusion of this section will be vital as it will provide recognition of local forest management that will need to be considered for national level land use planning, as well as meeting the Goal and Objectives of the Draft Community Forestry Policy²⁹. This recognition can only be acknowledged through the Suco regulations. Suco regulations are recognized by national level government, therefore by including the agreed to community forest management plans at Suco level, it will assist national government when developing land use plans for these areas. A critical aspect of the management plans is the monitoring and evaluation framework that will allow communities to track and adjust their management plans according to need. It is expected that adult training (Output 2.2.3) in data collection will be needed in most communities to ensure that this aspect of the plans is implemented and understood.
108. The project will apply the co-management model for natural resources in Timor Leste³⁰ and adapt to suit forest resources, recognizing the dynamics in national and local governance systems when establishing co-management groups. This Output will build into the community-based NRM plan integrating forest management regimes for community owned or managed forests. The inclusion of this section is vital as it provides recognition of local forest management that will be considered for national level land use planning, as well as fulfilling the overall goal and objectives of the Draft Community Forestry Policy³¹. The project also provides an opportunity to apply policy activities at community level for possible amplification in the future.
109. The recognition of local forest management can only be acknowledged through the Suco regulations. Suco regulations are recognized by national level government. It is therefore important to include the agreed community forest management plans at Suco level as it is envisaged to assist national government when developing land use plans for these areas. A critical aspect of the management plans is the monitoring and evaluation framework that will allow communities to track and adjust their management plans according to need. To address this, it will be appropriate to align adult training (Output 2.2.3) in data collection to participating communities, to ensure that communities develop clear indicators and monitoring tools to each key output of the NRM plan.

Output 3.1.3: Sustainable forest practices in priority community forests implemented

110. Attaining balance between society's increasing demands for forest products and benefits, and the preservation of forest health and diversity is critical to the survival of forests, and to the prosperity of forest-dependent communities. In Timor-Leste, the ongoing deforestation is being caused by the unsustainable forest product harvesting. Because forests and societies are in constant flux, the desired outcome of sustainable forest management is not a fixed one.
111. The project will work with Suco leaders in the two priority catchment corridors to implement capacity building training aimed at self-realization using participatory learning tools that will enable community members to identify root causes of forest habitat loss, soil degradation and decline in water quality. Community resource mapping exercises will enable communities to identify past and existing forest/ land uses as well as determine possible solutions to prevailing challenges. Expected outcomes of the community based capacity building training will inform forest management regimes that have been discussed and agreed by all community members. Community based forest management regimes may entail specific actions such as the designation of a community water-catchment area; identification of degraded areas that need to be restored; identification of sustainable seedling sources; construction of community tree nurseries at Suco or village level.

²⁹ Community Forestry Policy for Timor-Leste Draft 4-12-2007

³⁰ Pereira C. C.; Pinto. R. Mohan C.; Atkinson S. 2013. Guidelines for Establishing Co-Management of Natural Resources in Timor Leste. USAID Project Number: GCP LWA Award # LAG-A-00-99-00048-00. Conservation International for the Timor-Leste National Coordinating Committee Printed in: Jakarta, Indonesia 2013. <http://www.ctknetwork.org/wp-content/documents/pdf/Guidelines-for-Establishing-Co-Management-of-Natural-Resources-in-Timor-Leste.pdf>

³¹ Community Forestry Policy for Timor-Leste Draft 4-12-2007

112. Identifying what each community considers to be sustainable forest practices will be clarified during the PPG phase, but ultimately it depends upon the forest type and its value to the community. This Output will work with communities to identify the threats to their forests and assist them to design management techniques to address the current poor practices, and ensure longevity of the forests for future use. Led by an expert in sustainable forest management, the project will support the government and communities to clarify the actions and activities that will need to be developed to address these threats. The project will also draw from Lessons Learned in similar projects around the world, and adapt the tools and methodologies for Timor-Leste. To evaluate if the actions and activities are leading to improved sustainable forest practices, the project will work with government agents and communities to develop local level monitoring. The data collected will be fed into the ALGIS sector of national government whose responsibility it is to hold all data sets. This will also allow the national level government to report on forest health under its international agreements such as CBD.

Outcome 3.2: Priority degraded areas reforested

113. During the PPG Phase, degraded areas where the project will be implemented will be identified and verified through stakeholder consultation. These areas will be overlaid with the map of protected area network to identify areas where communities have encroached. It is expected that some encroachment would have occurred within the protected area boundaries, as there is currently little local knowledge about the boundaries or definitions of the protected areas. There are also no management plans at all governance levels hence encroachment is expected.
114. Restoration of the degraded areas is a strategic, high priority element to the long term protection and sustainable management of these ecosystems and has been identified in several strategic government documents such as the NAPCLD, PoWPA, and the NEGA. Timor is the custodian of a unique forest resource, by virtue of its status as the largest provenance source of germ plasm of the fast growing *Eucalyptus urophylla*, locally known as Timor White Gum, which is commonly used in reforestation programs. At the commercial scale, the wood is primarily used for pulp, fuelwood or charcoal, but these are not forest commodities pursued by Timorese communities. Local native species such as *Santalum album*, *Eucalyptus alba*, *E. urophylla*, *Paraserianthes falcataria* and others will also be used in the restoration effort.
115. Based on the forest management planning process, the most critical local degraded areas will be identified by communities for reforestation activities as part of their overall management plan. In order for the reforestation to be successful, the communities will need to assess their local forest type, and plan assisted re-vegetation and natural regeneration activities to build on existing forests and restore the biodiversity. The communities may choose to assign specific areas of the forest to include plantations for fuel wood or construction material but, to meet the current national plans and strategies, all planted species will need to be native or endemic to Timor-Leste.
116. Through the training program under Outcome 2.2, communities will learn how to carry out sustainable seed collection, germination, and seedling advancement through the development of local community nurseries. Skills training on tree identification and nursery management are important to ensure that communities collect good quality local seeds for germination of healthy tree seedlings. Community nurseries will use local material as much as possible, and techniques of soil bed preparation and nursery maintenance will be demonstrated on site at participating communities. These trainings will be jointly implemented with government, to ensure that capacity is being built across the Timor-Leste communities and allow future training beyond this project.
117. Monitoring of the reforestation sites will commence from the initial baseline that will be undertaken prior to planting, as proving the success of reforestation will be vital for the long term engagement of the people. This outcome will have direct positive impacts on increasing the biomass of the catchments and positive flow on effects that will see improved water quality and reduced soil loss.

