

Adapting to climate change and enabling sustainable land management through productive rural communities in Timor-Leste

Part I: Project Information

GEF ID
10713

Project Type
FSP

Type of Trust Fund
MTF

CBIT/NGI
CBIT No
NGI No

Project Title
Adapting to climate change and enabling sustainable land management through productive rural communities in Timor-Leste

Countries
Timor Leste

Agency(ies)
UNEP

Other Executing Partner(s)
Directorate of Climate Change – State Secretary for the Environment

Executing Partner Type
Government

GEF Focal Area

Multi Focal Area

Taxonomy

Integrated Programs, Climate Change, Focal Areas, Climate Change Adaptation, Climate resilience, Least Developed Countries, Community-based adaptation, Livelihoods, Small Island Developing States, Land Degradation, Sustainable Land Management, Improved Soil and Water Management Techniques, Income Generating Activities, Sustainable Agriculture, Community-Based Natural Resource Management, Restoration and Rehabilitation of Degraded Lands, Land Degradation Neutrality, Land Cover and Land cover change, Strengthen institutional capacity and decision-making, Influencing models, Private Sector, Stakeholders, Large corporations, Financial intermediaries and market facilitators, Civil Society, Community Based Organization, Communications, Awareness Raising, Education, Local Communities, Type of Engagement, Information Dissemination, Gender Mainstreaming, Gender Equality, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Gender results areas, Capacity Development, Participation and leadership, Access and control over natural resources, Food Systems, Land Use and Restoration, Comprehensive Land Use Planning, Sustainable Commodity Production, Landscape Restoration, Smallholder Farming, Smallholder Farmers, Commodity Supply Chains, Capacity, Knowledge and Research, Knowledge Generation, Enabling Activities

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 2

Duration

72 In Months

Agency Fee(\$)

935,338.00

Submission Date

9/25/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
LD-1-1	GET	2,528,536.00	4,520,000.00
LD-1-4	GET	750,000.00	1,600,000.00
LD-2-5	GET	300,000.00	740,000.00
CCA-1	LDCF	3,267,126.00	11,190,000.00
CCA-2	LDCF	3,000,000.00	7,250,000.00
Total Project Cost (\$)		9,845,662.00	25,300,000.00

B. Indicative Project description summary

Project Objective

To increase climate resilience and reduce land degradation in priority watersheds by strengthening collaborative SLM for increased livelihood resilience and water security of agriculture-based communities an ecosystem-based adaptation (EbA) model.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)

Component 1: Building the national case and leverage for EbA and addressing land degradation in rural communities through agri-business	Technical Assistance	<p>Outcome 1.1: Enabling environment developed for EbA, climate resilience and Land Degradation Neutrality (LDN) through improved gender-responsive national policies</p> <p>Possible indicators:</p> <p>☑ Degree of mainstreaming and integration of CR, LDN and agri-business approach in policies relevant to watershed planning and management.</p> <p>☑ Project-facilitated policy modifications benefit improved adoption of Sustainable Land Management (SLM) in two of the twenty nine national priority watersheds by 2023^[1] to avoid further LD</p> <p>^[1] This is one of the Timor Leste LDN Target Setting targets (2018)</p>	<p>Output 1.1.1: Opportunity assessment of agri-business developed and presented to relevant national ministries to achieve enhanced socio-economic and SLM outcomes</p> <p>Output 1.1.2: Cross-sectoral working group on climate resilience and LDN established and policy revision timeline agreed</p> <p>Output 1.1.3: Policy and communication campaign undertaken to build national- and local-level support for integrated, climate-resilient watershed development</p> <p>Output 1.1.5: Gender-responsive revisions to LDN targets and sectoral policies prepared and agreed with the national focal Ministries for UNFCCC and UNCCD, to incorporate climate change risk assessments and expand the scope of LDN strategies</p>	GET	300,000.00	200,000.00
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<p>Component 1: Building the national case and leverage for EbA and addressing land degradation in rural communities through agri-business</p>	<p>Technical Assistance</p>	<p>Outcome 1.1: Enabling environment developed for EbA, climate resilience and Land Degradation Neutrality (LDN) through improved gender-responsive national policies.</p> <p>Possible indicators:</p> <ul style="list-style-type: none"> □ <i>Total number of policies and plans that mainstream CC risk;</i> □ <i>Degree of mainstreaming and integration of CR, LDN and agri-business approach in policies relevant to watershed planning and management.</i> ☑ <i>Project-facilitated policy modifications benefit improved adoption of Sustainable Land Management (SLM) in two of the twenty nine national priority watersheds by 2023^[1] to avoid further LD</i> 	<p>Output 1.1.2: Cross-sectoral working group on climate resilience and LDN established and policy revision timeline agreed</p> <p>Output 1.1.3: Policy and communication campaign undertaken to build national- and local-level support for integrated, climate-resilient watershed development</p> <p>Output 1.1.4: Climate risk assessment (CRA) conducted at the national level to identify the potential impacts of climate change at country and sectoral level</p> <p>Output 1.1.5: Gender-responsive revisions to LDN targets and sectoral policies prepared and agreed with the national focal Ministries for UNFCCC and UNCCD, to incorporate climate change risk assessments and expand the scope of LDN strategies</p>	<p>LDC F</p>	<p>350,000.00</p>	<p>1,500,000.00</p>
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^[1] This is one of the Timor Leste LDN Target Setting targets (2018)

Component 2: Planning and implementation of EbA to address food and water security at suco (group of villages) level in two priority watersheds	Technical Assistance	<p>Outcome 2.1: <i>Suco</i>-level landscape management improved through the development and implementation of climate-resilient integrated watershed development plans (CRIWDP) in two watersheds</p> <p>Possible indicators:</p> <p>☒ <i>Percentage of the targeted 7,000 community members – apply SLM practices based on CRIWDPs (of which at least 30% women)</i></p> <p>☒ <i>Number of CRIWDPs, with associated actions and targets for climate- resilient landscape management, developed for an estimated maximum of 71,300 ha (15,700 ha Dasidaro & 55,600 ha Laclo watershed area)</i></p>	<p>Output 2.1.1: Detailed and gender-specific climate change vulnerability assessments conducted for two watersheds and shared with relevant stakeholders</p> <p>Output 2.1.2: CRIWDPs, for water and food security, developed and adopted in two priority watersheds</p> <p>Output 2.1.3: <i>Suco</i> Watershed Management Committees (SWMCs) established and schedule of activities agreed</p> <p>Output 2.1.4: Training conducted for 7,000 people, 50% of whom are women, in two watersheds to strengthen local governance and implementation of the CRIWDPs</p>	GET	200,000.00	150,000.00
Component 2: Planning and implementation of EbA to address food and water security at suco (group of	Technical Assistance			LDC F	500,000.00	3,100,000.00

villages) level in two priority watersheds

Outcome 2.1: *Suco*-level landscape management improved through the development and implementation of climate-resilient integrated watershed development plans (CRIWDP) in two watersheds

Possible indicators:

Number of climate change risk and vulnerability assessments conducted.

☒ *Total number of people trained regarding climate change impacts and appropriate adaptation responses.*

☐ *Percentage of the targeted 7,000 community members that apply SLM practices based on CRIWDPs (of which at least 30% women)*

☒ *Number of CRIWDPs, with associated actions and targets for climate-resilient landscape management, developed for an estimated maximum of 71,300 ha (15,700 ha Dasidaro & 55,600 ha Laclo watershed area)*

Output 2.1.1: Detailed and gender-specific climate change vulnerability assessments conducted for two watersheds and shared with relevant stakeholders

Output 2.1.2: CRIWDPs, for water and food security, developed and adopted in two priority watersheds

Output 2.1.3: *Suco* Watershed Management Committees (SWMCs) established and schedule of activities agreed

Output 2.1.4: Training conducted for 7,000 people, 50% of whom are women, in two watersheds to strengthen local governance and implementation of the CRIWDPs

Component 2: Planning and implementation of EbA to address food and water security at suco (group of villages) level in two priority watersheds	Investment	<p>Outcome 2.2: Food security of rural communities increased through improved climate-resilient SLM at suco level in two watersheds.</p> <p>Possible indicators:</p> <p>☒ <i>Number of hectares of agricultural and rural landscapes made more climate resilient;</i></p> <p>☐ Percentage of the target communities that are food secure through project interventions in ecosystem resilience and land restoration</p>	<p>Output 2.2.1: 4,500 ha forest restored to reduce land degradation and increase the climate resilience of rural communities in two priority watersheds</p> <p>Output 2.2.2: 10,500 ha forests and natural ecosystems protected through community agreements and monitoring</p> <p>Output 2.2.3: 4,000 ha communal grazing land in target <i>sucos</i> under improved management to reduce land degradation</p> <p>Output 2.2.4: Provision of ecosystem services and climate-resilient agricultural production enhanced on 1,000 ha communal land through ecosystem and farmland restoration and improved integrated farming systems (LEISA model)</p>	GET	1,300,000.00	1,000,000.00
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Component 2: Planning and implementation of EbA to address food and water security at suco (group of villages) level in two priority watersheds	Investment	<p>Outcome 2.2: Food security of rural communities increased through improved climate-resilient SLM at suco level in two watersheds.</p> <p>Possible indicators:</p> <p>☒ <i>Number of hectares of agricultural and rural landscapes made more climate resilient;</i></p> <p>☐ Percentage of the target communities that are food secure through project interventions in ecosystem resilience and land restoration</p>	<p>Output 2.2.1: 4,500 ha for est restored to reduce land degradation and increase the climate resilience of rural communities in two priority watersheds</p> <p>Output 2.2.2: 10,500 ha forests and natural ecosystems protected through community agreements and monitoring</p> <p>Output 2.2.3: 4,000 ha communal grazing land in target <i>sucos</i> under improved management to reduce land degradation</p> <p>Output 2.2.4: Provision of ecosystem services and climate-resilient agricultural production enhanced on 1,000 ha communal land through ecosystem and farmland restoration and improved integrated farming systems (LEISA model)</p>	LDC F	800,000.00	3,500,000.00
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Component 2: Planning and implementation of EbA to address food and water security at suco (group of villages) level in two priority watersheds	Investment	<p>Outcome 2.3: Water security in vulnerability hotspots enhanced through the upgrade of climate-resilient water supply infrastructure and improved water management systems at village level</p> <p>Possible indicators:</p> <p>□ <i>Number of water structures that are made more resilient to climate variability and change;</i></p> <p>▣ <i>Number of vulnerable households comprising 50% females report a 50% increase in number of days with regular access to water as compared to baseline</i></p>	<p>Output 2.3.1: Water supply and storage infrastructure upgraded to increase climate resilience in ~40 water-insecure villages</p> <p>Output 2.3.2: Community members at village level trained for the sustainable use, operation and maintenance of water supply and storage infrastructure</p> <p>Output 2.3.3: Community members trained and systems established for monitoring and reporting on village-level water use and availability</p>	LDC F	3,000,000.00	7,500,000.00
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Component 3: Strengthening and financing SLM practises through climate -resilient sustainable agriculture and value chains with small-holder farmers in two watersheds.	Technical Assistance	<p>Outcome 3.1: Adoption of SLM is upscaled through enhanced access to finance for climate-resilient sustainable agriculture and value chains</p> <p>Possible indicators:</p> <p>☑ US\$ 5 million from public and private 'impact finance' secured to expand sustainable agriculture and commodities – linked to traceable SLM results on- and off-farm</p> <p>☑ EbA and SLM objectives integrated in agri-business plans to increase climate resilience, and SLM linkages in the landscape</p> <p>☑ At least 40% of trained farmers & women benefitting from enhanced credit access or participation in 'impact finance' program</p>	<p>Output 3.1.1: Training conducted for 2,500 members of farmer organisations and women's cooperatives to develop climate-resilient sustainable agriculture through agri-businesses</p> <p>Output 3.1.2: Agreements negotiated and incentives created for private sector buyers to invest in traceable and sustainable agricultural commodity production and value chains</p> <p>Output 3.1.3: Portfolio of bankable impact investments developed with capital intermediaries and providers targeting sustainable production of cocoa, vanilla and other commodities</p>	GET	600,000.00	4,500,000.00
Component 3: Strengthening and financing SLM practises through climate -resilient sustainable agriculture and value	Technical Assistance		Output 3.1.1: Training conducted for 2,500 members of farmer organisations and women's cooperatives to develop	LDC F	200,000.00	450,000.00

chains with small-holder farmers in two watersheds.

Outcome 3.1: Adoption of SLM is upscaled through enhanced access to finance for climate-resilient sustainable agriculture and value chains

Possible indicators:

□ *Total number of people trained regarding climate change impacts and appropriate adaptation responses.*

□ *US\$ 5 million from public and private 'impact finance' secured to expand sustainable agriculture and commodities – linked to traceable SLM results on- and off-farm*

▣ *EbA and SLM objectives integrated in agribusiness plans to increase climate resilience, and SLM linkages in the landscape*

▣ *At least 40% of trained farmers & women benefiting from enhanced credit access or participation in 'impact finance' program*

climate-resilient sustainable agriculture through agribusinesses

Output 3.1.2: Agreements negotiated and incentives created for private sector buyers to invest in traceable and sustainable agricultural commodity production and value chains

Output 3.1.3: Portfolio of bankable impact investments developed with capital intermediaries and providers targeting sustainable production of cocoa, vanilla and other commodities

Component 3: Strengthening and financing SLM practises through climate -resilient sustainable agriculture and value chains with small-holder farmers in two watersheds.	Investment	<p>Outcome 3.2: Reduced land degradation and improved farmer income through integrated and climate resilient agro-forest/horticulture systems for traceable and sustainably grown cocoa and other agri-business commodities</p> <p>Possible indicators:</p> <p>☑ Improved SLM and Climate Resilience outcomes (e.g. soil, water, multi-story vegetation, and climate-proof crop production) on 2,200 ha new or upgraded agro-forest systems (identified as hotspots in CRIWDPs)</p> <p>☑ 900 tons of traceable and sustainably grown cocoa produced</p> <p>☑ 100 tons of traceable and sustainably grown vanilla produced</p> <p>☐ socio-economic benefits to 2,000 farmers of which 30% female</p>	Output 3.2.1: 2,200 ha unsustainably managed farms transformed to climate-resilient and profitable agroforestry systems for growing cocoa and other agri-business commodities	GET	800,000.00	100,000.00
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Component 3: Strengthening and financing SLM practises through climate -resilient sustainable agriculture and value chains with small-holder farmers in two watersheds.	Investment	<p>Outcome 3.2: Reduced land degradation and improved farmer income through integrated and climate resilient agro-forest/horticulture systems for traceable and sustainably grown cocoa and other agri-business commodities</p> <p>Possible indicators:</p> <p>☑ Number of hectares of agricultural land made more climate resilient;</p> <p>☑ Improved SLM and Climate Resilience outcomes (e.g. soil, water, multi-story vegetation, and climate-proof crop production) on 2,200 ha new or upgraded agro-forest systems (identified as hotspots in CRIWDPs)</p> <p>☑ 900 tons of traceable and sustainably grown cocoa produced</p> <p>☑ 100 tons of traceable and sustainably grown vanilla produced</p> <p>☐ socio-economic benefits to 2,000 farmers of which 30% female</p>	Output 3.2.1: 2,200 ha unsustainably managed farms transformed to climate-resilient and profitable agroforestry systems for growing cocoa and other agri-business commodities	LDC F	800,000.00	1,000,000.00
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Component 4: Knowledge management and monitoring for replication of best practices in other sucos and watersheds	Technical Assistance	<p>Outcome 4.1: Replication enabled in other <i>sucos</i> and watersheds for integrated ecosystem-based adaptation and agri-business development programs.</p> <p>Possible indicators:</p> <p>☒ <i>Financing secured for replication of EbA and agri-business model in two other watersheds in Timor-Leste</i></p>	<p>Output 4.1.1: Project impact and effectiveness measured and lessons communicated through the implementation of a monitoring, evaluation and learning system</p> <p>Output 4.1.2: Gender-responsive policy briefs and best-practice guidelines developed and disseminated to facilitate replication and upscaling of climate-resilient SLM in additional watersheds and municipalities</p> <p>Output 4.1.3: Watershed upscaling plan developed for replication of successful project activities</p>	GET	209,753.00	325,000.00
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Component 4: Knowledge management and monitoring for replication of best practices in other sucos and watersheds	Technical Assistance	<p>Outcome 4.1: Replication enabled in other <i>sucos</i> and watersheds for integrated ecosystem-based adaptation and agri-business development programs.</p> <p>Possible indicators:</p> <p>☒ <i>Number of people made aware of climate change impacts and appropriate adaptation responses.</i></p> <p>☒ <i>Financing secured for replication of EbA and agri-business model in two other watersheds in Timor-Leste</i></p>	<p>Output 4.1.1: Project impact and effectiveness measured and lessons communicated through the implementation of a monitoring, evaluation and learning system</p> <p>Output 4.1.2: Gender-responsive policy briefs and best-practice guidelines developed and disseminated to facilitate replication and upscaling of climate-resilient SLM in additional watersheds and municipalities</p> <p>Output 4.1.3: Watershed upscaling plan developed for replication of successful project activities</p>	LDC F	317,068.00	350,000.00
Sub Total (\$)					9,376,821.00	23,675,000.00
Project Management Cost (PMC)						
GET					168,783.00	585,000.00
LDCF					300,058.00	1,040,000.00
Sub Total(\$)					468,841.00	1,625,000.00
Total Project Cost(\$)					9,845,662.00	25,300,000.00

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Directorate of Climate Change – State Secretary for the Environment [LDCF]	In-kind	Recurrent expenditures	3,000,000.00
Recipient Country Government	Ministry of Agriculture and Fisheries [GEFTF]	In-kind	Recurrent expenditures	1,000,000.00
Donor Agency	GCF UNDP project [LDCF]	Grant	Investment mobilized	15,000,000.00
Other	Rabobank Agri-3 Fund or Belgian impact investor [GEFTF]	Grant	Investment mobilized	5,000,000.00
Civil Society Organization	RIKOLTO: Indonesia programme office – sustainable cocoa programme [GEFTF]	Grant	Recurrent expenditures	200,000.00
Civil Society Organization	RIKOLTO: Indonesia programme office – sustainable cocoa programme [GEFTF]	In-kind	Recurrent expenditures	300,000.00
Other	Sustainable sourcing companies: MARS etc t.b.c. [GEFTF]	Grant	Recurrent expenditures	300,000.00
GEF Agency	UNEP [LDCF]	Grant	Recurrent expenditures	500,000.00
Total Project Cost(\$)				25,300,000.00

Describe how any "Investment Mobilized" was identified

Environment Agri-3 (fund) for forest protection and sustainable agriculture (and possibly the Land Degradation Neutrality Fund - Technical Assistance Facility) to develop a bankable portfolio of private investments in sustainable production and sourcing of commodities, especially Cocoa and Vanilla. Any green loans would be carried by corporate partners – not the government or farmers. Preliminary talks with the global director of the Agri-3 indicated interest to consider Timor-Leste under their special facility for LDCF countries – notwithstanding its perceived additional investment risk. Talks have also been held by RIKOLTO ,with both sustainable sourcing companies such as OLAM and MARS, as well as commenced exploring possibilities with a Belgium impact investor. The indicated USD 5

million investment is largely based on the volume of targeted sustainable Cocoa yet much less on any feasibility design. The present COVID era will no doubt pose additional challenges with regards bankability and investors willingness; whilst the market of Cocoa and Vanilla remain strong.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNEP	GET	Timor Leste	Land Degradation	LD STAR Allocation	3,578,536	339,961	3,918,497.00
UNEP	LDCF	Timor Leste	Climate Change	NA	6,267,126	595,377	6,862,503.00
Total GEF Resources(\$)					9,845,662.00	935,338.00	10,781,000.00

E. Project Preparation Grant (PPG)
PPG Required true

PPG Amount (\$)				PPG Agency Fee (\$)			
200,000				19,000			
Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNEP	GET	Timor Leste	Land Degradation	LD STAR Allocation	74,432	7,071	81,503.00
UNEP	LDCF	Timor Leste	Climate Change	NA	125,568	11,929	137,497.00
Total Project Costs(\$)					200,000.00	19,000.00	219,000.00

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
5500.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
1,000.00			

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
4,500.00			

Indicator 3.3 Area of natural grass and shrublands restored

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

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

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

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
27200.00	0.00	0.00	0.00

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
10,500.00			

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

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

Type/Name of Third Party Certification

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
16,700.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

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

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	2896517	0	0	0
Expected metric tons of CO ₂ e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)	2,896,517			

Expected metric tons of CO₂e (indirect)

Anticipated start year of accounting

2023

Duration of accounting

20

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit

(At PIF)

(At CEO Endorsement)

(Achieved at MTR)

(Achieved at TE)

Expected metric tons of CO₂e (direct)

Expected metric tons of CO₂e (indirect)

Anticipated start year of accounting

Duration of accounting

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit

Energy (MJ) (At
PIF)

Energy (MJ) (At CEO
Endorsement)

Energy (MJ) (Achieved at
MTR)

Energy (MJ) (Achieved at
TE)

Target Energy Saved
(MJ)

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	33,592			
Male	34,408			
Total	68000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

☒ Core Indicator 3 (total 5,500), with under indicator 4.1 - 4,500 ha forest restoration in LD hotspots identified in the two CRIWDPs (output 2.2.1) – consisting of the full restoration of 2,500 ha low-level-degraded land (baseline), plus 2,000 ha moderately degraded land (baseline) to low level degradation, plus 1,000 ha restoration of poorly managed/unproductive farmland or degraded land through applying climate-smart improved agronomic practices on farms through technology transfer, capacity building and applying e.g. LEISA model (output 2.2.4). ☒ Core Indicator 4 (total 16,700) consist of (i) 10,500 ha forest protection for watershed functions under output 2.2.2 (with co-benefit BD conservation), where the project will target keeping current degradation levels (as opposed to ‘without’ scenario where degradation would significantly increase); plus (ii) 4,000 ha communal grazing land in target sucos under improved livestock management to reduce land degradation in grassland and associated woody vegetation (output 2.2.3); as well as (iii) 2,200 ha new or upgraded agro-forest systems (output 3.2.1) moving from annual to perennial crops – mainly in Cocoa/Vanilla systems (identified as hotspots in CRIWDPs) The project will contribute to the following Aichi targets (albeit now outdated): ☒ Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity ☒ Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Part II. Project Justification

1a. Project Description

1a. *Project Description.*

The global environmental and/or adaptation problems, root causes and barriers

Timor-Leste is a Small Island and Developing State (SIDS) classified as a Least Developed Country (LDC) in the Asia-Pacific region. The country has a population of ~1.27 million people^[1] with a population density^[2] of 85 per km² and a gender ratio of 49.5% women^[3]. Of Timor-Leste's GDP of US\$ 2.58 billion (2018)^[4], the oil industry is the most significant contributor (~66%)^[5], employing relatively few people and mainly from urban areas. Agriculture contributes ~30% to GDP as the dominant economic activity in rural areas, where ~70% of the population resides.

The Government of Timor-Leste (GoTL) is led by a president and prime minister^[6] in a semi-presidential system^[7] which dictates different governance responsibilities to both leaders. The president presides over Council of State and Superior Council of Defense and Security, ensures the respect for the constitution and for state institutions, and can act as a mediator for conflict resolution^[8]. Following legislative elections, the president also appoints a prime minister that leads the unicameral parliament^[9] and holds executive power as the head of government^[10]. The prime minister presides over the Council of Ministers and directs the general governmental policy as well as all governmental action^[11].

Administratively, Timor-Leste is divided into 13 municipalities (elsewhere in the document referred to as districts^[12]) with Dili serving as the country's capital. In each municipality, a sub-national government (referred to as a municipal government) has been established^[13]. Each municipality is further sub-divided into administrative posts (elsewhere referred to as sub-districts) and *sucos* (groups of villages). In total, Timor-Leste has 67 administrative posts (3–7 per municipality) and 442 *sucos* (2–18 per administrative post)^[14]^[15]. At present, the GoTL is in the process of enacting fiscal decentralisation^[16], aimed at distributing formal economic activity – which is currently highly concentrated in Dili – to other municipalities. Although budgets are allocated to municipal governments, in many rural areas national and municipal government spending has been inadequate for development requirements and to support the adoption of sustainable agricultural livelihood practices^[17]^[18]. In these rural areas, *suco*-level traditional leadership plays an important role in governance (further detailed in the *Policy and governance baseline scenario* section below).

Most of Timor-Leste's rural population are subsistence farmers who tend to livestock and cultivate crops on less than two hectares of land. Maize is the primary subsistence crop grown in the country^[19]^[20] alongside rice, beans and starchy tubers. Moreover, Timorese cash crops include coffee, (which is Timor-Leste's second largest export after oil)^[21], coconut, cocoa and candlenut, which are grown on a smaller scale^[22]. Livestock production – for subsistence, cultural significance and domestic trade – is also a common source of income for small-scale farmers. Chickens, pigs, cattle, goats and buffalo are the most abundant livestock in the country^[23]. Timor-Leste's rural populations are however food and water insecure and ~42% of the population are living in poverty^[24]^[25], primarily as a result of low crop productivity compounded by the adverse effects of climate change and land degradation^[26]. Consequently, subsistence farmers are often unable to purchase agricultural inputs and equipment, limiting their ability to adopt more productive or modern farming practices and subsequently trapping them in a cycle of poverty. In addition to financial deficits, low crop productivity in Timor-Leste is a result of reliance on unsustainable farming practices, such as shifting agriculture^[25]. These practices lead to soil nutrient depletion, loss of topsoil and gully erosion, which negatively impact crop growth. Moreover, natural hazards, including frequent tropical cyclone events, flooding, drought and landslides damage crops and further reduce agricultural productivity.

Agriculture in Timor-Leste is also affected by the limited amount of surface water available as a result of the country's steep topography. Most rural villages have shared communal access to groundwater for household use through natural springs or a few shared wells. Women are frequently responsible for collecting water from these communal sources to supply household needs, which can be a time-consuming task. Despite the GoTL's investment in irrigation, the required irrigation infrastructure remains limited in small-scale farming communities and is concentrated in rice-growing areas. Damage and destruction of infrastructure from landslides, erosion and siltation, and from decades of conflict and occupation have resulted in only a small proportion of the existing infrastructure being useable. This limits the ability of subsistence farmers to irrigate crops, particularly during periods of drought, which further reduces crop productivity. As a result of limited infrastructure, subsistence agriculture is largely rainfed and rural communities are often dependent on informal, unregulated groundwater for domestic use. With rainfall projected to become more erratic, and drought and extreme rainfall events likely to occur more frequently under future climate conditions, climate change presents a substantial threat to the water and food security of rural communities in Timor-Leste.

Climate change and its impacts on water security and agriculture

Since 1950, the average annual temperature in Timor-Leste has increased by $\sim 0.016^{\circ}\text{C Pa}$, with an overall increase of $\sim 1^{\circ}\text{C}$ over the last 60 years. During the 20th and early 21st century, rainfall in Timor-Leste increased by an average of 6.4 mm/decade. This overall trend matches an increase in rainfall in the wet season (December to February). In contrast, rainfall in the dry season (April to August) has decreased by ~ 10 mm since 1930, indicating an increase in seasonal rainfall variability. This variability is associated with the country's frequent extreme events such as droughts, floods and landslides. Anecdotal evidence also indicates a recent shift in rainfall seasonality towards a later wet season. These changes in rainfall patterns, combined with extreme climate events, are already reducing agricultural productivity and water availability and resulting in increased food and water insecurity. Further losses in agricultural production are projected under future climate conditions and are likely to increase poverty within *sucos*, exacerbating their vulnerability to climate change.

Current trends in temperature, rainfall and extreme events are predicted to continue in Timor-Leste. Specifically, temperature is projected to increase by between 1.5°C (under RCP4.5) and 3.5°C (under RCP8.5) by 2100. This temperature rise is likely to result in increased: i) evapotranspiration rates, increasing water stress for crops; ii) water demand for livestock; iii) evaporation rates, reducing already limited surface water availability; and iv) thermal stress for crops, reducing the productivity of temperature-sensitive crops in low-lying areas. Some projections for maize yields – the primary food crop in Timor-Leste – under future climate conditions indicate that yields of non-irrigated maize may decrease by up to 19%, while other models project an increase in rice and maize yields as a result of more interannual variation. These impacts of increasing temperature on water security and agriculture are illustrated in Figure 1 and Figure 2 below.

Projected rainfall trends for Timor-Leste indicate both high uncertainty and substantial seasonal variability. On average, a small decrease in rainfall is projected by 2100 for June to August (the dry season). In addition, a ~ 20 -day delay in the onset of the wet season is projected, along with an ~ 11 -day delay in the onset of the dry season. This indicates that the length of the dry season is likely to extend and the area experiencing a dry season of more than eight months is likely to expand. The longer dry season is likely to increase water insecurity and drought frequency in communities that depend on rainfall and springs that dry up during drought periods. The extended dry season will also increase pressure on alternative water sources, including groundwater well points and rainwater storage systems. Severe droughts under future climate conditions are furthermore likely to reduce soil moisture and vegetative cover, increasing the vulnerability of slopes to land degradation and decreasing the potential for infiltration and water retention.

Besides droughts, extreme rainfall events associated with tropical cyclones are likely to increase in intensity as larger tropical cyclones are expected under future climate conditions in Timor-Leste. In addition, the annual range in monthly rainfall – the difference in rainfall between the driest and wettest months – is projected to increase by ~ 170 mm by 2080–2099, while the proportion of the total rainfall from rainfall events on very wet days is projected to increase by $\sim 25\%$ by 2080–2099. These changes indicate an increase in rainfall variability and heavy rainfall events, which increase the risk of erosion and flooding (Figure 1, Figure 2). Increased erosion and flooding are likely to result in a reduction in water quality, reducing the availability of clean water for domestic and agricultural use. Without urgent adaptation interventions, water security in rural Timor-Leste is likely to be considerably adversely impacted by climate change, as groundwater recharge becomes more erratic – particularly in areas where water supply and storage facilities are limited. Moreover, by decreasing agricultural productivity in Timor-Leste climate change is likely to increase food insecurity, compounding baseline problems such as rural poverty, in addition to increasing pressure on agricultural land, which in turn drives shifting agriculture and further exacerbates land degradation.

Land degradation drivers, impacts and links to climate change adaptation

As mentioned above, Timor-Leste is a mountainous country with several slopes that are particularly susceptible to erosion, as well as soils with low fertility. Consequently, about half of the country's land area is at risk of land degradation. In this regard, Timor-Leste is at risk of considerable deforestation and forest degradation in its upland areas. Between 2003 and 2012, forest cover in Timor-Leste was reduced by nearly 2,000 km² (3% of the country's total land area). This has largely been driven by shifting agriculture, unsustainable farming practices, illegal logging and forest fires. In 2012, ~58% of Timor-Leste was forested, with an estimated annual deforestation rate of 1.7%. In many parts of the country, these forest ecosystems play an important role in ensuring the quality and availability of water resources, as well as in reducing vulnerability to flooding and landslides. In areas that have been deforested, bare soils are eroded more rapidly, increasing the sediment load in rivers and leading to water being unfit for consumption. Soil erosion increases when prolonged dry periods are followed by heavy rains, as a result of the subsequent loss of natural vegetation (Figure 1). Consequently, landslides frequently occur on steep slopes during the rainy season. In addition to preventing or slowing down soil erosion, vegetation facilitates the deeper permeation of water into the soil, enabling groundwater recharge. This reduces surface runoff during heavy rainfall events and subsequently reduces the risk of flooding. However, the loss of vegetation associated with forest degradation in upper catchments decreases ecosystem water storage capacity, increasing downstream peak flows, flooding and damage to infrastructure, farms and land resources. Reduced forest clearing and restoration of forest ecosystems are therefore an important component of strategies aimed at increasing the quality and quantity of water available to rural communities and, in particular, for reducing their vulnerability to flooding and landslides.

Forest degradation in Timor-Leste is driven by logging, for both timber and fuelwood, while shifting cultivation and forest fires are the direct drivers of forest loss in the country (Figure 1). These unsustainable practices are compounded by: i) climate change, which is expected to increase the occurrence of fires; and ii) the socioeconomic circumstances of subsistence farmers. As mentioned above, many of these farmers are trapped in a cycle of poverty and without access to irrigation infrastructure, markets for cash crops, or equipment and technologies for improving yields, they are unable to increase their incomes or ensure their own food security. Previous efforts to support rural development by subsidising or providing equipment for agricultural mechanisation have had limited success, because: i) they did not provide adequate incentives or motivation for farmers to transform their agricultural practices; ii) there is limited technical capacity among subsistence farmers to adopt sustainable agricultural practices; and iii) farmers have not sufficiently incorporated the management of common resources. In addition, land use in rural communities is not always well adapted to the topography and capacity of the landscape. Specifically, unsustainable farming practices, including overstocking and cultivating crops on steep slopes increase land degradation on agricultural lands. Farmers have adopted strategies – including the expansion of farmland into valuable ecosystems such as forests, increasing livestock numbers and farming on steep slopes – to address food and income shortages. However, these strategies are drivers of land degradation, and the subsequent loss of ecosystem services associated with land degradation has a negative impact on water security and agricultural productivity, exacerbating the cycle of poverty for small-scale farmers.

Approximately 87% of households in Timor-Leste engage in some form of livestock rearing. In addition to contributing to food security, livestock are an important source of income for households and can be sold to provide for domestic needs. Although livestock rearing is managed in some parts of Timor-Leste, in many areas, livestock are free roaming and populations are not managed according to carrying capacity. Livestock have a substantial impact on land – even when grazing is managed – because the depth of the upper layer of soil is diminished from compaction and compression by animal trampling. Additionally, grazing reduces the quantity and density of roots in the topsoil. Unmanaged overgrazing and high livestock densities therefore exacerbate soil erosion and land degradation. Effective livestock management at the community level in Timor-Leste is limited, as a result of land availability as well as insufficient planning for appropriate land use.