118. **Targets:**

- a. At least 500 hectares of degraded land reforested
- b. 10 community nurseries established and functioning
- c. 10 community-based Conservation Groups participate in nursery and reforestation training

Output 3.2.1: Community tree nurseries established

119. To support the restoration and reforestation efforts and to provide practical training to participants, this project will assist in establishing plant nurseries within 10 communities. These 10 nurseries will be established by the project in conjunction with local communities. These nurseries will act as “farmers school” where interested community members can attend training, share seeds, techniques and best practices of nursery establishment and management. By establishing the nurseries in communities with the highest engagement in reforestation activities, the project will provide solid opportunities for training and hands-on experience for community volunteers who wish to establish their own community nurseries. The program will act along a satellite system, where the nurseries form a network providing support to each other. Those communities living within the most degraded areas will be encouraged to establish their nurseries first, with the view of becoming local trainers to other communities that will be involved in the project at later stages.

Output 3.2.2: Priority restoration areas identified and approved by communities and government

120. Restoring key biodiversity areas will achieve several goals under the PoWPA. This will be attained by utilizing the results from Output 3.1.1 that will identify the most degraded forest areas through the participatory NRM planning process carried out at Suco level. The most degraded local areas will be targeted under this output, so that the communities are supported in their efforts to address the threats and drivers. This Output will work closely with Output 3.2.1 and 3.2.3 to ensure synergy across the project activities so that areas are identified and managed in accordance with priority conservation values and forest management regime. Through community consultation, key sites within the degraded areas will be identified. Due diligence will be undertaken through established processes to ensure national Government and Suco approval for reforestation and restoration actions.

Output 3.2.3: Restoration plans implemented

121. The Output will work with communities to develop restoration plans that will last beyond the project timeline. Restoration of damaged and degraded landscapes take time and effort, and these plans will map out NRM plan - activity matrix that outlines timeline against which activities will be nominated as well as responsible agencies that are involved in the co-management framework to ensure that the communities do not become overwhelmed with the task.
122. A base line assessment of all reforestation sites will be undertaken to document all flora and fauna recorded in the area. Planting is often done early in the rainy season, or at least before the end of rainy season. It is important for seedlings to have sufficient time to acclimatize in the field and create good woody stems before the beginning of the dry season. Generally, spacing procedure for planting tropical species is to space according to crown size at maturity. Each species fills physical space over time at a particular growth rate, which varies between species. Species can be grouped according to growth rate, size, maturity and habitat. For Timor White Gum (*Eucalyptus urophylla*), the plant spacing may depend on end use. For instance, pulp wood would be planted in 3m x 3m while fire wood or conservation planting may adopt a wider spacing of 6m x 6m. Such detail will be deliberated at stakeholder consultations and aligned to the community NRM plan.
123. In the context of reforestation, monitoring commences from the initial baseline that will be undertaken prior to any works carried out. Once plants are established, survival assessment of tree seedlings will be undertaken at three (3) months after planting to gauge species hardiness in the field and, if desired by the community, a technical assessment may be carried out at nine months after planting. The initial assessment at three months is a quick check to ensure that all planted species are coping with the shock of transplant out into the wild. It will also inform nursery management techniques and provide lessons learnt to improve nursery management.

124. After nine months of establishing restoration sites; a technical survival assessment is undertaken at 8-10% sampling intensity to gauge species suitability, as well as to provide lessons learned on planting time, spacing adopted, and other forest silvicultural aspects. The Ministry of Forestry will assist the project in all technical aspects to ensure the long-term success of the restoration work, which will be vital for the long term engagement of the people. This outcome will have direct positive impacts on increasing the biodiversity of the catchments and positive flow on effects that will see improved water quality, increased biomass, and reduced soil loss.