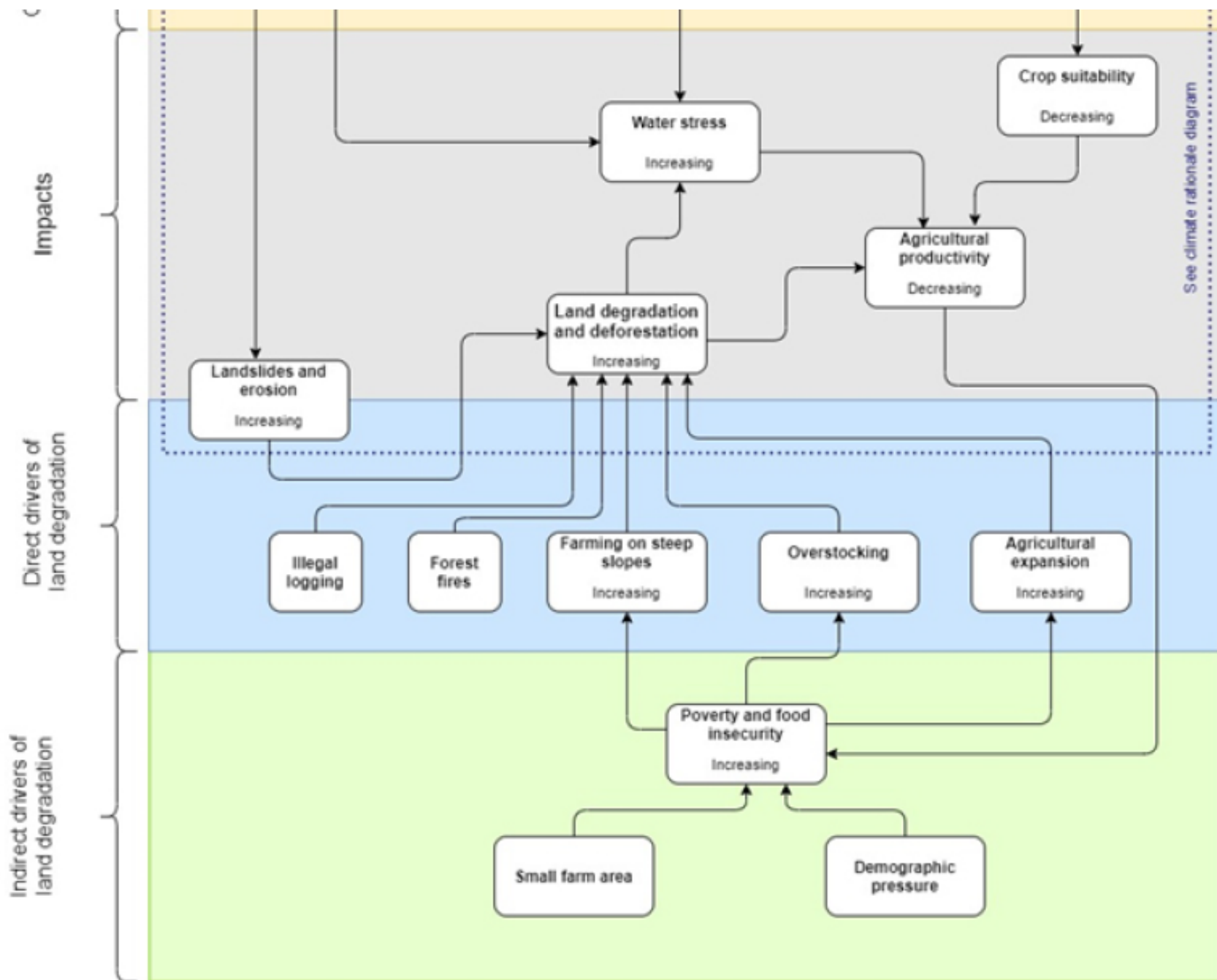


Figure 1. The linkages between climate change impacts and drivers of land degradation in rural Timor-Leste. An expanded version of the climate change impacts is provided in Figure 2.

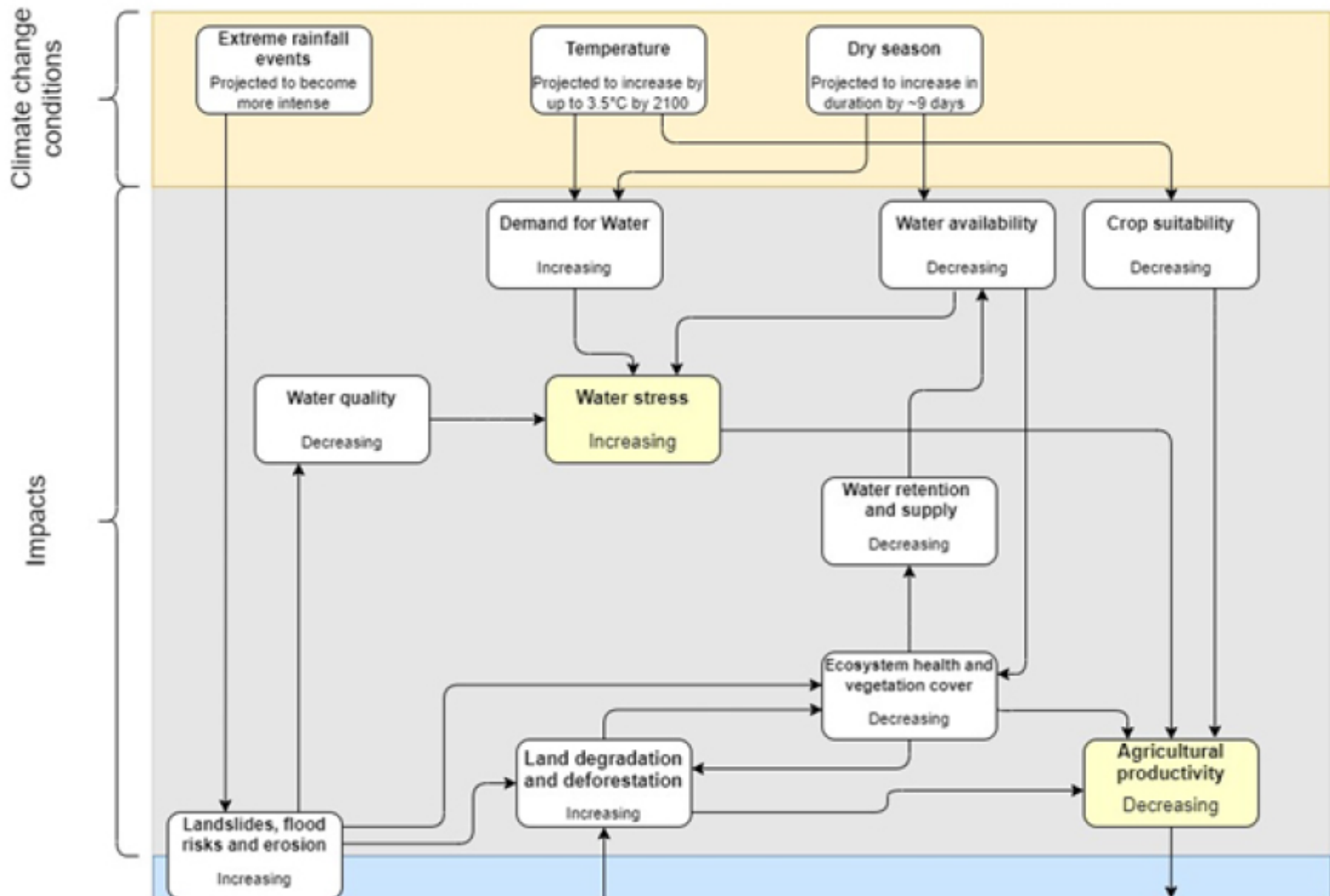


Figure 2. Climate change rationale illustrating the links between climate change, land degradation, water insecurity and food insecurity in Timor-Leste.

Land degradation in Timor-Leste is both a result of and exacerbates climate change impacts. This occurs in a reinforcing feedback loop as extreme climate events such as heavy rainfall and flooding, diminish communities' abilities to sustain themselves. Unsustainable land-use practices — often used as an urgent means by communities to increase food production — destabilise water resources and soils that support communities' livelihoods, negatively impacting the

supply of ecosystem goods and services. This loss of ecosystem goods and services results in land degradation and deforestation, which increases the vulnerability of rural communities to climate change. Subsequently, communities experience exacerbated food and water insecurity, compounded rural poverty and increased pressure on agricultural land which, in turn, drives shifting agriculture and exacerbates land degradation. This hinders the ability of ecosystems to recover from extreme climate events, continuing the cycle between land degradation and further climate change impacts. Communities in downstream areas are particularly vulnerable to this cycle, as the loss of vegetation in upper catchment areas decreases the quality and availability of water resources downstream, consequently reducing the capacity of farmers to adapt to the increasing duration of the dry season. In particular, the loss of forest vegetation reduces the availability of firewood for communities throughout the catchment areas and as a result of the subsequent loss of windbreaks, increases the vulnerability of crops to storm damage. Degraded catchment areas are more vulnerable to landslides and erosion associated with more intense rainfall events projected under future climate conditions. Land degradation is therefore driven by both extreme climate events and unsustainable agricultural practices that are used as coping measures to address food insecurity.

The **problem** that the proposed project seeks to address is the urgent and immediate adaptation needs of vulnerable communities in Timor-Leste, driven by the nexus of climate change, water insecurity and unsustainable land management in rural parts of the country. Accordingly, there is an urgent need to support small-scale farmers in Timor-Leste to adopt climate-resilient sustainable land management (SLM) practices and improve access to and management of climate-resilient water resources for rural communities. In turn, this will reverse land degradation, decrease water and food insecurity and reduce rural poverty.

The proposed **solution** is to support rural subsistence farmers in Timor-Leste to adopt climate-resilient SLM and reduce water insecurity in rural communities. This solution will focus on reversing land degradation and restoring agroecosystem functions through: i) improved national and sub-national adaptation planning; ii) ecosystem restoration and protection; iii) agricultural management systems; iv) climate-resilient water supply and management systems; and v) the transformation of subsistence agriculture to agri-businesses. This transformation will promote access of smallholder farmers to commodity markets and catalyse motivation, incentives and resources to communities (for example, through the impact investments) to engage in improved sustainable water, forest, land and livestock management in priority watersheds. These measures will ultimately result in an increase in food and water security under future climate conditions.

Barriers

Several barriers exist to achieving the GoTL's climate change adaptation goals and addressing land degradation in the country. These have been identified and are described below. Without additional interventions to overcome these barriers, land degradation and forest cover loss will continue in Timor-Leste, increasing water and food insecurity and exacerbating communities' vulnerability to climate change.

Barrier 1. Limited coordination and institutional capacity at the national level for climate change adaptation and Land Degradation Neutrality (LDN)

Given Timor-Leste's relatively recent independence, the country's ability to proactively address land degradation and climate change adaptation is limited^[61]. The necessary institutional and regulatory frameworks are still under development with several gaps at present, including in specific climate change legislation, policies and plans^[62]. In addition, coordination between government institutions at the national level is a challenge, as mechanisms for cooperation are limited and have not been embedded into institutional operations. This has resulted in the lack of an integrated approach to addressing climate change, land degradation, water insecurity and rural poverty. For example, while the national LDN target setting process identified poverty and agriculture as drivers of land degradation, targets for addressing these drivers were not set. Coordination between the GoTL and traditional local governance systems is also limited^[63], which has constrained the effective governance of natural resource management at a landscape level^[64].

Barrier 2. Limited technical and financial capacity of farmers to shift from subsistence agriculture to agri-business

Many small-scale farmers in Timor-Leste are not sufficiently economically secure to take on the risks associated with the shift from subsistence agriculture to agri-business development. The economic incentives for the transition to agri-business and adoption of sustainable agricultural practices have been inadequate, as a result of limited access to: i) capital; ii) markets for commodity crops; and iii) risk transfer measures^[65]. In addition to these financial constraints, there is limited technical capacity among small-scale farmers for sustainable commodity crop cultivation and for developing and operating these agri-businesses.

Barrier 3. Inadequate systems for water resource management at the village level

The extent of water supply and storage infrastructure in rural Timor-Leste is limited. In addition, most of the existing infrastructure has been damaged or has not been maintained. This degradation of the country's water resource infrastructure is attributed to damage during historical periods of political instability and limited investment in maintaining them. At the village level, systems established for the management and maintenance of water infrastructure are inconsistent. Rural communities therefore depend on rainfed agriculture and wellpoints or springs to supply their domestic water needs. In many of these cases, water availability and use are not monitored, resulting in communities' vulnerability to unanticipated water shortages. Consequently, improving the climate resilience of water supply and management systems in Timor-Leste is necessary, by maintaining and formalising: i) existing infrastructure; ii) local monitoring of groundwater levels and water use; and iii) systems to promote water conservation. This is particularly important as the country's rainfall patterns are projected to change under future climate conditions and rainfall-dependent communities are subsequently becoming increasingly vulnerable to water insecurity.

Barrier 4. Limited knowledge generation and management to inform upscaling of EbA and sustainable agricultural practices

Historical information on climate variability and projections of future climate change and its impacts are limited in Timor-Leste^[66]. Limited detailed information is available about climate change vulnerability and risks at a landscape level, as well as the likely impacts of these risks on agricultural production. In addition, while initiatives to facilitate the adoption of climate-resilient agricultural (CSA) practices and EbA have been undertaken in the country, management of the knowledge and lessons learned emerging from these initiatives has been limited. Consequently, these lessons learned have not been systematically collated and validated, resulting in inadequate information available to inform policy development or the upscaling of effective initiatives^[67].

Project intervention sites

Following an assessment of land degradation and climate change vulnerability, two watersheds have been selected as sites for the proposed project – in alignment with the GoTL's priorities. These are the Dasidaro and Lacro Watersheds, which are further discussed below^[68].

Dasidaro Watershed

The Dasidaro Watershed (*Sungai Dasidaro*) – located on the border of Lautém and Baucau municipalities – covers an area of ~157 km² (15,700 ha). This has been selected as a priority watershed for a combination of reasons, including its vulnerability to climate change, the prevalence of land degradation and its socioeconomic context. Specifically, considerations included: i) the rating of most of the watershed as highly vulnerable to climate change^[69]; ii) the area's high deforestation rates – with a very large decrease in dense forest area^[70]; and iii) communities' economic vulnerability, with several *sucos*^[71] in the watershed rated as least developed^[72]. The GCF project entitled 'Safeguarding rural communities and their physical and economic assets from climate induced disasters in Timor-Leste' will facilitate the climate-proofing of 23 and 26 infrastructure units in Baucau and Lautém, respectively^[73]. The proposed project will expand on these initiatives by developing small-scale, climate-resilient water supply and storage infrastructure in villages not targeted by the abovementioned GCF project. In addition, the proposed project will expand the scope of on-the-ground activities from the focus on rural water and road infrastructure to include restoration of farmland and forests as well as forest protection and improved livestock management^[74].

The Dasidaro Watershed includes seven *sucos* (located both fully or partly in the watershed) across four administrative posts^[75], with a population of ~7,300 people^[76]. Almost all households in Lautém (96.7%) and Baucau (96.3%) municipalities that surround the Dasidaro Watershed engage in agricultural activities – including livestock rearing and crop production^[77]. As a result, the communities rely heavily on agriculture to sustain themselves economically and are particularly vulnerable to climate change impacts which directly threaten their livelihoods and food and water security. Most households in both municipalities produce crops and livestock mainly or entirely for household consumption. A small number of households engage in agricultural production primarily to sell their produce (Figure 3)^[78]. The most commonly grown crops in both municipalities are maize, cassava, coconut and sweet potatoes. In addition, many households in Baucau grow rice and temporary fruit crops, while many households in Lautém cultivate permanent fruit crops and beans (Table 1)^[79]. Chickens and pigs are the most commonly kept livestock, in addition to goats and horses (Baucau) and cattle and buffalo (Lautém)^[80]. Further information about the anticipated impacts of climate change on specific crops and livestock in this watershed will inform the detailed project design during the PPG stage.

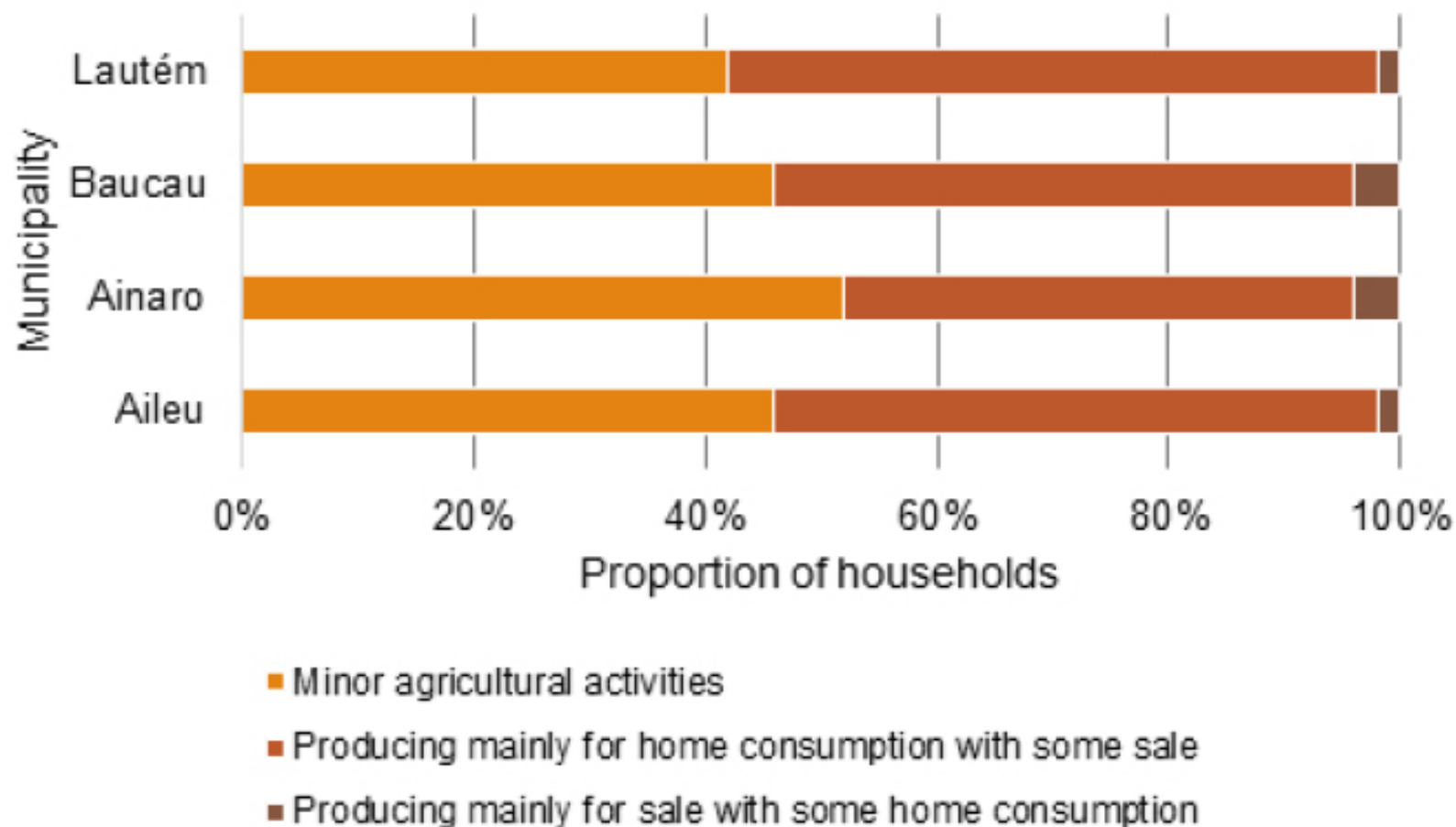


Figure 3. Proportion of households practicing each level of agricultural activity in target municipalities. Source: 2015 Population and Housing Census[81].

Table 1. Most commonly kept crops and livestock in target municipalities. Source: 2015 Population and Housing Census[82].

Municipality	Most commonly grown crops	Most commonly kept livestock
Aileu	Maize, cassava, sweet potato, coffee, vegetables, beans	Pigs, chickens, goats, cattle
Ainaro	Maize, sweet potato, cassava, vegetables, coffee, fruit (temporary)	Pigs, chickens, horses, cattle
Baucau	Maize, cassava, coconut, sweet potato, rice, fruit (temporary)	Chickens, pigs, goats, horses
Lautém	Maize, coconut, cassava, sweet potato, fruit (permanent), beans	Chickens, pigs, cattle, buffalo

Laclo Watershed

The large Laclo Watershed (*Sungai Laclo*) covers ~1,390 km² (139,000 ha) – which amounts to ~9% of the country's land area. The watershed is located in central Timor-Leste, spanning across the Aileu, Ainaro, Manufahi and Manatuto municipalities. Forty-five *sucos* in eight administrative posts^[83] lie partially or entirely within the Laclo Watershed, which amounts to a total population of 184,700 people. While vulnerability to climate change and land degradation differs across the watershed, some parts have been substantially deforested^[84] and communities in some *sucos* located in the watershed have a low standard of living^[85]. In both Dasidaro and Laclo, some communities have been rated among the 20% of least developed *sucos* in Timor-Leste, based on their access to basic services (including water, sanitation, health care and education) and ownership of household assets^[86]. The GCF project entitled 'Safeguarding rural communities and their physical and economic assets from climate induced disasters in Timor-Leste' will facilitate the climate-proofing of 25 infrastructure units^[87] in Aileu, but will not target any villages in Ainaro, Manufahi or Manatuto. The proposed project will expand on these initiatives by developing small-scale, climate-resilient water supply and storage infrastructure in other villages in Aileu and elsewhere in the Laclo Watershed, in addition to expanding the scope of on-the-ground activities to include: i) restoration of farmland and forests; ii) forest protection; and iii) improved livestock management^[88].

The proposed project will focus on a maximum of 55,600 ha (50%) of the highlands of the Laclo Watershed (the highlands account for ~80% of the total watershed area or 111,200 ha) on the border of Aileu and Ainaro municipalities. Similar to Baucau and Lautém, almost all households in Aileu (98.6%) and Ainaro (97.9%) engage in agricultural activities. Agriculture accounts for ~80% of Aileu's and ~70% of Ainaro's economic activity. Most households in both Aileu and Ainaro produce crops and livestock mainly for household consumption with some sales, while many other households engage in minor (backyard) agricultural activities (Figure 3).^[89] Maize, cassava and sweet potato are the primary crops in these two municipalities, while coffee and vegetables are also commonly grown in both (Table 1)^[90]. Many of Ainaro's households cultivate rice only – or primarily – for cash (66.8%)^[91]. Pigs, chickens and cattle are commonly kept in both municipalities, along with goats in Aileu and horses in Ainaro (Table 1).

Baseline scenario and baseline projects

Policy and governance baseline scenario

Timor-Leste is a party to both the UN Convention to Combat Desertification (UNCCD) and the UN Framework Convention on Climate Change (UNFCCC). Despite having established national targets and plans for both climate change adaptation^[92] and addressing land degradation^[93], there has been little integration between these two focal areas. Indeed, limited coordination between ministries and directorates within the GoTL has been previously identified as a constraint to its achievement of environmental priorities^[94]. Consequently, agricultural policies and plans are created in isolation of those that are climate change- and water-related. The GoTL has also developed several policies and plans in response to deforestation, including the National Biodiversity Strategy and Action Plan (NBSAP, 2011–2020), National Forest Conservation Plan (2013), National Forest Policy (2016) and National Action Program to Combat Land Degradation (2017), in addition to other legislation^[95]. The Land Degradation Neutrality Target-Setting Programme^[96] (LDN TSP) identified reforestation,

forest protection, community-based natural resource management (CBNRM) and conservation agriculture as measures for addressing land degradation in Timor-Leste. However, the focus on the linkages between livestock management and land degradation, with the need for a climate-resilient integrated watershed development approach is limited. To address this barrier, several projects have developed mechanisms to improve inter-ministerial and inter-directorate communication. For example, the GEF project 'Strengthening the resilience of small-scale rural infrastructure and local government systems to climate variability and risk' facilitated cross-sectoral collaboration through the Climate Change Adaptation Technical Working Group (CCA-TWG). Similarly, one of the objectives of the GEF project 'Strengthening targeted national capacities to improve decision-making and mainstreaming global environmental obligations into national development priorities' is to establish mechanisms for improved coordination between directorates and ministries for the planning and implementation of environmental interventions. Improving the use of these mechanisms is necessary to strengthen coordination between programming, planning and target-setting for climate change adaptation as well as addressing land degradation.

In cases where adequate legislation for natural resource use and watershed management has been developed, limited institutional capacity – particularly at the national level – for the enforcement of these policies has limited their effectiveness^[96]. To address this gap, the GoTL^[97] recognised the importance of cooperating with and supporting *sucu* leadership by developing institutional capacity^[98] local and multi-level governance^[99]. As such, the GoTL's National Program for Village Development (PNDS) has been under implementation since 2012^[100]. The PNDS aims to strengthen *sucu*-level planning and decision-making by providing budgets to elected committees in each *sucu* and supporting them in prioritising and investing in local infrastructure projects. In addition to the PNDS, externally funded projects have developed capacity for participatory land-use planning (PLUP) and implementation at the *sucu* level. For example, the JICA 'Community-Based sustainable Natural Resource Management' (CBNRM) project undertook extensive PLUP in six *sucos*^[101]. Increasingly, projects that undertake community-level PLUP incorporate traditional systems of governance – such as *tara bandu*^[102] – in the implementation framework to promote local ownership of the plans. Without systematic approaches to integrating multi-level governance systems, the effectiveness of the implementation of watershed management initiatives will likely remain limited.

Locally, many community decisions are made through *sucu* councils^[101] that are headed by a chief^[102]. In addition to the chief, the council members comprise the village chief for each individual village^[103], one elder, two women's representatives, two youth representatives – one man and one woman, and one traditional dispute settler^[104]. These *sucu* councils are formally recognised by the state and serve as the interface between traditional governance systems and Timor-Leste's national government^[105]. The exact interaction between *sucu* councils and national authorities differs between *sucos* according to their needs. *Sucu* councils carry out responsibilities delegated by the GoTL, in addition to functions that are 'invisible' to government-level policymakers and legislation. Some of these functions are essential services that include: i) service delivery; (ii) natural asset regulation; (iii) accessing state-derived entitlements; (iv) conflict resolution; and (v) domestic violence prevention^[106]. In many ways, the GoTL is reliant on the *sucu* councils to fill the abovementioned gaps, as well as for networking and building trust within their communities. In turn, the *sucu* council garners support and legitimacy through their representation within the community as responsive providers for communal needs. However, *sucu* budgets are restricted and *sucu* councils receive minimal or no funds, salaries, or allowances for their efforts^[107]. While programmes aimed at strengthening *sucu*-level governance are likely to continue in the baseline scenario, the limited integration of local, municipal and national governance systems for landscape management is likely to constrain effective planning and implementation of integrated watershed development.

Water security baseline scenario

As described above^[108], most rural communities in Timor-Leste are dependent on rainfed agriculture and groundwater for domestic use. The limited irrigation and water supply infrastructure in many communities exacerbate their vulnerability to water insecurity during dry periods or when groundwater sources have been depleted. Currently, groundwater abstraction is not licensed or regulated, and in many places water use and availability are not systematically monitored, making it difficult for communities to effectively manage water resources. In addition, climate change is likely to increase water insecurity, including through: i) increasing temperatures and evaporation rates; ii) longer dry seasons and more erratic rainfall patterns; and iii) more intense storms and floods, which threaten water quality and ecosystem function^[109]. Accordingly, without interventions, water security is like to decrease in many parts of the country as a result of climate change.

The hydrogeology of Timor-Leste is highly spatially variable, which means that groundwater resources differ in size and extent and are often localised^[110]. Limited information is readily available on groundwater resources, partially because these resources are not comprehensively mapped^[111] or monitored. In the two target watersheds (Dasidaro and Lacio), large areas are likely to have localised rather than pervasive groundwater resources^[112]. While groundwater recharge may be adversely affected by changes in rainfall patterns, this will likely differ across the country, depending on the hydrogeology and ecosystem

functions of the area. For this reason, monitoring water use and availability is an important component of improving water security. Numerous projects have increased climate resilience of communities in Timor-Leste by upgrading and providing water supply and storage infrastructure. For example, the GEF-LDCF project 'Strengthening community resilience to climate-induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste' addressed water insecurity by constructing: i) irrigation canals; and ii) drinking water reservoirs with distribution pipes. Similarly, the GCF project 'Safeguarding rural communities and their physical and economic assets from climate induced disasters in Timor-Leste' under implementation from 2020–2026 will decrease climate-induced water insecurity by: i) revegetating land around rural water supply systems; ii) formalising informal water sources by installing pipes and collection or storage systems; iii) installing standpipes in villages connected to existing water sources to enable equitable distribution of water; and iv) developing small-scale water storage systems for irrigation during dry periods. These baseline projects will increase water security at specific target sites. However, without further intervention other water insecurity hotspots in Timor-Leste will become increasingly vulnerable to climate change.

Besides upgrading water supply and storage infrastructure in vulnerable communities, a landscape-level approach to improving ecosystem function is necessary to support resilience to climate-induced water insecurity. Degraded land and forests, particularly in the upper watershed, can negatively impact water quality and availability for surrounding and downstream communities [112]. To address this impact, several baseline projects have targeted integrated watershed management and planning in Timor-Leste. These projects include: i) the 'IA4RA Rauphup Watershed' project supported by Hivos [113]; ii) the ongoing World Bank-funded project titled 'Sustainable Agriculture Productivity Improvement Project' [114]; iii) the 'Timor-Leste Water Sector Assessment and Roadmap' compiled by the World Bank [115]; and iv) the JICA-funded 'Project for Community-Based Natural Resource Management' which catalysed the formation of the Watershed Management Council [116]. Based on this large portfolio of watershed planning projects, the national focal point of the UNCCD within the Ministry of Agriculture and Fisheries has taken the initiative to develop the Common Guidelines for CBNRM in Watersheds (including a PLUP process), coordinate a National Committee for Watershed Management, as well as develop a proposal through JICA towards the National Roadmap for Watershed Management (targeting 10 watersheds). The PPG baseline analysis will further assess these programmes and available tools to inform this proposed GEF project.

In the business-as-usual scenario, detailed, *suco*-scale land-use and adaptation planning is constrained by the limited availability of high-resolution information on climate change vulnerability and land degradation in Timor-Leste. The GoTL has made some efforts to address this gap – for example, in the Initial National Communication to the UNFCCC, a national climate change vulnerability assessment was conducted that provided a vulnerability index for each *suco* based on biophysical, social and economic indicators. While the identification of climate-vulnerable *sucos* is important for national- and municipal-level planning, higher resolution analysis is necessary to inform *suco*-level adaptation and land-use planning. Similarly, forest cover has been mapped at *suco*-level as part of the Land Degradation Neutrality Target-Setting Program, but the limited baseline information on other indicators of land degradation is recognised as a gap [117]. Some high-resolution information on climate change vulnerability has been produced, but this is limited to: i) specific project sites – for example, the climate change vulnerability assessments undertaken for the GEF-LDCF project 'Strengthening community resilience to climate-induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste'; and ii) specific resources – such as the groundwater vulnerability assessment undertaken by AusAid [118]. Without intervention, however, gaps and limitations in the availability of high-resolution climate and land degradation data will remain, constraining the development and implementation of fine-scale land-use plans.

Agriculture and rural livelihoods baseline scenario

Most of Timor-Leste's population practices small-scale subsistence agriculture, with some selling small amounts of produce to generate an income. Livestock production – for subsistence, cultural significance and domestic trade – is also a common source of income for small-scale farmers. Further detail on the important crops grown and livestock reared in the target watersheds is provided in the previous section under *Project intervention sites*. The subsistence agriculture in these areas is primarily rainfed and the combined effects of water insecurity, land degradation and limited financial capacity to invest in more sustainable practices result in low yields and food insecurity.

The sustainable production of commodity crops – including coffee, cocoa and vanilla – could improve farmers' incomes and subsequently promote commercial agriculture in Timor-Leste's *sucos*. However, the limited ability of farmers to access markets or finance to invest in the required inputs constrains the adoption of these crops into small-scale agricultural systems. The Agricultural Mechanisation Policy (2018) and the National Action Plan for a Hunger and Malnutrition Free Timor-Leste (2015–2025) have identified the promotion of agri-business as an important strategy for improving market access and income as well as for enabling agricultural mechanisation and sustainable land management. Accordingly, investment into improving market access and value addition was incorporated into the 2014–2018 Agriculture Sector Development Medium Term Investment Plan.

Numerous interventions have been implemented by the GoTL and international development partners to promote the development of agri-businesses by small-scale farmers to improve their incomes derived from cash crops [119]. These interventions have focussed on supporting small-scale farmers' access to markets and finance to grow coffee, cocoa and other commodities [120]. The projects include: i) the 'Coffee and Cocoa Agri-business Opportunities' (CACAO) project being implemented in partnership with New Zealand Agency for International Development (NZAID) and the National Cooperative Business Association (NCBA); ii) the NCBA project titled 'East Timor Agri-business Development'; iii) a project implemented through a partnership between the NCBA and USAID titled 'Consolidating cooperative agri-business recovery in Timor-Leste'; iv) the GIZ and European Commission project 'Innovative approaches to food insecurity in Timor-Leste'; and v) the European Union and German Government project titled 'Partnership for Sustainable Agroforestry'. The development of coffee agri-businesses for international markets has been prioritised in these projects. However, the expansion and upscaling potential of the market for Timorese coffee is limited and comprehensive support for cultivating other commodities is therefore required, in addition to planning for ensuring the long-term climate resilience of these agri-businesses. As a result, access to markets for other commodities as well as support for small-scale farmers to access finance and implement climate-resilient SLM is limited under the baseline scenario.

Other projects that have been implemented have focussed on promoting more sustainable farming methods and land-use planning. For example, the FAO has promoted conservation agriculture in seven municipalities across Timor-Leste to improve yields and income for subsistence farmers [121]. However, few projects have considered the links between agri-business development, climate change adaptation and land degradation. In addition, there has been limited national-level planning and coordination of these agri-business development initiatives, preventing a programmatic approach to their development. Without additional interventions, the development of agri-businesses will remain limited to the few *sucos* and municipalities where previous projects have worked and will fail to integrate national climate change and land degradation priorities.

While barriers to adopting climate-resilient SLM affect all small-scale farmers in Timor-Leste, access to finance and markets as well as capacity for implementing new farming methods are particularly constrained for women [122]. This results from the restricted involvement of women in household-level decisions, as men are traditionally considered the head of the household [123]. In addition, the burden of unpaid work — including childcare, cooking and cleaning — is primarily borne by women, limiting their available time and energy for non-essential activities such as learning new farming techniques [123]. These factors limit the ability of many rural women to implement livelihood changes under baseline conditions. Without the consideration of gender-specific barriers to the implementation of climate-resilient SLM as well as the subsequent design of gender-sensitive interventions, widespread uptake of SLM is unlikely to occur.

Knowledge management baseline analysis

Several initiatives to promote the adoption of SLM and agri-business in addition to facilitating climate change adaptation in Timor-Leste's rural communities have been conducted or are underway [124]. The upscaling and coordination of these initiatives across municipalities has been limited, however, as their lessons learned have not been systematically collated and disseminated to support their replication. As a result, the evidence-base for climate-resilient SLM and rural adaptation is underdeveloped. To address this gap in knowledge management, the GEF-LDCF SSRI project [125] established the Centre for Climate Change and Biodiversity (CCCB) at the National University of Timor-Leste. The CCCB aims to serve as a resource for informing decision-making and action on climate change adaptation and mitigation as well as biodiversity conservation. Moreover, the centre serves as a repository for a small but growing pool of information on climate change and biodiversity conservation, including on past projects, policies and research. The CCCB's work should be strengthened and expanded to inform the implementation of SLM and agri-business interventions, thereby creating opportunities for learning across projects. Newly developed knowledge on climate change adaptation and addressing land degradation should be further collated to ensure the continued integration of these best practices and lessons into GoTL initiatives and donor projects.

Co-financing projects

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Safeguarding rural communities and their physical assets from climate induced disasters in Timor-Leste (GCF, 2020–2026)

In 2019, the Green Climate Fund (GCF) approved a US\$59 million project called “*Safeguarding rural communities and their physical and economic assets from climate induced disasters in Timor-Leste*”. The project will be implemented from 2020-2026 in six municipalities – Lautém, Baucau, Viqueque, Aileu, Ermera and Liquica – to increase the resilience of infrastructure and services to the impacts of climate change. Interventions will include high resolution vulnerability mapping, with a focus on assets and infrastructure, as well as revegetating landscapes to stabilise slopes and protect water sources (Table 2).