1.4. Incremental/additional cost reasoning and expected contributions to the baseline and co-financing (refer to the GEF guidelines):

a) Incremental/additional cost:

125. GEF resources will lever additional funds (i) to establish a National Protected Area network and (ii) to invest in the roll-out of a community-based natural resource management system. In addition, GEF resources will be invested into gaining experience and building in-country capacity into forest management and rehabilitation of degraded areas by building collaborative relationships with stakeholders, and to advance on building connectivity between protected inland ecosystems and coastal protected areas.
126. GEF incremental resources will lead to a boost in the implementation of the The National Strategic Development Plan for Timor-Leste (2011-2030) and the National Biodiversity Strategy and Action Plan of Timor-Leste (2011-2020) and address key barriers, legislative and operational, in the process of establishing and implementing a National Protected Area network.
127. This project will take advantage of and build on the investments made by the Ministry of Commerce, Industry and Environment and the Ministry of Agriculture and Fisheries in nature conservation, agriculture production and forestry. It will also build on the investments made by the Government in the energy sector, improving services and hence reducing pressure on natural resources.
128. The project will contribute to setting the ground for synergic management of National Protected Area networks through effective collaboration that links the national government with the Sucos and local communities.

b) Co-financing:

129. An analysis of the Government of Timor-Leste's budget allocation in 2015 for environmental specific purposes related to natural resource management and protection within the Ministry of Commerce, Industry and Environment and the Ministry of Agriculture and Fisheries indicate that the Government's co-financing over the project period is approximately US\$11 million. Conservation International will invest approximately US\$2 million in activities supporting natural resource management and protected areas management, both terrestrial and marine. Other development organizations and civil society in Timor-Leste are likely to make in-kind investments equaling US\$1.2 million over the project period.

1.5. Global environmental benefits and/or adaptation benefits:

130. This project is expected to deliver the Global Environmental Benefits described below. These benefits will be further assessed and refined during the PPG phase
- a. Formal establishment of Timor-Leste's Protected Areas Network: based on existing information and new assessments this project will propose that at least 17% of the country's territory is under some form of formal protection, in accordance with the Aichi Target 11. This percentage represents around 2,551 km² or 255,100 hectares; however, a better assessment of the total area to be covered by the Network will be refined during the PPG, because the area by itself will not be a good proxy for biodiversity representation within the

Network.

By establishing and developing the Timor-Leste Protected Area Network, this project will contribute significantly to maintaining globally significant biodiversity and the ecosystem goods and services that they provide to society. Several reports³²³³ highlight that Timor-Leste is data deficient in a number of areas when it comes to identifying its biodiversity. The reports recommend further surveys into the declared and proposed protected areas in order to clarify the status of globally significant species; however there are five globally threatened and fifteen near threatened bird species recorded, some with Restricted Ranges that make use of the protected areas. The key species that this project will help conserve will be clearly identified during the PPG.

Table 2: List of five Globally Threatened bird species identified in Timor-Leste

IUCN status	Common Name	Scientific Name	Endemic Birds Area (EBA)
Critically Endangered	Christmas Island Frigatebird	<i>Fregata andrewsi</i>	
Critically Endangered	Yellow-crested Cockatoo	<i>Cacatua sulphurea</i>	
Endangered	Wetar Ground Dove	<i>Gallicolumba hoedtii</i>	Restricted Range
Endangered	Timor Green-pigeon	<i>Treron psittaceus</i>	Restricted Range
Endangered	Timor Imperial-pigeon	<i>Ducula cineracea</i>	Restricted Range

By supporting the movement of current protected area legislation from draft to approved status and identifying the gaps in current legislation, it will greatly improve the government's ability to plan and manage these vital areas. This national level planning coupled with the local level management plans will ensure greater understanding and communication between the co-managers of these areas and reduce conflict. Greater coordination between ministries, government agents and communities, and stakeholders and the government and communities will deliver and enhanced environment within which Timor-Leste and its people can thrive.

As part of the process of establishing the Timor-Leste Protected Area Network, the project will directly support the participatory development and implementation of management plans for two priority protected areas. In addition, these two protected areas will serve as demonstration sites for building local capacity.

The project will develop a sustainable long-term financial plan for the entire network, which will help address financial gaps, identify financial sources, and pilot at least one sustainable self-financing model, which will be the first of its kind in the country.

- b. Two priority catchments areas (approximately 224,000 hectares) will have improved management of its natural capital, through the development and implementation of co-management models with local communities, and coordination with local and national agencies. The improved catchment management aims at halting or significantly reducing the drivers of land degradation that are depleting key ecosystem services upon which people and nature depend.
- c. The project will contribute greatly to the improved management of at least 500 hectares of forests which falls both inside and outside of the protected areas system by building the capacity of the local people to manage their resources. Reforestation of at least 500 hectares of degraded areas will greatly improve the ecosystems ability to self-regulate by reducing the risk of erosion, increasing the permeability of the soil for water

³² Trainor, C. R., Santana, F., Rudyanto, Xavier, A. F., Pinto, P. and de Oliveira, G. F. (2007) Important Bird Areas in Timor-Leste: Key sites for conservation. Cambridge, U.K.: BirdLife International.

³³ Grantham, H.S., Watson, J.E.M., Mendes, M., Santana, F., Fernandez, G., Pinto, P., Riveiro, L., and C. Barreto, 2011. National Ecological Gap Assessment for Timor-Leste 2010. Prepared on behalf of the United Nations Development Program and the Department of Protected Areas and National Parks of Timor-Leste by CNRM Solutions Pty Ltd, Byron Bay, New South Wales.

absorption, increasing vegetative cover which will provide shelter to critical species as well as people, and improve food security. The flow on benefit of developing income generating opportunities for communities based on the protection and enhancement of the forests increases the value of the forests and thereby their protection.

- d. A preliminary calculation of the amount of CO₂ to be avoided through the sustainable forest management practices and sequestered via the reforestation activities of the project, which will be further refined during the PPG phase, estimates a total of 2,745,910.68 tCO₂e over a period of 20 years. See Appendix I for additional information on the estimation of this number.