The proposed project will build on the high-resolution information available from Output 1 of the GCF project, expanding the vulnerability mapping to Ainaro, Manatuto and Manufahi municipalities and incorporating existing and potential land degradation risks into vulnerability assessments. Under Output 2 of the GCF project, activities will be undertaken to revegetate land around water sources, upgrade water supply systems and formalise irrigation infrastructure in beneficiary communities. The proposed project will expand activities to restore landscapes and improve the delivery of ecosystem goods and services through *suco*-level participatory land-use planning. Under the proposed project, water supply infrastructure will be upgraded in communities not benefitting from the GCF project in Baucau, Lautém and Aileu, and water resilience initiatives will be expanded to villages in Ainaro, Manatuto and Manufahi, using the institutional knowledge and lessons learned from the GCF project. In addition, an EbA approach at watershed level, which the proposed project will promote, will complement Output 2 of the GCF project by increasing water security and improving resilience to climate-related hazards, including landslides and floods. In Lautém, Baucau and Aileu (municipalities targeted by both projects), the proposed project will build on activities of the GCF project, making use of the systems and infrastructure to improve the resilience of rural livelihoods and farming practices. Under Output 2 of the GCF project, ~US\$15 million has been budgeted for climate proofing rural infrastructure in Aileu, Baucau and Lautém. This is considered co-finance for the proposed project. The proposed project will build on this investment, with a focus on agricultural landscapes and practices and restoring and protected forested ecosystems.

Table 2. Matrix clarifying how the proposed LDCF-supported measures will be distinct from GCF-supported measures in Lautém, Baucau and Aileu municipalities.

GCF project	Further adaptation measures that would be supported by LDCF
Target municipalities: Lautém Baucau Aileu	Target watersheds: Sungai Dasidaro, including the municipalities Lautém and Baucau Sungai Lacro, including the municipality Aileu, Ainaro, Manatuto and Manufahi
Supporting the adoption of agroforestry in 10 vulnerable sucos based on climate vulnerability assessments and risk information	<ul style="list-style-type: none"> - Developing climate-resilient integrated watershed development plans (CRIWDP) to expand and incentivize approach to addressing climate vulnerability and land degradation - Establishing <i>Suco</i> Watershed Management Committees to oversee the implementation of the CRIWDPs - Supporting upscaling of agroforestry and sustainability by enhancing market access and supply chains - Supporting for agri-business development to improve financial incentives for adopting agroforestry, building on lessons learned - Enhancing access to finance to support transition to sustainable farming - Restoring degraded farmland through LEISA model
Slope stabilisation and revegetation of slopes along road corridors and around water sources,	<ul style="list-style-type: none"> - Restoring a further 4,500 ha of forest and protecting 15,000 ha of forest and natural ecosystems to reduce land degradation - Improved management of grazing land and incentives for permanent agriculture to reduce land conversion and degradation
Small scale climate-proofed rural infrastructure including water supply, irrigation systems and flood defenses	<ul style="list-style-type: none"> - Upgrading water supply and storage systems in villages not benefitting from the GCF project - Using lessons learned and best practices regarding community engagement, climate risk information and water supply infrastructure from GCF project - Training community members (50% women) on sustainable use, operation and maintenance of water supply and storage infrastructure and monitoring of water use and availability

Rabobank Agri-3 Fund, Rikolto and sustainable sourcing companies

During the PPG phase, a pre-feasibility analysis and design will be conducted in collaboration with the Rabobank-UN Environment Agri-3 (fund) for forest protection and sustainable agriculture (and possibly the Land Degradation Neutrality Fund - Technical Assistance Facility) to develop a bankable portfolio of private investments in sustainable production and sourcing of commodities, especially Cocoa and Vanilla. Any green loans would be carried by corporate partners – not the government or farmers. Preliminary talks with the global director of the Agri-3 indicated interest to consider Timor-Leste under their special facility for LDCF countries – notwithstanding its perceived additional investment risk. Talks have also been held by RIKOLTO[126], with both sustainable

sourcing companies such as OLAM and MARS, as well as commenced exploring possibilities with a Belgium impact investor. The indicated USD 5 million investment is largely based on the volume of targeted sustainable Cocoa yet much less on any feasibility design. The present COVID era will no doubt pose additional challenges with regards bankability and investors willingness; whilst the market of Cocoa and Vanilla remain strong.

UNEP

UNEP will provide \$500,000 of co-financing support over 6 years. This breaks down as USD100,000 over 6 years of in-kind co-financing support through its Global Adaptation Network (GAN). Established in 2010, GAN mobilizes information and knowledge and to build capacity for the uptake of CCA knowledge. GAN currently works very closely with regional networks such as the APAN in the Asia Pacific region. This Platform will be useful for sharing lessons learnt and best practices produced by this LDCF project and will contribute towards a global understanding of best practice adaptation in an LDC context, as well as providing international exposure for policy makers and practitioners in Timor Leste, thereby potentiating replication initiatives elsewhere in the country. Secondly, the project will benefit from technical support from the National Adaptation Plan support programme at UNEP. UNEP is currently supporting a total of 32 NAP proposals in Asia, Africa and Latin America. Supporting this programme is a community of practice and technical support consultancy lines. UNEP will extend this support to the LDCF project for outputs 1.1.4, 2.1.1 and 2.1.2 to motivate for uptake of best available methodological approaches for an estimated co-financing of 100,000 over 3 years. Thirdly, technical and communication support to the LDCF project will be provided by the UN Decade of Restoration, amounting to USD300,000 over 6 years.

On 1 March 2019, under Resolution 73/284, the United Nations General Assembly proclaimed 2021-2030 to be the United Nations Decade on Ecosystem Restoration, with the primary aim to prevent, halt, and reverse the degradation of ecosystems worldwide. UNEP and FAO were mandated to develop and implement the strategy. Through partnerships and a digitally-driven 'New Power' approach, the initiative seeks to catalyse the upscaling of restoration over hundreds of millions of hectares in terrestrial and marine environments. The initiative will be launched on World Environment Day: 5 June 2021. The LDCF project's Outcome 2.2 and 4.1 will benefit from being connected to The Decade through i) a digital hub which will show case ecosystem restoration initiatives, developed and implemented by local organisations, enabling them to be recognised on the international stage and assisting them to access finance for upscaling; and provide a repository of easily searched and categorised information on how to design, finance, implement and sustain ecosystem restoration in different ecosystems ii) webinars will be used to disseminate knowledge on specific technical topics, such as restoration protocols in different ecosystems, and lessons learnt from stakeholders' on-the-ground experiences and iii) the Decade's monitoring and reporting framework, being developed currently, supported by a geospatial dissemination platform, with indicators and made available via the digital hub. The LDCF project will benefit from a global community of experts for restoration monitoring. This community will enable exchange of knowledge and methodologies, and will seek to overcome ecosystem specific data, monitoring and reporting challenges. The FAO-led Monitoring Task Force will comprise 219 technical experts from 82 organisations tasked with collaboratively developing a monitoring framework for the UN Decade. The framework will enable monitoring and reporting of the progress of global restoration efforts throughout the duration of the decade and beyond.

Proposed alternative scenario and description of expected outcomes and components of the project

The alternative scenario will address the barriers to adaptation and the adoption of climate-resilient sustainable land management (SLM) in rural Timor-Leste. In light of the uncertainty regarding changes in precipitation patterns under future climate conditions, the proposed project has been designed following a no regrets approach. The project will focus on building the adaptive capacity of communities in ways that will enable them to better several possible climate scenarios, including increased drought, more intense rainfall events, flooding and more erratic and unpredictable rainfall. This will involve motivating and enabling communities to implement a climate-resilient SLM, including EbA, and water resource management (WRM) measures on village (*suco*) communal land and at farm level, targeting hotspots of land degradation and climate change vulnerability in priority watersheds. By transforming unsustainable agricultural practices that drive land degradation and increasing reliability of water supply, the transition to climate-resilient SLM will improve the health of agro-ecosystems and support the long-term resilience of small-scale farming livelihoods to the impacts of climate change. The project will also coordinate with existing investments to promote and update the use of early warning systems in target communities. In addition, developing community-driven plans for the protection of forests and natural ecosystems will address non-agricultural drivers of land degradation, including logging and forest fires. Integral to this approach, the proposed project will: i) facilitate the integration of EbA and agri-business into national policies and targets to create an enabling environment for their implementation; ii) facilitate land restoration and climate-resilient agricultural livelihoods, based on participatory adaptation and land-use planning; iii) improve resilience to climate change-induced water scarcity through the development of small-scale infrastructure and WRM; iv) transforming farming and access to markets facilitated by private sector investments and agri-business development to support sustainable commodity production; and v) develop monitoring, evaluation and learning systems to ensure that the measures implemented under the project are sustainable, lead to improved adaptation outcomes, and can be upscaled to other priority watersheds across Timor-Leste.

Aligned with this alternative scenario, the objective of the proposed project is to increase climate resilience and reduce land degradation in priority watersheds in Timor-Leste by strengthening collaborative SLM for increased livelihood resilience and water security of agriculture-based communities. This objective will be achieved through the implementation of four inter-linked components, as summarised in the Theory of Change (Figure 4).

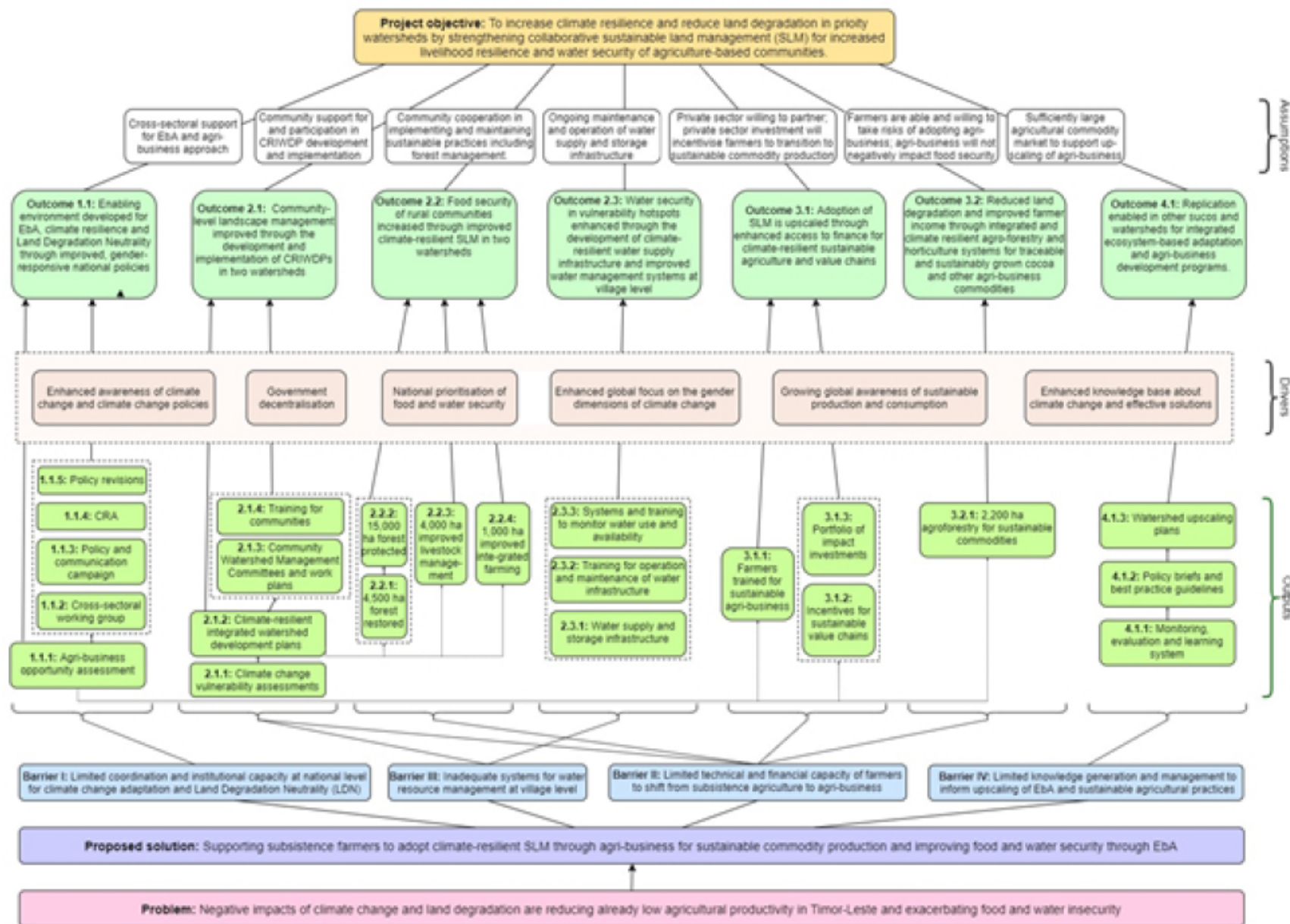


Figure 4. Theory of Change for the proposed project.

Component 1: Building the national case and leverage for EbA and addressing land degradation in rural communities through agri-business

To facilitate the uptake and implementation of climate-resilient SLM by small-scale farmers, it is necessary to develop incentives for the transition and to overcome barriers relating to access to finance. Under this component, opportunities for the development of agri-businesses nationally and in the priority watersheds will be assessed and a business case for the adoption of ecosystem-based adaptation (EbA) – enabled through agri-business – will be established. The agri-business opportunity assessment will be used to inform: i) a gender-responsive policy and communication campaign aimed at national- and local- level decision-making groups that are 50% women[127]; and ii) revisions of national policies and gender-responsive targets in relevant sectors. To facilitate the gender-responsive policy revisions, a cross-sectoral working group will be established – with a focus on gender-parity in participation – comprising representatives of relevant national ministries. These interventions will be undertaken to incorporate support for EbA and agri-business development into the national framework for addressing land degradation and building climate change resilience and adaptation. Through Outcome 1, adoption of SLM in Timor-Leste's agro-ecosystems will be enabled, contributing to GEFTF Objectives LD-1-1 and LD-2-5.

Outcomes and outputs within this component are described below.

Outcome 1: Enabling environment developed for EbA, Land Degradation Neutrality (LDN) and climate resilience through improved gender-responsive national policies

Output 1.1.1: Opportunity assessment of agri-business developed and presented to relevant national ministries to achieve enhanced socio-economic and SLM outcomes

A study will be undertaken to assess the potential for growing commodity crops, specifically cocoa and vanilla, as an approach to enhancing the profitability, productivity and climate-resilience of small-scale agriculture and reducing land degradation. This will include: i) market and value chain assessments of selected commodity crops; ii) a spatial assessment of agro-ecological and cultivable zones in terms of crop suitability and the potential impacts of climate change on these crops; iii) an assessment on the potential impacts of climate change on value chains for commodity crops; iv) an analysis of how the agri-business approach could be integrated into LDN targets; and v) an assessment of the opportunities for impact investment and private sector partnerships for agri-business development. The opportunity assessment will be presented to relevant national ministries to promote agri-business development – with a focus on women's empowerment – as part of a strategy to address land degradation and promote climate change resilience and adaptation. The results of the assessment will also be used to inform the activities under Outcome 3.1. The majority of smallholder farmers are women and therefore, during Component 3 of the proposed project, particular focus will be placed on enabling women agri-entrepreneurs and piloting women's cooperatives to develop climate-resilient agri-businesses.

Output 1.1.2: Cross-sectoral working group (CSWG) on climate resilience and LDN established and policy revision timeline agreed

A cross-sectoral working group (CSWG) will be established, comprising representatives of relevant line ministries to work on integrating climate resilience and LDN into national policies and plans[128], and addressing barriers to LDN and climate change adaptation. This CSWG will be formed with gender parity in participation in mind. As such, it will comprise 50% women[129] and there will be particular focus on women's participation and leadership in discussions. The CSWG will involve policy- and decision-makers working on, *inter alia*, agriculture, water management, forestry, rural development and the environment. The membership of the Cross-Sectoral Working Group will be finalised during the PPG stage through stakeholder consultations to ensure that all important institutions are represented. This is likely to include, for example, the Centre for Integrated Disaster Management, the State Secretary for the Environment, the Ministry of Agriculture and Fisheries, and the Ministry of Social Solidarity and Inclusion. Through collaborative workshops, a mandate and workplan for the CSWG will be developed and adopted to facilitate ongoing coordination across sectors and support the realisation of climate change adaptation and LDN goals[130]. Policies and targets in each sector that need to be revised, including LDN targets, will be identified and a timeline for their revisions will be prepared to inform Output 1.1.4. All policy revisions will lead to policy designs that are gender responsive. Additionally, financial plans – including budget plans, fund allocations and fund leveraging – will be assessed and revised to ensure that government funding for watershed management is effectively and sustainably managed beyond the grant period. This national level financial planning will be conducted in tandem with financial training activities, under Output 1.1.3.

Output 1.1.3: Policy and communication campaign undertaken to build national- and local-level support for integrated, climate-resilient watershed development

Information products will be developed and disseminated on the EbA model and agri-business opportunities. This will include a baseline communications campaign developed during the first year of the project, as well as ongoing communication based on project outputs. Specifically, the information products and communication materials will be informed by the gender-responsive agri-business opportunity assessment conducted under Output 1.1.1 and will also aim to build capacity for decision-making related to climate risks and uncertainty. They will be aimed at national and municipal government stakeholders, as well as private sector partners, relevant NGOs, *suco* councils, farmer organisations and cooperatives. This campaign will target at least 200 government staff, 50% women, to increase support for the EbA and climate-resilient agri-business approach. Additionally, through targeted engagements with the CSWG established under Output 1.1.2, the communication campaign will be further focused towards national policy- and decision-makers. The engagements with the CSWG will include sharing information on EbA, building climate resilience, and agri-business opportunities as well as training members of the CSWG on the integration of these approaches into policies and plans. CSWG members will also receive training on budget planning, fund allocation and leveraging funds for climate change adaptation and to reduce land degradation, at the national, municipal and *suco* council levels. This information will be shared between governance levels such that the effectiveness of financial planning is increased holistically, in a way that aligns with national aims for fiscal decentralisation.