Additional environmental and socio-economic benefits

131. The people of Timor-Leste have a strong relationship with the natural environment and most rely on the natural resources for the essentials of life. The potential impacts of climate change on Timor-Leste such as extreme weather events, including long droughts and excessive rain will lead to flooding and major erosion. These impacts will have profound consequences for agricultural production, food security, the tourism industry, and the well-being of the Timorese people. The Timor-Leste Strategic Development Plan 2011-2030 identifies climate change as one of the greatest environment challenges and the impacts of climate change are likely to be intensified by its extremely high dependency on the natural resource base, inadequate infrastructure and lack of institutional capacity. This project will provide the added benefit of increasing the lands ability to buffer these events by building the protected area network into a series of areas that will be able to withstand the extremes of climate, and protect the surrounding communities and natural capital.
132. Through the implementation of sustainable natural resources practices with local communities, the project expects to increase household income by at least 5% over the baseline.
133. The project will build capacity of local communities, paying special attention to women and disadvantage groups, such as unemployed youth and adults. It is expected that at least 100 youth and 100 adults will increase their capacity on issues related to natural resource management and participate in field exchanges to learn from peers involved in similar activities.

1.6. Innovation, sustainability, and potential for scaling up:

a) Innovation:

134. The key components of this program of work have been conducted in many other countries globally over the last century, but they are being implemented in Timor-Leste for the first time. However, this approach is innovative due to the fact that Timor-Leste has only been a new sovereign state since 2002 and, as such, it is a blank slate for conservation planning purposes wherein the most cutting-edge information, tools, models and approaches can be implemented alongside and aligned with the development pathway of the country.
135. The core program components that are innovative are: (i) Development of a functioning national protected area network that, right from the planning stage, incorporates the newest technologies to ensure best positioning of the PA network (e.g., high-definition satellite imagery, spatial planning models); (ii) Implementation of the most effective current thinking on conservation planning to connect PAs to agriculture and societal needs (e.g., landscape-scale conservation, ecosystem services valuation and mapping); and (iii) Use of the most up-to-date climate change models to ensure the PA network functions as intended even under changing global conditions.

b) Sustainability:

136. According to the Constitution of Timor-Leste, Section 61, every citizen of Timor-Leste has the right to a humane, healthy and ecologically balanced environment, and a duty to protect and improve it for the benefit of

future generations. For this reason, the Constitution of Timor-Leste recognized the need to preserve and rationalize the use of its natural resources and promote actions aimed at protecting the environment and safeguarding the sustainable development of the economy.

137. The Law on Protected Areas was formulated under the United Nations Transitional Administration in East Timor (UNTAET) in 2000 together with the Prohibition of Logging Operations and the Export of Wood from East Timor. Several additional laws related to environmental protection and management are being drafted. Only one national park has been declared by law which contains 3 of the declared “wild areas” legislated under UNTAET.

138. Sustainability will be accomplished by addressing the key barriers identified by the project, such as:

Knowledge gap: Part of the knowledge gap will be addressed through the initial mapping of the national protected area network. It is expected that the findings will generate sufficient excitement around new species identification and a better understanding of the value of the available natural resources, to support further investigation of Timor-Leste’s natural resources.

institutional coordination: The project will be implemented through the Ministry of Forestry Fisheries and Agriculture (MAF) by the Forestry department, along with and the Ministry of Commerce, Industry and Environment (MCIE), Department of Biodiversity, with CI supporting the coordination between the two entities. Previously, most programs have been implemented by one entity only and hence, this approach is supporting and fostering a more inclusive and coordinated working mentality between the two Ministries.

Financial limitations: Very little resources are currently allocated towards natural resource management and the protected areas protection of national parks. It is also well acknowledged that the Timorese government has many competing priorities and hence it is very important for the project to assess the financial long term aspects of the project. Hence, it will be very important to pilot and introduce different innovative financing mechanisms that can generate funding long-term. During the PPG phase CI and key stakeholders will identify different financing mechanisms, and build on their experience elsewhere, identify one to pilot in Timor-Leste.

Weak enforcement: Part of the focus on the project is to empower the local communities to engage in the protection and management of their own natural resources. Timorese legislation is based on the Portuguese system and therefore is also written in Portuguese. With the majority of the population not able to speak or read Portuguese, this has limited access to these laws by the people. Currently, few people in the communities are aware of the existing laws and regulations and hence unaware of action they may take that are actually in conflict with the law. The project will focus on socializing existing and new laws and regulations as they relate to NRM and protected areas. This includes making them available in Tetun, the local national language, as most laws currently are only available in Portuguese and hence little understood by the majority of the Timorese people. This language barrier is also a challenge within the government and particularly at District level. Ownership of the laws and regulations will also be strengthened the communities develop their own NRM plans and include them in their Sucos.