Output 1.1.4: Climate risk assessment (CRA) conducted at the national level

A climate risk assessment (CRA) will be conducted at the national level to identify the potential impacts of climate change at country and sectoral level. The assessment will include a desktop study and screening of exposure to both the observed and predicted effects of climate change. Following this, climate change risks – those that compound existing baseline problems or will produce new ones – will be identified for communities and sectors. The CRA will also assess the extent to which the country and sectors are equipped to adapt to these risks. The assessment will inform policy updates under Output 1.1.5 as well as the agri-business assessment under Output 1.1.1. Additionally, the CRA will feed into climate change vulnerability assessments (CCVAs) conducted under Output 2.1.1 – although the CRA will be conducted at the national level, as opposed to the *suco* level during CCVAs.

Output 1.1.5: Gender-responsive revisions to LDN targets and sectoral policies prepared and agreed with the national focal Ministries for UNFCCC and UNCCD, to incorporate climate change risk assessments and expand the scope of LDN strategies

Under Output 1.1.5, the CSWG (Output 1.1.2) will work with the GoTL focal points for the UNCCD and UNFCCC as well as other relevant stakeholders to propose revisions to the LDN targets and policies including strategies to reduce climate risks to food and water security identified under Output 1.1.2. This will include proposing revisions to the LDN targets^[131] for Timor-Leste to incorporate livestock management, water resource management and agri-business development, based on lessons learned from the climate risk assessments on food and water security (Output 1.1.4) and the climate-resilient integrated watershed development planning (CRIWDP) process (under Component 2 of the proposed project) undertaken in two watersheds (covering areas of six municipalities). As set out in the workplan developed under Output 1.1.2, the CSWG will also review sector-specific policies, plans and targets from represented line ministries and propose revisions to these to incorporate: i) EbA and climate resilience; ii) LDN; and/or iii) agri-business development in support of poverty alleviation. To ensure the proposed revisions are applied, the CSWG will prepare a detailed action plan with assigned responsibilities for the validation and incorporation of all proposed revisions. The activities under this Output will be done in coordination with the project management team for the GEF project “Strengthening targeted national capacities to improve decision-making and mainstreaming global environmental obligations into national development priorities”, to maximise synergy between the two projects and prevent duplication of effort.

Component 2: Planning and implementation of EbA to address food and water security at *suco* level in two priority watersheds

The component will facilitate the adoption of an EbA model in each *suco* to improve climate resilience and reduce land degradation in target *sucos* in the two priority watersheds. As a first step, climate-resilient integrated watershed development plans (CRIWDPs) will be generated through a participatory process, informed by climate change vulnerability assessments (CCVAs) of the priority watersheds. Both the CCVAs and the CRIWDPs will take into consideration: i)

the links between climate change and land degradation; and ii) gender-differentiated vulnerability to climate change iii) disaster risk mitigation plans in response to climate extremes^[132]. Capacity for implementing these CRIWDPs will be developed among local communities through the selection of *Suco* Watershed Management Committees (SWMCs) and provision of training to community members comprising 50% females.. Context-appropriate EbA measures – including the protection and restoration of forests and improved crop and livestock management to reduce vulnerability to climate change– will be identified during the project preparation phase and finalised through the planning process. Communities vulnerable to the effects of climate change on water resources will be identified and innovative water supply, storage and management solutions will be implemented to improve climate resilience. Designs for the small-scale water infrastructure will be developed during the project preparation phase. The land and water resource management systems implemented under this component will build on traditional technologies and systems^[133], and their impact and cost-effectiveness will be measured (see Output 4.1). Overall, this Component will contribute to reducing the vulnerability of rural communities in line with the LDCF objectives (CCA-1) and creating an enabling environment for the achievement of LDN targets, in line with GEFTF Objective LD-2-5.

Outcomes and outputs within this component are described below.

Outcome 2.1: Suco-level landscape management improved through the development and implementation of climate-resilient integrated watershed development plans (CRIWDP) in two watersheds

Output 2.1.1: Detailed and gender-specific climate change vulnerability assessments conducted for two watersheds and shared with relevant stakeholders

Detailed climate change vulnerability assessments (CCVAs) will be conducted for each of the two targeted watersheds – Sungai Dasidaro and Sungai Lacro. The CCVAs will specifically focus on: i) gender-differentiated vulnerability to climate change; ii) local and regional hydrology, flood risk and water availability under future climate conditions; iii) strategies to mitigate climate change extremes (rainfall, drought, cyclones). iv) domestic and agricultural water use and requirements; v) land-use and land degradation; vi) agricultural activities and agricultural potential; and vii) COVID-19 related risks and opportunities for green recovery. The development of the CCVAs will build on the climate risk information made available through the GCF project, entitled “*Safeguarding rural communities and their physical and economic assets from climate induced disasters in Timor-Leste*”. Information from the CCVAs will be made available and accessible to local communities to inform participatory planning undertaken under Output 2.1.2 for: i) optimising land-use and restoring vulnerable ecosystems; ii) improving farming practices; and iii) enhancing water resource management. Specifically, the CCVA will identify ‘hotspots’ of climate vulnerability^[134] as well as requirements for natural resource protection and restoration to support improved food and water security. The CCVAs will also consider flood risk as one of the indicators for identifying climate vulnerability hotspots, and this will inform the watershed planning under Output 2.1.2.

Output 2.1.2: CRIWDPs for water and food security, developed and adopted in two priority watersheds

CRIWDPs will be developed for a total of 71,300 ha of land – 15,700 ha in the Dasidaro watershed and 55,600 ha in the Lacro Watershed^[135]. The plans will be informed by the high-resolution CCVAs prepared under Output 2.1.1 as well as the opportunity assessment for agri-business development conducted under Output 1.1.1, specifically related to agro-ecological and cultivable zones. An enhanced participatory land-use planning (PLUP) process – with special attention on women agri-entrepreneurs – will be used and informed by: i) traditional *tara bandu*^[136] and *lisan*^[137] governance practices^[138]; ii) the principles of Community-Based Natural Resource Management (CBNRM)^[139]; and iii) gender parity in participation practices to ensure the inclusion of women in decision-making processes. This process will build on the extensive baseline of former watershed planning programmes and will be strengthened through a climate change lens within the framework of the CCVA. The process will also build on lessons learned from community engagement and catchment management initiatives under the GCF project. The CRIWDP process will include: i) identifying water insecurity hotspots to inform Outcome 2.3. and developing watershed-

level adaptation plans for water resource management, considering the likely impacts of climate change on the availability of water; ii) mapping agro-ecological sub-zones and cultivable zones based on agreed criteria – specifically related to ensuring land use that is appropriate to local topography, soil and water availability; iii) identifying potential sites to transform unsustainably managed farms into sustainable agroforestry systems for agri-business under Output 3.2.1; iv) mapping important ecosystem services and landscape elements; vi) defining targets and locations for forest restoration (Output 2.2.1) and protection (Output 2.2.2), modified integrated farming systems (Output 2.2.4) and improved livestock management systems (Output 2.2.3); and v) developing preparation and response plans for climate hazards. Flood risk will be incorporated as one of the indicators considered in the development of the plans and identification of sites for EbA under Outcome 2.2. Given the potential for extreme climate events during project implementation, landscape restoration should be carried out in a way that does not detract from people's livelihoods today, function as windbreaks to targeted farms where feasible, as well as being most effective in the drought conditions (e.g. Assisted Natural Regeneration).

The CRIWDPs will be validated by local communities^[140], *suco* leadership and government stakeholders, and will align with existing municipal development plans. Responsibilities for implementing and overseeing the CRIWDPs will be negotiated between communities and local government, considering the willingness to collaborate on EbA both on-farm as well as off-farm on communal land in the watersheds.

Output 2.1.3: Suco Watershed Management Committees (SWMCs) established and schedule of activities agreed

Suco-level governance of the CRIWDPs developed under Output 2.1.2 will be enhanced, in alignment with national programmes for promoting decentralisation, as well as the Municipality Economic Development Plans. The Suco Watershed Management Committees (SWMCs) will be established in each target *suco*. They will be linked to *suco* leadership^[141] and comprise youth representatives and at least 50% women as well as including representatives of farmers. SWMC members will be selected through appropriate *suco* council processes due to the *suco* council's current pivotal role in *suco* governance^[142]. Further to this, SWMCs will work directly alongside *suco* councils. Project managers will ensure that people with disabilities and members of the LGBT+ community are represented on the SWMCs.

The SWMCs will strengthen local implementation of the CRIWDPs and coordinate EbA interventions at *suco* level. On each SWMC, members will be selected to represent and coordinate with the groups responsible for implementing and monitoring the: i) forest conservation agreements (Output 2.2.2); ii) livestock management plans (Output 2.2.3); and iii) water resource management systems (Output 2.3.2). A schedule of activities, including training under Output 2.1.4, will be developed collaboratively with each SWMC. In addition to coordinating *suco*-level implementation of project activities, the SWMCs will assist the Project Management Unit in formal project monitoring through data collection and collating lessons learned (Output 4.1.1). Finally, in light of the funding required for the SWMCs to fulfil their roles, their funding will be sustained beyond the project period through the improved financial planning for watershed management under Outcome 1.1 and the increased impact finance – including training and agribusiness development activities – under Outcome 3.1.

Output 2.1.4: Training conducted for 7,000 people, 50% of whom are women, in *sucos* within two watersheds to strengthen local governance and implementation of the CRIWDPs

Community learning hubs will be identified in each of the target *sucos* to be used as venues for training and educational activities, including capacity building for entrepreneurship and agri-business development under Output 3.1.1. Using these venues and other relevant mechanisms (e.g. community radio), the SWMCs will be trained to conduct and oversee training and education sessions on the CRIWDPs for at least 7,000 community members, using a training-of-trainers (ToT) approach. The training programme, including the modalities, content, venue and times, will be planned to accommodate the needs of men and women separately. At least 50% of the community members trained will be women. The training will also include people with disabilities and members of the LGBT+ community and will be developed to ensure that people from these and other marginalised groups are included in implementation and decision-making related to the CRIWDPs. Training materials will also include sections on gender-differentiated climate vulnerabilities as well as linkages between ecosystem

health, water management (under the CRIWDPs), hygiene and human resilience against zoonotic diseases such as COVID-19. In coordination with other investments, training will also include information on the use of weather advisories and early warning systems to support climate-resilient agricultural livelihoods. Capacity development under this output will be done in collaboration with NGO partners – for example Rikolto – building on their experience and expertise in agriculture, socio-environmental entrepreneurship as well as their record in enabling commodity market access.

Outcome 2.2: Food security, delivery of ecosystem services and climate resilience of rural communities enhanced at suco level within two watersheds.

Output 2.2.1: 4,500 ha forest restored to increase the climate resilience of rural communities at *suco* level within two priority watersheds

The CRIWDPs (Output 2.1.2) will identify areas for forest restoration in each of the target *sucos*. At least 4,500 ha of degraded or deforested areas will be restored, with a focus on important areas for reducing the impacts of climate change through watershed health and the provision of ecosystem services. Forest restoration will largely comprise assisted natural regeneration^[144] to increase efficiency and ensure that species remain site appropriate, as well as for a smaller part the reforestation with trees and shrubs providing direct economic benefit to communities. Plants species used under this output will be selected to be climate resilient and to increase the resilience of the landscape and communities. Specifically, these interventions will focus on improving infiltration and protecting soil in critical parts of watersheds to: i) reduce the risk of landslides; ii) reduce soil loss; and iii) increase water infiltration and availability. The socio-ecological impacts and cost-effectiveness of the interventions will be quantified during the project (see Output 4.1). The forest restoration interventions will be jointly funded through LDCF grant funding, government support (e.g. via co-finance from other projects) and through impact finance agreed upon with investors in the agri-business development under Component 3. Sites for the forest restoration will be selected to upscale initiatives under the GCF project to revegetate road corridors and around water sources, including in Baucau, Lautém and Ainaro. Options and partnerships for impact financing will be identified during the PPG phase. This output, in combination with the forest protection measures under Output 2.2.2, is targeted to reduce the incidence and impact of floods, drought and storm damage to farms and property.

Output 2.2.2: 10,500 ha forests and natural ecosystems protected through community agreements and monitoring at *suco* level

The CRIWDPs (Output 2.1.2) will identify at least 10,500 ha of forests and natural ecosystems for community-led protection in target *sucos*. Additionally, it will restore 4,500 ha of forest land under Output 2.2.1 in addition to protection agreements and delineation of 10,500 ha of existing forest and natural ecosystems. Community conservation agreements will be developed through a participatory process, using traditional *Tara Bandu* practices as a basis for community forest governance. These participatory processes will be gender-responsive and focused on the participation of women in decision-making. The agreements will include guidelines for forest fire management and for the sustainable use of forest resources, identifying spatial and seasonal thresholds for using forest resources. The guidelines will also consider the different ways in which men and women use forest ecosystems. As such, community agreements will be focused on gender parity in the decision-making body. Roles and responsibilities for implementing and monitoring the agreements will be assigned, including for the SWMCs established under Output 2.1.3. The community conservation agreements will be reviewed and revised three years after their initial development to embed lessons learned from the initial implementation. These forest protection measures are expected to benefit ~68,000 people in Dasidaro and Laclo watersheds by improving the delivery of ecosystem services and reducing vulnerability to droughts, floods and landslides.

Output 2.2.3: 4,000 ha communal grazing land at *suco* level within target *sucos* under improved management to reduce land degradation

The CRIWDP will identify 4,000 ha of communal grazing land that is degraded or particularly vulnerable to land degradation given the climate change. Under this output, livestock management plans and systems to monitor rangeland condition will be developed through community consultation to improve productivity and build the resilience of these livestock systems to the impacts of climate change. It is envisaged that this rangeland restoration and protection will benefit 1,000 people, of which at least 50% will be female. During the PPG phase, research on successful livestock management models in Timor-Leste will be undertaken to inform the project design. The management plans will be aligned with the principles of the CRIWDPs (Output 2.1.2) and will include guidelines for spatial and seasonal management of grazing lands. In addition, a monitoring system will be developed including the identification of ecological thresholds, indicators and adaptive actions to prevent land degradation, based on local community knowledge. This will be implemented under the overall

project monitoring, evaluation and learning system (Output 4.1). All relevant community members will be co-designers in the development of these management plans, which will consider the needs of both men and women in terms of livestock management and will focus on empowering women-headed households. Responsibilities for monitoring rangeland condition and overseeing implementation of the livestock management plans will be assigned during their development. The livestock management plans will be updated in consultation with the communities three years after their initial development to refine them based on lessons learned from their implementation and rangeland monitoring.

Output 2.2.4: Provision of ecosystem services and climate-resilient agricultural production enhanced on 1,000 ha communal land at *suco* level through ecosystem and farmland restoration and improved integrated farming systems

Under this output, integrated farming systems will be established on 1,000 ha communal farmland in target *sucos* using the Low External Input Sustainable Agriculture (LEISA) model to improve SLM and climate resilience. Capacity building and technical assistance will be provided for the conversion of village farms to LEISA systems, with a focus on: i) horticulture; ii) agroforestry; iii) climate-resilient agriculture including water-efficient irrigation; iv) manure management, composting and mulching; and v) integrated farming of crops and livestock. As for Outputs 2.2.1-2.2.3, the CRIWDPs (Output 2.1.2) will be used to identify appropriate land for these activities and to build community consensus. During the PPG phase a consultative process will be undertaken to confirm details of the measures to be undertaken. These initiatives will increase agricultural productivity and climate resilience for ~1,200 households – 50% female-headed – improving their income by up to 30%, by improving the flow of agro-ecosystem services, in alignment with GEF Objective LD-1-1. In coordination with other investments^[145], the uptake and use of early warning systems and co-development of climate advisories in agricultural planning will be supported under the proposed project. The PPG phase will scope out the methodology for integrating early warning systems into the project strategy. This output will support the adoption of climate-resilient agri-business development on previously unsustainable farms under Output 3.2.1 by facilitating the implementation of *suco*-level SLM in agricultural landscapes.

Outcome 2.3: Water security in vulnerability hotspots enhanced through the upgrade of climate-resilient water supply infrastructure and improved water management systems at village level

Output 2.3.1: Water supply and storage systems upgraded to increase climate resilience in ~40 water-insecure villages

This output will upscale work undertaken to improve the climate resilience of water infrastructure under the ongoing GCF project *Safeguarding rural communities and their physical and economic assets from climate induced disasters in Timor-Leste* and completed LDCF project *Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) and Local Government Systems to Climate Variability and Risk*. Small-scale water infrastructure at village level will be upgraded and developed to improve water security and climate resilience for at least ~40 vulnerable villages^[146] in targeted *sucos*. The design of the water supply and storage systems will depend on the needs of each target village and will be determined during the PPG phase. Drawing on the lessons learned from the two projects mentioned above, the options of water systems considered for each village will include:

- developing rainwater harvesting systems;
- formalising informal communal water sources, for example through the installation of standpipes and storage tanks;
- revegetating land surrounding water sources;
- connecting existing water sources to collection points through distribution pipes; and
- developing small reservoirs for water storage.

The infrastructure will be designed to: i) enable villages to better monitor water availability and use; ii) provide more equitable and reliable access to water sources; iii) provide alternative water sources (for example stored rainwater) to increase drought resilience; and iv) reduce the risk of floods and extreme rainfall events negatively affecting water quality. This will increase the climate resilience of targeted villages by increasing their access to water under future

climate conditions of more erratic rainfall patterns and prolonged dry seasons. The PPG phase will determine what safeguard measures would be needed to ensure that the interventions implemented are effective and that the project is not implemented by adverse climate events. For example, water harvesting structures should be built to account for domestic needs and extremes in rainfall variability.