Capacity limitations: The capacity limitations will be addressed at all levels throughout the project hence to ensuring that there is a reduction in the gap currently experienced in the people capacity for natural resource management. Different stakeholders within the project (Government officials, adults and youth in the communities, students) will be offered different kinds of capacity building opportunities that will be targeted towards their needs, and will include sequenced training, both hands-on and more formal class-training training. CI will also ensure that there is an active mentorship program throughout the entire project to for both Government officials as well as the communities. Youth in the targeted areas will be provided a six month training that will include both in-the-field work and class room education in addition to numerous follow ups. This training will provide the participant with a certificate. Adults in the communities will receive training that also takes into consideration their role as bread winners of their families and will be a flexible combination of

both hands-on and more formal education. In addition the project will also link up to the local University to tap in and build on the local talent residing in Timor-Leste. Students will be provided internships and in some cases part of the program work could be built into their formal study courses.

c) Potential for scaling up:

139. The World Database on Protected Areas (WDPA) lists Timor-Leste as having 10 tentatively Designated PAs and 19 Proposed PAs. There are no management plans in place or under development for any of them, and the PA delineations need to be refined and adapted as needed.
140. This project aims to develop a strategic blueprint for the PA Network in Timor-Leste, and to develop Management Plans for two PA's. The planning process, information gathered, and technical outcomes from the project (tools, management plans) are replicable by the Timor-Leste Government such that this project will facilitate further expansion of the network across the country to ultimately incorporate the entire PA system for Timor-Leste under one management strategy.
141. Information gathered, tools, and national capacity developed under the project will also be useful for creating a similar network for establishment of marine protected areas in Timor-Leste.
2. Stakeholders. Will project design include the participation of relevant stakeholders from [civil society organizations](#) (yes /no) and [indigenous peoples](#) (yes /no)? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.
142. The following table summarize key stakeholder roles in the project. Nonetheless, a full stakeholder analysis will be conducted during PPG, with focus on the key stakeholders of the pilot sites. Important to note is that there are no indigenous people in these areas. During the PPG CI expects to identify one or two International NGOs as potential partners for certain aspects of the work. Most development organizations in Timor-Leste focus on social issues with limited environmental scope. World Vision, Water Aid, Save the Children and Care are based in Dili but their geographical focus and scope of work varies significantly and will have to be further explored identifying potential areas for collaboration.
143. USAID's Avansa Agrikultura Project kicked off in 2015 and will focus on improving the country's horticulture value chain—including farm inputs, agricultural extension, storage, transportation, trade, and policies—by providing technical assistance and facilitating market linkages within the vegetable and fruit sectors in over 250 communities throughout five districts (Aileu, Ainaro, Bobonaro, Dili, and Ermera).

Table 3: Current identified stakeholders in the project

Stakeholder	Current function	Project role/responsibility
Government Agencies		
Ministry of Agriculture and Fisheries (Forestry sector - various departments)	Governing institution for forestry and terrestrial protected areas. Main lead for the Protected Area Network	Lead government partner for all Components
Ministry of Commerce, Industry and the Environment (Biodiversity Directorate)	National administrative and managing authority for biodiversity, GEF Focal point, CBD focal point.	Consultative partner, technical advisor and outreach facilitator; recipient of training and capacity development
Local government (municipal and Suco)	Manage at a local level the natural resources and work directly on co-management with communities	Direct participation in Component 2 & 3 and will lead community consultations
Civil Society Organizations (CSO)		

Conservation International Timor-Leste	Promote biodiversity conservation, supports the development of environmental policy, conducts ecological & biological baseline surveys	Executing Agency
Permatil	Promotes Permaculture	Direct participation in community capacity building and NRM planning
Education Institutions		
Centre for Biodiversity and Climate Change, National University Timor-Leste	BD-related research, engagement in research and extraction agreements	Technical advisor and outreach facilitator; recipient of training and capacity development
Local communities		
Local people in Irabere catchment, Viqueque/Lautem municipalities and the Comoro catchment, Dili Municipality	Lives in or in close vicinity of the protected areas and/or the suggested expansions in the catchments and are directly dependent on the natural services provided.	Conducting forestry work, reforestation, nursery establishment; implementers of the community-based natural resource management systems

3. *Gender Equality and Women's Empowerment.* Are issues on [gender equality](#) and women's empowerment taken into account? (yes /no). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

144. Women are key stakeholders in a large number of activities that occur within and adjacent to the Protected Areas. These activities range from direct collection of firewood, farming, to running households, and as part of Sucos, and national governments.

145. The proposed project is firmly rooted in CI's belief that in order for conservation work to be successful gender and the understanding of gender roles plays an important role in achieving our long-term goals and objectives. As part of Conservation International's existing Rights-based Approach to conservation, CI has identified gender as a critical component of the overall strategy to protect human rights and ensure equitable participation and decision-making by stakeholders at all scales in our project activities. Both men and women encounter constraints based on gender to varying degrees and if unaddressed, these constraints can cause delays or impediments to achieving CI's global mission.

146. Since independence, Timor-Leste has made serious efforts to improve gender equality and women's empowerment through policy reform, legislation, institutional mechanisms and public awareness campaigns. Equality for women is enshrined in the Constitution, and Convention on the Elimination of All Forms of Discrimination (CEDAW) has been ratified. The status of the national women's machinery was elevated in 2008 to a State Secretariat reporting directly to the Prime Minister's Office, which strengthens its authority to develop and implement policies and programmes that address women's needs and concerns. The government signed the Dili Komprimisu, a public declaration that acknowledges the importance of gender equality and investing in women and girls, to achieve sustainable development, address poverty and strengthen society.

147. Every effort will be made by CI and the Government of Timor-Leste to advance gender equality in the project. To ensure that the project meets CI-GEF Project Agency's Gender Mainstreaming Policy, the executing entity will develop a Gender Mainstreaming Plan (GMP) during the PPG phase of the project. The aim of the GMP will be to identify needs and opportunities to mitigate potentially adverse effects of the project on men and women, as well as promote gender equality an aspect of the project.