Moreover, increasing the ability of communities to monitor water availability and distribution will support village-level efforts to increase water security through water resource management. Under this output, village-level plans for sustainable water use and distribution and responses to water shortages will be developed in a participatory manner. The plans will include the identification of water shortage thresholds and corresponding actions to reduce water insecurity and will be informed by the needs of both men and women to ensure that they are gender-responsive. This output is strongly aligned with the adaptation priorities identified in Timor-Leste's National Adaptation Programme of Action (NAPA)[147]. During the PPG phase, villages that are particularly vulnerable to climate change-induced water shortages will be identified in the two priority watersheds, ensuring that villages that have benefited from climate-proofing water infrastructure under the GCF project are not selected again. Vulnerability will be determined through a combination of exposure to water insecurity and social vulnerability. The designs will prioritise an ecosystem-based adaptation approach and the materials and designs used for infrastructural developments will be resilient to climate change. Management, operation and maintenance systems will be put in place under Outputs 2.3.2 and 2.3.3 to ensure that the infrastructure developed under this output delivers long-term climate resilience benefits to the targeted villages.

Output 2.3.2: Community members at village level trained for the sustainable use, operation and maintenance of water supply and storage infrastructure

Under this output, villages targeted under Output 2.3.1 will be trained in the sustainable use, operation and maintenance of the water supply and storage systems installed under that output. The training will focus on equipping women to maintain village water infrastructure[148]. Women are primarily responsible for collecting and using water for domestic purposes, which consumes their time each day[149]. Women are also most affected when water infrastructure is not operational. With the aim to minimise women's unpaid reproductive labour and a concurrent understanding that women engage most regularly with water collection, women's groups[150] will be targeted for training in efficient maintenance of water infrastructure such that women are empowered in their current responsibility for water collection and that the burden of maintenance is shared collectively. Previous projects have found that training women to maintain water infrastructure at village level improves the effective and timeous maintenance of the infrastructure. In addition to developing technical skills for infrastructure maintenance, the training will facilitate discussions on sustainable water use and management, including local ecological knowledge about climate-resilient water management, and will identify water conservation strategies to manage water use in dry periods. In this way, Output 2.3.2 will support the village-level implementation of the sustainable water use plans developed under 2.3.1. The participatory design, context-appropriate nature and community-based management of the water supply and storage infrastructure developed under this outcome will ensure that the systems are sustainable and increase the long-term water security and climate resilience of vulnerable communities.

Output 2.3.3. Community members within villages trained and systems established for monitoring and reporting on village-level water use and availability

In target villages, community-driven systems for monitoring and reporting on water use and availability will be developed through a participatory approach. Activities under the output will include identifying village members who will be responsible for water use and availability, in collaboration with the village chief. These members will be trained on how to measure water use and availability and how to record and manage this information. Effective monitoring of water resources will support the implementation of the sustainable water use plans developed under Output 2.3.1, informing when and how water conservation strategies are implemented. In addition to the training, communication channels will be established between villages, SWMCs and municipal governments to support the collection of water availability data at *suco* and watershed level. In this way, the output will contribute to filling persistent data gaps relating to water security and use in Timor-Leste and enable improved evidence-based planning at municipal and watershed level.

Component 3: Enabling and piloting of agri-business development to incentivise adoption of climate-resilient SLM practices by small-scale farmers in two watersheds

This component will support the adoption of climate-resilient SLM at farm level through an agri-business model, thereby overcoming financial barriers to the transition away from unsustainable farming practices that drive land degradation and reduce climate resilience. Private sector partners will be engaged to leverage markets and create investment opportunities to enable small-scale farmers, comprising at least 60% women, to develop agri-businesses based on

traceable and sustainably grown commodity crops. This will create an enabling environment for small-scale farmers to implement climate-resilient SLM, contributing to GEF Objective LD-2-5. By promoting permanent, locally-appropriate agroforestry systems and climate-resilient SLM, these interventions will reduce pressure on forests and water resources, contributing to the GEFTF Objective LD-1-4, as well reducing the vulnerability of small-scale farmer to climate-change induced crop losses and food insecurity. The adoption of this model will be piloted in the two priority watersheds – Sungai Dasidaro and Sungai Lacro. In addition to facilitating the adoption of sustainable agroforestry, these activities will enhance the viability and sustainability of existing agroforestry systems, including those established under the GCF project, by improving technical support and market access for sustainably produced commodities.

Outcomes and outputs within this component are described below.

Outcome 3.1: Farmer organisations and women's cooperatives for agri-business development and sustainable value chains access finance to support adoption of climate-resilient SLM

Output 3.1.1: Training conducted for 2,500 members of farmer organisations and women's cooperatives to develop climate-resilient sustainable agriculture through agri-businesses.

Farmer organisations and women's cooperatives from target *sucos* will be capacitated for the adoption of CR sustainable agricultural practices enabled through an agri-business approach. As for Output 2.1.3, this capacity development will be done in partnership with NGOs (like Rikolto) with expertise in agri-business development. Training on business management and engagement with value chain stakeholders will be conducted and assistance will be provided to connect farmer organisations and women's cooperatives to markets and financial institutions linked to partnerships developed under Outputs 3.1.2 and 3.1.3. A ToT model will be used and plans for the replication and up-scaling of training activities through the farmer organisations and women's cooperatives will be developed. At least 2,500 farmers (60% women) will be trained under this output. Incremental support will be provided to government and farmers to build capacity and conduct baseline and periodic farm surveys to monitor the success of agri-business development, linked to the monitoring undertaken by the SWMCs in Output 2.1.3.

Training activities and materials will include sections related to COVID-19, with a specific focus on how climate-resilient land management, climate-resilient agriculture and ecosystem protection will increase communities' resilience to both climate change, including extreme events, and zoonotic threats such as COVID-19. The integral link between ecosystem health and human health will be made clear and these training activities will raise awareness among stakeholders about this connection as well as the connections between ecosystem degradation and the emergence of zoonotic diseases. In doing so, the project will build momentum for broader-scale green recovery that foregrounds the ecosystems and human health linkages, and the ability for the proposed project's climate-resilient adaption measures to contribute to this green recovery.

Output 3.1.2: Agreements negotiated and incentives created for private sector buyers to invest in traceable and sustainable agricultural commodity production and value chains

Based on the foundation laid during the PPG phase as well as Output 1.1.1 where a market assessment of agricultural commodity crops will be conducted, partnerships with the private sector and NGOs will be leveraged to develop agri-business. Through engagement with intermediaries like Rikolto, commitments from private sector buyers of agricultural commodities (for example Mars and Olam) to sourcing traceable and sustainable commodities will be developed. These commitments will be designed to contribute to building climate resilience within the project's EbA model. Following from these partnerships and commitments, technical assistance for adopting SLM methods and achieving sustainability certification will be provided to farmer organisations and cooperatives.

Output 3.1.3: Portfolio of bankable impact investments developed with capital intermediaries and providers targeting sustainable production of cocoa, vanilla and other commodities

Under this output, public and private sector financing mechanisms will be created to assist small-scale farmers, comprising 50% women, in developing agri-businesses and establishing agroforestry systems for growing and marketing of sustainable commodities – specifically cocoa and vanilla. These mechanisms will be designed to incentivise and facilitate the adoption of SLM activities and improve the income of small-scale farmers. Government and grant finance will provide seed funding for these mechanisms, with the majority of the investment coming from the private sector. These mechanisms will be developed through a partnership between the private sector commodity buyers (Output 3.1.2), local banks and agricultural finance institutions (for example the Rabobank Agri-3 Fund) to facilitate the de-risking of impact investments. Under these mechanisms, all loan or investment risks will be borne by the private sector. Additionally, part of the investment will be used for attaining environmental objectives such as reforestation, water resources or others SLM activities (see Outcomes 2.2 and 2.3). Farmer organisations and cooperatives in target *sucos* will be assisted to participate in and benefit from commodity development programmes without the risks associated with commercial loans or borrowing systems.

Outcome 3.2: Production of traceable and sustainably grown cocoa and other agri-business commodities increased to contribute to SLM and benefitting 2,000 farmers of which 50% will be female

Output 3.2.1: 2,200 ha unsustainably managed farms transformed to climate-resilient and profitable agroforestry systems for growing cocoa and other agri-business commodities

Supported by capacity development (Output 3.1.1) and public and private impact investments (Output 3.1.3), climate-resilient agroforestry systems and sustainable commodity production will be developed under this output. One thousand hectares of formerly unproductive or degraded farmland in the target *sucos* (identified through the CRIWDPs produced under Output 2.1.2) will be transformed to pilot agroforestry systems, specifically growing cocoa and vanilla. These agroforestry systems will both increase the income of local farmers and improve the delivery of agro-ecosystem services. Field schools will be hosted by NGO partners (e.g. Rikolto) to train small-scale farmers, comprising 50% females, on good agriculture practices such as conservation agriculture, climate-smart agriculture, pest management, waste management and post-harvest management. Facilities to support sustainable cocoa production, including demonstration gardens, clonal gardens to test for climate- and pest-resilient clones, nurseries for seedling propagation, and post-harvest processing facilities will be established in target *sucos*. The transition to agri-business-based systems will be monitored throughout the project by the SWMCs (established under Output 2.1.3) to contribute to adaptive management and supplying lessons learned for future upscaling of agroforestry for sustainable commodity production (Component 4). This output is targeted to benefit 2,000 farmers – 50% female – and improve production and adoption of SLM practices over 2,200 ha of agroforestry systems. This will facilitate the production of 900 tons of traceable and sustainably sourced cocoa (dry beans) as well as 100 tons of vanilla and other marketable commodities.

Component 4: Knowledge management and monitoring for replication of best practices in other *sucos* and watersheds

Under this component, gender-responsive monitoring and evaluation (M&E) will be undertaken to assess the effectiveness and impact of project interventions, including the implementation of CRIWDPs (Component 2) and development of agri-businesses (Component 3). Information gathered during this M&E process will be used to develop best-practice guidelines and policy briefs on climate-resilient SLM and agri-business development, with a focus on the gender dimensions of these approaches. These information products will be disseminated targeting national- and local-level stakeholders to inform policy and programming on adaptation to climate change as well as reversing land degradation. This will facilitate upscaling of successful project activities to other *sucos* and watersheds in Timor-Leste, contributing to LDCF and GEFTF objectives (CCA-1 and LD-1-1). The M&E information will also feed back into the (current) proposed project so that it may be improved according to an adaptive management approach.

Outcomes and outputs within this component are described below.

*Outcome 4.1: Replication enabled in other *sucos* and watersheds for integrated ecosystem-based adaptation and agri-business development programs.*

Output 4.1.1: Project impact and effectiveness measured and lessons communicated through the implementation of a monitoring, evaluation and learning system

A monitoring, evaluation and learning (MEL) system will be designed and implemented throughout the lifespan of the project. Monitoring will be conducted by the project team and specialists with support from members of the SWMCs (Output 2.1.3). The MEL system will be inclusive and gender-sensitive and will establish baselines and track progress against the targeted global environmental and adaptation benefits of project activities. Progress of the implementation of the CRIWDPs will be monitored and the impact and scalability of EbA measures (Component 2) and agri-businesses for sustainable commodity production (Component 3) will be assessed. Lessons learned and best practice generated through the MEL system – particularly related to women's agri-businesses – will be disseminated under Output 4.1.2. M&E information will also enable an adaptive management approach in the (current) proposed project, whereby the project is improved via an iterative process according to the knowledge and experiences gained.

Output 4.1.2: Gender-responsive policy briefs and best-practice guidelines developed and disseminated to facilitate the replication and upscaling of climate-resilient SLM in additional watersheds and municipalities

Under this output, the lessons learned and best practices generated through the MEL system (Output 4.1.1), from sources of LEK via *suco* councils and *lia-na'in*^[154], as well as from female-headed households will be collated and disseminated to inform upscaling of the EbA model including agri-business. Knowledge products will be developed to inform culturally relevant and gender-responsive policy- and decision-making at national and local level. These knowledge products will include policy briefs and best-practice guidelines for financing and upscaling successful EbA interventions into other *sucos* and watersheds in Timor-Leste. This will be done in coordination with existing knowledge management platforms and systems, including the Centre for Climate Change and Biodiversity at the National University of Timor-Leste.

Output 4.1.3: Two watersheds identified and upscaling plans developed for replication of successful project activities

Based on the gender-responsive policy briefs and best-practice guidelines developed under Output 4.1.2, as well as the improved financial planning developed under Outcome 1.1, an upscaling plan will be developed to replicate successful project activities in two additional watersheds. Towards the end of the project period, a workshop will be held with the CSWG (established under Output 1.1.2) and other project stakeholders to: i) present the policy briefs and best-practice guidelines; ii) identify two target watersheds for replication of the CRIWDP approach; and iii) develop an action plan for identifying funding sources, engaging with private sector partners and implementing activities recommended through the policy briefs and best-practice guidelines. Doing this during the implementation of the proposed project will ensure that the institutional knowledge developed through the project is retained and applied to replicate the project's successes elsewhere in Timor-Leste.

Alignment with GEF focal areas and/or impact program strategies

The proposed project is a multi-trust fund investment and is aligned with both the land degradation focal area under the GEF Trust Fund and climate change adaptation under the LDCF. Details of how the project aligns with each of these focal areas is given below.

LDCF: Climate change adaptation

Objective CCA-1: Reduce vulnerability and increase resilience through innovation and technology transfer for climate change adaptation

In combination with Trust Fund resources, the LDCF investment will be used to reduce the vulnerability of rural communities and agro-ecological systems to water insecurity, floods and landslides, which are likely to increase under future climate conditions. As a multi-focal initiative, the proposed project recognises the interlinkages between climate change adaptation and land degradation and will introduce innovative, integrated measures to address these challenges. The project will implement an EbA model that combines the protection and restoration of forests, improved crop and livestock management, water resources provision and agri-business development to reduce vulnerability to climate change.

The project will innovate in two key areas: a mix of green and grey technologies to bring about adaptation benefits and creating models for private sector financing for SLM. Forest restoration will comprise assisted natural regeneration as well as trees and shrubs providing direct economic benefit to communities. Specifically, these interventions will focus on improving infiltration and protecting soil in critical parts of watersheds to: i) reduce the risk of landslides; ii) reduce soil loss; and iii) increase water infiltration and availability. Low External Input Sustainable Agriculture (LEISA) model will be used to improve farming practices on 1,000 ha of agricultural land. Water infrastructure could include rainwater harvesting systems, water storage tanks, groundwater recharge basins, water source protection measures, fog harvesting systems and tube well irrigation systems. These measures will increase reliable access to water during dry periods and improve resilience to increased rainfall variability under future climate conditions. Through an agri-business model, private sector partners will be engaged to leverage markets and create investment opportunities to enable small-scale farmers to develop agri-businesses based on traceable and sustainably grown commodity crops, thereby creating an impact financing model.

Improved management practices will be realised through the SWMCs, to be established in each target *suco*, linked to *suco* leadership and comprising youth representatives and at least 50% women. Community learning hubs for training and educational activities, including capacity building for entrepreneurship, agri-business development. A ToT model will be used for up-scaling of training activities through the farmer organisations and women's cooperatives. To ensure the sustainability of the water infrastructure, operation and maintenance will be managed through community water resource management systems (Component 2). These processes will be focused on ensuring gender parity in participation and decision-making at all stages of collaboration. A monitoring and learning system will be put in place to collate lessons learned from these pilots and contribute to the development of an evidence base on EbA measures in Timor-Leste that can be used for upscaling the approach (Component 4).

Objective CCA-2: Mainstream climate resilience for systemic impact

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The proposed project has been designed to address vulnerability to climate change through a systemic shift, by integrating efforts to address land degradation, water insecurity and rural poverty. To this end, the project will support the mainstreaming of climate change adaptation into a range of policies and sectoral planning targets at national government level (Component 1). Climate change considerations will also be mainstreamed into private sector partnerships, facilitating further investment into achieving the adaptation and land degradation neutrality (LDN) targets of Timor-Leste (Component 3), improving access to finance for small-scale farmers thereby increasing the adaptive capacity of these rural communities. In addition, LDCF resources will be used to expand the knowledge base on climate change risks in rural Timor-Leste, and promote policy mainstreaming by developing the evidence base on the cost effectiveness through the MEL system (Component 4). as well as to develop the technical capacity of rural communities to implement climate-adaptive land and water management practices (Component 2).

GEF Trust fund: Land degradation

Objective LD-1-1: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM).

Aligned with the GEF 7 land degradation objectives, the proposed project will facilitate the implementation of SLM in agricultural landscapes in Timor-Leste. This will be done, firstly, by improving policy and planning support at national level for the implementation of climate-resilient SLM and water resource management (Component 1). This will include improving cross-sectoral coordination for implementing targets under the UNCCD and UNFCCC and integrating agri-business development into climate-resilient policies. Support for sustainable agri-business will address barriers to small-scale farmers adopting climate-resilient SLM, which include limited access to finance. Secondly, climate-resilient integrated watershed development plans (CRIWDPs) will be developed to facilitate the restoration and sustainable management of agro-ecosystems. Based on these plans, SLM will be implemented at landscape level to improve the delivery of ecosystem goods and services to rural communities (Component 2). Capacity building at *suco* level for the implementation of the CRIWDPs and SLM practices will enhance the sustainability of these project interventions (Component 2). Thirdly, farmers will be supported to adopt SLM by developing agroforestry systems to produce sustainable and traceable commodity crops. To support this transition, access to markets and links with sustainable supply chains for these farmers will be improved through private sector partnerships (Component 3). In this way, farmers will be incentivised to adopt climate-resilient SLM, because of the increased opportunities for income generation through sustainably produced commodities.