148. The GMP will include an assessment of gender roles, responsibilities, uses, and needs relating to the environment/natural resources on which the project will be based (e.g., patterns, participation in management, etc.), as well as both short-term and long-term costs and benefits of the project to men and women. It will also

include potential roles, benefits, impacts, and risks for women and men of different ages, ethnicities, social structure, and status. Specific actions and activities will be identified to ensure that gender-related adverse impacts of this project are appropriately avoided, minimized, and/or mitigated.

149. The GMP will explicitly describe the actions and processes to be put in place during the PPG and implementation phases in order to ensure that women and men: 1) receive culturally compatible social and economic benefits, 2) do not suffer adverse effects during the development process, and 3) receive full respect for their dignity and human rights. Finally, the GMP will provide specific indicators for monitoring and evaluating progress towards gender equality within the project.
150. CI has procurement procedures that explicitly recognize the promotion of gender equality as a standard business practice. As a result, gender equality will be taken into consideration through their procurement programs when sourcing staff, equipment, and consultants.
151. Conservation International in Timor-Leste carried out its own research into the Gender and Natural Resource management (*Gender Integration Pilot Project 2014*) in the fishing communities of Nino Konis Santana National Park. The results showed a very distinct separation of tasks between men and women and the research has guided CI's continued engagement with the fishing communities and how to work to better empower women in this area. The research also had a direct impact in the way CI programs are designed in Timor-Leste and now each project has a community based field team consisting of one male and one female part time staff member.
152. The following is a list of examples of project elements that are particularly gender-sensitive and thus focal areas for the GMP. The project team will need to ensure that:

Component 1

- Work supporting the legal framework and revision such as the analysis, strategies and legislation developed are gender sensitive in terms of participation, use of language and also in terms of outcome.

Components 2 and 3

- Information such as the National Resource Management plans and guidelines are accessible to both women and men.
- Community consultative and participatory processes are designed to facilitate equal participation, mutual respect, and collective decision making by women and men.
- Training and capacity building related to reforestation and community based natural resources management are accessible to both women and men
- The potential project impacts (positive and negative) on both men and women are taken into consideration during the Environmental and Social Impact Assessment (ESIA).
- Presentations of results and lessons learned reach both women and men.
- All publications resulting from the project use gender sensitive language and are made equally accessible to men and women.

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

Table 4: Identify risks and mitigation strategies

Risk	Level	Risk Mitigation Strategy
Uncertainty due to government shifts in priorities and policy changes.	M	The project will strengthen the political commitment by moving a number of key legislative documents from Draft to gazette. This will greatly strengthen the country's ability to conserve key species and habitats as well protect natural resources, by providing guidance to officers in the management of the key areas.
Limited coordination/communication between sectoral agencies and/or ministries	M	The two key Ministries responsible for environmental matters (MAF & MCIE) are both working in close coordination on the design and implementation of the project.
Continued threats to protected areas and terrestrial ecosystems through uncontrolled exploitation	M	The Project aims to provide incentives for the protection of catchments; PA's and forest ecosystems by identifying key alternative income and livelihoods, opportunities.
Lack of institutional and individual capacities to implement policies and provisions of livelihoods to protection of ecosystems and PA's	H	<p>The project strategy differs from other projects in that it includes a differentiated capacity building approach to address the different capacity building needs and circumstances of the different stakeholders across the entire society. Previous programs and projects and either focused very much on one group only and/or provided training with limited opportunities for follow up training and assessments. Youth in the communities will partake in a six month capacity training that includes both hands-on work in the communities and more formal training in a class room environment. This training will lead to a certification upon completion. The adult training includes both long-term and short-term training courses.</p> <p>On a government level CI will take on a mentoring role to ensure that capacity gaps are addressed appropriately. In addition, to ensure and strengthen further linkages to the communities and the different sectors of society, CI will link up with the local University to take on interns to support the implementation of the project and also to explore opportunities to include program work as part of a University course.</p>

<p>Lack of enforcement of current and new laws and regulations related to natural resource management and protected areas</p>	<p>H</p>	<p>The project is aiming to mitigate this risk by ensuring that relevant existing and new laws are socialized at community level. Currently communities are often unaware of the legislation in place and hence unaware that certain actions they take are actually breaking the law. In addition, most legislation in available only in Portugese, a challenge also highlighted at Government level were officials, particularly at District level, are unable to access and understand the laws due to language barriers. The project will ensure that relevant laws are translated from Portugese to Tetun and shared with the communities and local officials.</p> <p>The community involvement is very important in some cases their buy-in, through the development of their own NRM plans and their uptake into the Sucos will further strengthen the implementation and enforcement of existing laws and regulations.</p> <p>In addition, the mapping of the different protected areas will highlight specific areas most vulnerable to forest fires or other environmental threats and this will allow for very targeted efforts as needed.</p>
<p>Financial sustainability of the efforts taken in the project limits the longevity of the project's impacts</p>	<p>H</p>	<p>The Government has noted in its latest strategic plan that natural resource management will need to explore sustainable funding avenues. This project will pilot one innovative financing mechanism that will allow the communities to benefit from taking actions to protect their natural environment. CI has already presented in a meeting (10th March 2016 to Ministry's for Tourism, Finance, Agriculture & Fisheries, and Commerce, Industry, and Environment) actions taken in other protected areas such as Raja Ampat, where visitors fees to different protected areas are generating funding that is benefitting the communities through the establishment of community funds.</p> <p>In addition, supporting the sustainability of the project efforts is the fact that the project is supporting not only one particular group but cuts across different parts and layers of Timorese society. The project itself is not providing direct funds to any entity but is used to demonstrate actions that the communities and others will directly benefit from. Hence, there is no such components as "work-for-cash" etc. that generates immediate cash payments to the communities that are difficult to maintain once the project comes to an end. In addition, supporting sustainability is the capacity building component cutting across and including all stakeholders, which in some cases lead to certification, which in turn supports young people's ability to find alternative livelihoods.</p>
<p>Effects of Climate Change has a negative impact on the outcome of project activities such as re-vegetation and rehabilitation work</p>	<p>M</p>	<p>The project will involve expertise in forestry and re-vegetation work and effects of climate change, rainfall and droughts are taken into consideration.</p>