Objective LD-1-4: Reduce pressures on natural resources from competing land uses and increase resilience in the wider landscape

The proposed project will work with rural communities and small-scale farmers to address the drivers of land degradation and deforestation. Under Component 2, CRIWDPs will be developed as well as strategies for the sustainable management of forests, communal rangeland and water resources in collaboration with the communities. Training and building capacity for the implementation of these plans at *suco* level will help to ensure that they are effective in reducing pressure on forests, water resources and rangelands. In addition, farmers will be supported to develop permanent agroforestry systems for the sustainable production of commodity crops (Component 3). Through agri-business development, the income and food security of small-scale farmers will be increased in the target communities. This transition to permanent agriculture – as opposed to shifting agriculture – will complement the forest protection measures to reduce deforestation rates in the target watersheds. The reduction in deforestation, active forest restoration, increased water security and adoption of climate-resilient SLM practices facilitated by the project will enhance the resilience of rural communities and landscapes, decreasing their vulnerability to land degradation and the impacts of climate change. Robust monitoring, evaluation and learning systems (Component 4) will ensure that successful project activities can be replicated to reduce pressure on forests and increase resilience in other watersheds in Timor-Leste.

Objective LD-2-5: Create enabling environment to support scaling up and mainstreaming of SLM and LDN

The proposed project will contribute to the establishment of an enabling environment for the achievement of LDN in Timor-Leste. Under Component 1, the country's LDN targets, strategy and policy framework will be strengthened, to more comprehensively incorporate agricultural drivers of land degradation and targets for the implementation of climate-resilient SLM. Update to the policy framework for LDN will be accompanied by capacity development and communication and national and sub-national level to support the implementation of LDN initiatives through the CRIWDP framework. Additional training targeting rural communities (Component 2) and members of farmer organisations and women's cooperatives (Component 3) will develop capacity for the restoration and management of functional landscapes, with a focus on communal land (Component 2) and small-scale farms (Component 3). The training will include technical skills development for climate-resilient SLM, as well as support for the development of bankable business models and access to finance.

Incremental/additional cost reasoning and expected contributions

By addressing the nexus of climate change vulnerability and land degradation, the project will ensure that an integrated approach to climate change adaptation and reversing land degradation is implemented and embedded into national priorities in Timor-Leste. This will be done by supporting rural subsistence farmers in Timor-Leste to adopt an EbA model, focusing on reversing land degradation through improved national and sub-national adaptation planning, land restoration, agricultural management systems, water provision and through the transformation of subsistence agriculture to agri-business as well as improving access to commodity markets. This transformation will catalyse mechanisms for providing additional motivation, incentives and resources to communities (e.g. through the impact investments) to engage in more sustainable water, forest, land and livestock management in priority watersheds. Policy mainstreaming activities will promote the upscaling of the approach to other watersheds in the country. Table 3 provides details of the additional cost reasoning for the proposed project.

Table 3. Additional cost reasoning for the four components of the proposed project.

Component and additional cost (by fund)	Baseline	Alternative scenario
<p>Component 1: Building the national case and leverage for EbA and addressing land degradation in rural communities through agri-business</p> <p>GEFTF: US\$300,000 LDCF: US\$350,000</p>	<p>To date, there has been limited integration of efforts to address land degradation, climate change adaptation and rural poverty in Timor-Leste. For example, LDN targets are focused on forests, with limited inclusion of livestock and watershed management. While agribusiness development has been identified as a priority in the agricultural sector, systematic national planning to catalyse its implementation or the incorporation of EbA into this approach has not been undertaken. In addition, coordination between the ministries governing water resources, forests, agriculture and land-use planning for implementing this approach has been limited.</p> <p>In the baseline scenario, coordination between ministries and integration of climate change adaptation efforts will continue to be limited. As a result, the national policy support for EbA and agri-business will remain limited, constraining the implementation of these approaches.</p>	<p>Through GEF investment, the proposed project will address the drivers of land degradation, including unsustainable farming practices. This will be done by facilitating the incorporation of economic incentives for the adoption of climate-resilient SLM linked to an agri-business approach and building climate resilience into national plans, policies and targets. This will include an opportunity assessment of agribusiness development at a national level and for the two priority watersheds. Results of this assessment will inform a communication campaign targeting national and local decision-makers to catalyse the incorporation of this approach into policies and plans for addressing land degradation and building climate resilience. A cross-sectoral working group (CSWG) will be established to facilitate the integration of climate-resilient SLM and agri-business into relevant sectoral priorities. The CSWG will also facilitate the revision of Timor-Leste's LDN targets to incorporate lessons from the CRIWDP process undertaken through the proposed project. These interventions will create an enabling environment for the implementation of climate-resilient SLM, EbA and agri-business development and for the replication of project initiatives in other watersheds in Timor-Leste.</p>
<p>Component 2: Planning and implementation of EbA to address food and water security at <i>suco</i> level in two priority watersheds</p> <p>GEFTF: US\$1,500,000 LDCF: US\$4,300,000</p>	<p>Unsustainable agricultural practices, including shifting agriculture, cultivating on steep slopes and overstocking, contribute to land degradation and deforestation in rural Timor-Leste. As a result, there is a decline in the delivery of ecosystem services that support rural livelihoods and increased vulnerability to extreme climate events including floods, droughts and landslides.</p> <p>Several initiatives have undertaken watershed management planning in Timor-Leste to address these challenges. However, these initiatives have had limited success in incentivising farmers and communities to adopt climate-resilient SLM practices and gaps in food and water security still exist. There is also limited capacity and support for local communities to implement and</p>	<p>Using LDCF and GEFTF finance, CRIWDPs will be developed in two priority watersheds based on high-resolution CCVAs. The CRIWDPs will be developed through a participatory approach and adopted at <i>suco</i> level. The CRIWDP process will consider existing and potential land degradation, agricultural potential, water security and gender-differentiated vulnerability to climate change as well as strategies to mitigate climate change extremes (rainfall, drought, cyclones). Based on the vulnerability assessment and planning process, plans for EbA, water resource management, livestock management and ecologically appropriate agricultural land-use. To support local governance and ownership of the CRIWDPs, <i>Suco</i> Watershed Management Committees (SWMCs) will be selected in each target <i>suco</i> to oversee their implementation. Through a training-of-trainers approach, training will be provided to community members on the implementation of the CRIWDP. This training and the selection of the CRIWDPs will be designed to ensure the inclusion and representation of women, people with disabilities and</p>

govern existing plans and limited availability of financial resources to invest in improving and monitoring water supply or the restoration and protection of agro-ecosystems.

Without LDCF and GEFTF investment, development and implementation of climate-resilient integrated watershed development plans will remain a challenge. The success of watershed management initiatives is likely to continue to be limited by the lack of incentives for farmers to adopt sustainable practices and limited support for community-level governance of natural resources. In this scenario, unsustainable agricultural practices will continue to contribute to land degradation and climate change vulnerability.

In addition, water supply will be reduced as climate change results in an increase in droughts and more erratic rainfall. Demand for water will increase for livestock and crop production and water quality will be compromised by the increase in flooding and erosion. As a result, communities that previously relied on rainfall and limited water supply infrastructure will become increasingly water insecure.

entation of women, people with disabilities and the LGBT+ community. Improved coordination and communication between levels of governance will also be facilitated through these activities.

Forests and degraded agricultural land in the target watersheds will be restored and protected using GEF investments and impact investments from private sector partners. This will improve the delivery of ecosystem services, thereby reducing land degradation and increasing the climate resilience of rural communities and their livelihoods. Landscape restoration should be carried out in a way that does not detract from people's livelihoods today, function as windbreaks to targeted farms where feasible, as well as being most effective in the drought conditions (e.g. Assisted Natural Regeneration).

Water supply infrastructure will be upgraded to improve water security in vulnerability hotspots identified in the CRIWDPs. This infrastructure will increase resilience to extended dry periods and erratic rainfall projected under future climate conditions. In addition, improved monitoring of the use and availability of water resources and training on demand management will enable communities to adjust water management practices during water-scarce periods. To support the sustainability of these investments, collaborative plans for forest protection, livestock management and the operation and maintenance of water infrastructure will be developed. The PPG phase will determine what safeguard measures would be needed to ensure that the interventions implemented are effective and that the project is not implemented by adverse climate events. For example, water harvesting structures should be built to account for domestic needs and extremes in rainfall.

		nfall variability.
<p><u>Component 3: Enabling and piloting of agri-business development to incentivise adoption of climate-resilient SLM practices by small-scale farmers in two watersheds</u></p> <p>GEFTF: US\$1,400,000 LDCF: US\$1,000,000</p>	<p>Small-scale farmers in Timor-Leste primarily grow subsistence crops. Low yields of these crops frequently lead to food insecurity and insufficient incomes for farmers. There is potential to improve incomes for these farmers and promote permanent agriculture by growing commodity crops — including coffee, cocoa and vanilla. However, farmer's limited ability to access markets or finance to invest in the required inputs constrains the adoption of commodity crops into small-scale agricultural systems. Access to financial services and commodity markets is particularly restricted for rural women, as a result of the burden of unpaid work and cultural and social norms regarding the roles of women (see Section 3).</p> <p>In the baseline scenario, agri-business development will continue to be limited as a result of the limited capacity of farmers to take on financial risks. Without investment building capacity for agri-business development and improving access to finance and markets, the transition from shifting subsistence agriculture to permanent agroforestry is likely to remain unviable for many small-scale farmers. Access will continue to be particularly limited for women, exacerbating existing gender inequalities in the absence of LDCF and GEFTF investment.</p>	<p>The proposed project will engage with private sector partners to increase access to finance and markets for small-scale farmers, to support the adoption of sustainable agricultural practices. Under this component, GEF resources will be used to incentivise subsistence farmers to transition to agribusiness to produce climate-resilient, traceable and sustainable commodities, including cocoa. To achieve this, impact investment mechanisms will be developed and market access for small-scale farmers will be improved through engagement with private sector and NGO partners, enabling farmers to overcome the financial barriers to the adoption of climate-resilient SLM. The capacity of farmer organisations and women's cooperatives for starting agri-businesses and adopting climate-resilient SLM practices will be developed, with a focus on the empowerment of women. Building on these financing mechanisms and capacity development, 2,200 ha of climate-resilient agro-forestry systems will be developed on degraded farmland to cultivate cocoa and other agri-business commodities. This activity will both address land degradation on the selected agro-forestry sites and pilot an agri-business approach to overcome barriers to the adoption of climate-resilient SLM.</p>
<p><u>Component 4: Knowledge management and monitoring for replication of best practices in other <i>sucos</i> and watersheds</u></p> <p>GEFTF: US\$209,753 LDCF: US\$317,068</p>	<p>The development of agri-businesses to support small-scale farmers has been piloted under past projects in Timor-Leste. However, knowledge management for learning, validation and replication of effective practices has been limited. There has also been limited integration of evidence on EbA and agri-business into policies and plans to promote the transition away from unsustainable agricultural practices. Without improved knowledge management and systematic processes to collate, validate and upscale best practices, initiatives to promote EbA and agri-business are likely to continue to be disparate. In this baseline scenario, future efforts</p>	<p>Lessons learned and best practices from the implementation of the proposed project will be documented through a monitoring, evaluation and learning (MEL) system. Through this system, the progress, effectiveness and impact of project interventions will be assessed. This information will be used to generate knowledge products including gender-sensitive best practice guidelines and policy briefs on EbA and the agri-business approach. The knowledge products will be disseminated to targeted decision-makers. In addition, a workshop will be held to develop plans to replicate successful project interventions in two additional watersheds in Timor-Leste, using the best practice guidelines and policy briefs.</p>

<p>rts to upscale EbA and agri-business development are less likely to be context-appropriate and effective.</p>
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Global environmental benefits (GEFTF) and adaptation benefits (LDCF)

The proposed project will deliver global environmental benefits aligned with three LDCF Core Indicators and three GEFTF Core Indicators. The number of direct beneficiaries disaggregated by sex (LDCF Core Indicator 1, GEFTF Core Indicator 11) is reported to both funds. The area of land managed for climate resilience (LDCF Core Indicator 2) is split into the area of land restored (GEFTF Core Indicator 3) and the area of landscapes under improved practices (GEFTF Core Indicator 4) for reporting to the GEFTF. At least two sectoral policies on water and food security and one national policy will mainstream EbA (LDCF Core Indicator 3). The number of people trained disaggregated by sex (LDCF Core Indicator 4) is also presented. Proposed targets for these Core Indicators and the expected adaptation benefits will be refined and validated during the project preparation phase.

Climate change in Timor-Leste is projected to: i) decrease the length of the wet season, prolonging the dry period; ii) increase temperatures; and iii) increase the frequency of severe storms which cause flooding and landslides. Rising temperatures and longer dry seasons are likely to decrease productivity of small-scale agriculture which is predominantly reliant on rain as a result of limited irrigation infrastructure in rural areas. Increased climate variability and more frequent and severe extreme climate events are also likely to exacerbate water insecurity and forest and land degradation. The project interventions will contribute to the country's adaptation priorities as identified in the National Adaptation Programme of Action. This will be done by: i) introducing innovative solutions to reduce climate-related risks (CCA Outcome 1.1); ii) enabling innovative investment models to enhance climate resilience (CCA Outcome 1.2); iii) strengthening cross-sectoral collaboration for mainstreaming climate resilience (CCA Outcome 2.1); and iv) developing human and institutional capacity for climate change adaptation (CCA Outcome 2.3). These interventions will contribute to the CCA and LD core indicators in the following ways:

LDCF Core Indicator 1, GEFTF Core Indicator 11: Number of direct beneficiaries disaggregated by sex

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The proposed project will directly benefit the total population ~68,000 people, of which 49.4% will be female – in the Dasidaro (~7,300 people) and Lacio (~60,700 people) watersheds. The populations of these two watersheds will all benefit from the CRIWDP processes undertaken under Output 2.1.2 as well as the forest protection measures introduced under Output 2.2.2. The beneficiaries of all other outputs under this project will be residents of the Dasidaro and Lacio Watersheds and are therefore included in the ~68,000 beneficiaries rather than being counted separately.

Under Outcome 2.3, at least 1,500 vulnerable households, comprising 50% female-headed, in ~40 villages identified as vulnerability hotspots of the priority watersheds will benefit from the development of water supply and storage infrastructure, which will reduce vulnerability to climate change-induced water shortages. This will reduce the vulnerability of communities to further water insecurity resulting from the erratic rainfall, longer dry season and increased drought risk projected under future climate conditions.

At least 1,000 farmers, of which 50% will be female, will benefit from improved livestock management on 4,000 ha of communal land under Output 2.2.3 and 1,200 households, comprising 50% female-headed households, will benefit from the restoration of 1,000 ha of communal land for integrated livestock and crop production under Output 2.2.4. A further 2,500 members – 50% female – of farmer organisations and women's cooperatives will benefit from the development of agroforestry systems for sustainable commodity crop production under Output 3.2.1 (2,200 ha). Through these outputs, livelihoods and sources of income for these communities will be strengthened and diversified (CCA Output 1.1.2). In addition, the development and testing of investment models (CCA Output 1.2.2) will enable the transition to sustainable commodity production through an agri-business approach.

LDCF core indicator 2: Area of land managed for climate resilience

GEFTF Core indicator 3: Area of land restored; GEFTF Core indicator 4: Area of landscapes under improved practices

The proposed project will develop CRIWDPs for the Dasidaro (15,700 ha) and Laclo (55,600 ha) watersheds.

The CRIWDP process will include:

- developing watershed-level adaptation plans for water resource management, considering the likely impacts of climate change on the availability of water;
- mapping agro-ecological sub-zones and cultivable zones to ensure land use that is appropriate to local topography, soil and water availability;
- developing preparation and response plans for climate hazards;
- defining suitable locations for 4,500 ha of forest restoration (Output 2.2.1);
- defining suitable locations for 10,500 ha of forest protection;
- defining suitable locations for 4,000 ha of improved livestock management systems (Output 2.2.3);
- identifying areas for 1,000 ha of farmland restoration (Output 2.2.4); and
- identifying potential sites to transform 2,200 ha of unsustainably managed farms into sustainable agroforestry systems (Output 3.2.1).

While on-the-ground interventions will only take place on 22,200 ha of the two target watersheds, it is assumed that through the CRIWDP development and implementation process that the climate resilience of the entire watershed areas will be improved. This is because non-target areas within the two watersheds will benefit from: i) development planning that is informed by climate risk and vulnerability assessments; ii) an improved supply of ecosystem services such as soil stabilisation, infiltration and water retention; iii) land use that is appropriate to local conditions and takes predicted climate change impacts into account; iv) improved water availability because of forest restoration and protection; and v) improved agricultural practices because of the training of farmers and demonstration of good practice. Therefore, a total of 66,800 ha of land will be managed for climate resilience through the proposed project (Table 4).

Within the two target watersheds, the proposed project will restore 4,500 ha of forest (Output 2.2.1) and 1,000 ha of degraded farmland (Output 2.2.4). In addition, improved agricultural practices will be introduced on 4,000 ha of communal grazing land (Output 2.2.3) and 2,200 ha of unsustainably managed farmland (Output 3.2.1).

The table below shows how the land targeted under each output corresponds to the relevant LDCF and GEFTF core indicators.

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Table 4. Breakdown of land areas (ha) targeted under each output and how they correspond to LDCF and GEFTF Core Indicators. Asterisks indicate where the same land is captured under multiple core indicators.

Activity and output	LDCF Core indicator 2: Area of land managed for climate resilience (ha)	GEFTF Core indicator 3: Area of land restored (ha)	GEFTF Core indicator 4: Area of landscapes under improved practices (ha)
Climate-resilient integrated watershed development plans (Output 2.1.2)	44,600		
Forest restoration (Output 2.2.1)	4,500*	4,500*	
Community conservation agreements (Output 2.2.2)	10,500*		10,500*
Improved communal grazing land management systems (Output 2.2.3)	4,000*		4,000*
Degraded farmland restored (Output 2.