5. *Coordination.* Outline the coordination with other relevant GEF-financed and other initiatives.

Initiative	Coordination
Enhancing the Conservation Effectiveness of Seagrass Ecosystems Supporting Globally Significant Populations of Dugong Across the Indian and Pacific Ocean Basins (Short Title: The Dugong and Seagrass Conservation Project) (GEF 4930)	CI will be working with MBZ the Executing Agency to implement component TL 1 & 3 of the project and will hence be coordinating closely with this particular GEF investment. It is expected that by addressing the drivers of deforestation and land degradation, the sediment runoff that negatively impacts the coastal line and sensitive marine ecosystems will be greatly reduced.
Building Shoreline Resilience of Timor-Leste to Protect Local Communities and their Livelihoods (GEF 5671)	The Shoreline Resilience project and this proposed project will both interconnect in the Ire Bere protected area at the mouth of the catchment. The two projects will coordinate their activities to ensure no doubling up occurs, and that the communities will receive the best support for resource management.
Implementation of the Arafura and Timor Seas Regional and National Strategic Action Programs (GEF 6920)	The ATSEA project is focused on the Timor and Arafura seas. This proposed project will support the ATSEA marine protected area activities in the Timor seas located near the Viqueque catchment.

6. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The project is consistent with the following national priorities:

Table 6: National priorities Timor-Leste

National strategies/plans/reports/assessments	GEF Project Alignment and Contribution
Draft Biodiversity Decree Law	To protect and maintain biodiversity in Timor-Leste through science and collaborative management.
National Biodiversity Strategy and Action Plan of Timor-Leste (2011-2020)	Includes two strategic priorities that the project responds to: (i) building climate-resilient ecosystems through effectively managing protected areas and reducing threats to biodiversity; and (ii) enhancing biodiversity and ecosystems services to ensure benefits to all.
National Adaptation Program of Action (NAPA) on Climate Change	The project will contribute to the several NAPA priorities. First of all it will help to <i>build resilience of rural livelihoods to secure national food security</i> . Second, the project specifically responds to the priority on <i>restoration and conservation of ecosystems and awareness raising to protect ecosystems exposed to degradation</i> . Third, <i>improving institutional and human resource capacity</i> .
Environmental Policy (2012)	Guides the Government in managing its environment and natural resources in order to achieve a sustainable economic development.
National Forest Policy and Strategy No.9/2007	The overarching objectives of policy is to protect all forests from damage or loss through program that will empower encourage

	and involve local communities to manage forest land, through public relations and education activities, the prevention and physical control of wild fires and reduce livestock grazing.
National Action Program to Combat Land Degradation	The government of Timor-Leste realizes that poverty reduction is only possible if the environment is able to provide the services that people depend upon and if natural resources are used in a manner that does not undermine long-term development
Draft Community Forestry Policy 2007	To implement the Government’s plan to delegate authority for the management of natural resources to the lower levels of government and to the civil society. The aim of the draft Forest Policy is to enable the implementation of sustainable forest management for the long term economic benefit of the nation (particularly the rural communities) and for maintaining the provision of ecosystem goods and services.
Strategic Action Plan for the Programme of Works on Protected Areas, Timor Leste, 2011	Protected areas must not be planned and managed as isolated “islands” but be linked with mechanisms such as buffer zones or corridors to ensure ecological integrity is maintained. The relationship between protected areas and surrounding lands and waters are also of paramount importance and should be considered so that management regimes for both protected areas and adjacent lands can be harmonized for their mutual benefit.
The National Ecological Gap Assessment (2010)	Recommends the completion and establishment of the protected area network; Management plan needs to be developed for all protected areas. Without regulations and zoning, the conservation values of these protected areas cannot be ensure; and advises that additional areas not yet identified be included in the network to ensure all critical habitats and species are protected; The protected area network is linked to ensure viable corridors for species migration and to prevent isolation

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

153. The project will utilize and share learning and best practices through existing mechanisms like GEF IW:LEARN, IUCN’s World Commission on Protected Areas, The CTI Network, and UNTL Environment Center.

154. Specific products of the project will be disseminated through specialized training courses developed to train the communities, stakeholders, and government representatives. These courses will articulate the benefits, responsibility, and outcomes of the project activities. The outputs of the training will be made available to the government, stakeholders, and educational institutes for further professional development opportunities.

APPENDIX I: Preliminary Estimation of CO2 Emissions to be Avoided and Sequestered by the Project

Outcome 3.1: Sustainable forest management in priority catchment corridors substantially improved

When considering the 2 watersheds within which a number integrated landscape management initiatives are supported including, PA management, community forestry and sustainable production, the amount of GHG emissions to be avoided is estimated using the following methodology.

The area and forest status for the different landscape unit areas shown in Table 1 below.

Table 1: Timor Leste's forest cover and deforestation statistics since from 2000 to 2014

Landscape	Total Land	Forest with > 30% tree cover (Ha)			Deforestation
		In 2000	In 2005	In 2015	
Location	Area (ha)				Annual (%)
Comoro Catchment	21,200	13,677.17	13,605.63	13,311.16	0.0022
Irabere Catchment	37,480	22,178.95	22,127.82	21,731.54	0.0018
Mount Matebian	10,340	4,221.06	4,208.17	4,127.63	0.0019
Mount Fatumasin	1,412	986.53	980.87	967.68	0.0013
Mount Burabo	3,927	3,381.87	3,373.49	3,331.82	0.0012
Mount Legumau	10,035	6,998.93	6,986.52	6,899.30	0.0012

Source: Forest cover and deforestation derived from Hansen (2015)³⁴

Predicted Business as usual scenario:

Parameters used to calculate emissions:

Project Period (e.g 2016 to 2020) (years)	4
National Deforestation Rate (%)	1.50%
Pre-Clearing C stock (Mg/Ha) (Uryu et al 2008) ³⁵	224.83
Post-Clearing C stock (Mg/Ha) (plantations Uryu et al 2008)	109
Emission Factor (MgCO ₂ /Ha)	424.72
CO ₂ Reduced (26% or 41%) (Based on Indonesia Numbers)	40

Baseline/BAU Emissions and emission reductions based on above parameters:

Landscape	Area (ha)	Existing Forest 2016 (ha)	Annual Deforestation Rate (%)	Forest loss BAU (ha)	Baseline/BAU Emissions tCO ₂ e	Emissions Reduced tCO ₂ e
Comoro Catchment	21,200	13282.35	0.0022	797	338478.47	135391.39
Irabere Catchment	37,480	21692.62	0.0018	1,302	552800.34	221120.14
Mount Matebian	10,340	4119.73	0.0019	247	104984.49	41993.80
Mount Fatumasin	1,412	966.38	0.0013	58	24626.53	9850.61
Mount Burabo	3,927	3327.71	0.0012	200	84801.11	33920.44

³⁴ http://earthenginepartners.appspot.com/science-2013-global-forest/download_v1.2.html

³⁵ Uryu, Y. et al. 2008. Deforestation, Forest Degradation, Biodiversity Loss and CO2 Emissions in Riau, Sumatra, Indonesia. WWF Indonesia Technical Report, Jakarta, Indonesia.

Mount Legumau	10,035	6890.69	0.0012	413	175597.73	70239.09
TOTAL CATCHMENTS					891,278.81	356,511.52
TOTAL PAs					390,009.86	156,003.95

If we assume that our efforts will impact the whole watershed then we would have emissions reduction to the tune of about 350,000 tCO₂e.

Given that our work will focus on protected areas management and sustainable forest management within the broader watershed then we could claim an emissions reduction of around 150,000 tCO₂e during the initial 4 years of the project.

Subsequently, the avoided emissions in a period of 20 years would yield the following CO₂ emissions and reductions.

Location	BAU Emissions tCO₂e	CO₂ Reduced tCO₂e
Catchments	4,456,394.04	1,782,557.62
PAs	1,950,049.32	780,019.73
TOTAL		2,562,577.34

Outcome 3.2: Priority degraded areas reforested

The target for this outcome is 500 ha of land rehabilitated via afforestation and reforestation practices, and support community forestry, agroforestry and riparian buffers.

“Typical sequestration rates for afforestation/reforestation, in tonnes of carbon per hectare per year, are: 0.8 to 2.4 tonnes in boreal forests, 0.7 to 7.5 tonnes in temperate regions and 3.2 to 10 tonnes in the tropics (Brown et al., 1996). The sequestration potential for agroforestry practices is even more variable, depending on the planting density and production objectives of the system.”³⁶

If we assume a sequestration rate of 5 tons of carbon per hectare per year, then the total carbon sequestration potential over a project period of 4 years can be calculated as:

4 years*500 ha*5 tons/ha/year = 10,000 tons of Carbon over a 4 year period (the life of the project)

Or CO₂ emissions equivalent = 10,000 * 44/12 = 36,666 tCO₂e

It is expected, however, that this number could be lower, given that in the first few years of growth, the sequestration potential will be much less.

If we extrapolate this projection to a time period of 20 years, we would have 183,333.33 tCO₂e sequestered.

Summary:

Project Outcome	Location	BAU Emissions tCO₂e	CO₂ Reduced tCO₂e
Outcome 3.1: Sustainable forest management	Catchments	4,456,394.04	1,782,557.62
	PAs	1,950,049.32	780,019.73

³⁶ FAO website – <http://www.fao.org/docrep/003/y0900e/y0900e06.htm>

Outcome 3.2: Priority degraded areas reforested	Catchments	---	183,333.33
TOTAL			2,745,910.68

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


A. RECORD OF ENDORSEMENT³⁷ 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 [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Joao Carlos Soares	GEF Operational Focal Point	MINISTRY OF COMMERCE, INDUSTRY AND THE ENVIROMENT	02/24/2016

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies³⁸ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Miguel Morales		03/04/2016	Miguel Morales	7033412637	mamorales@conservation.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

³⁷ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

³⁸ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF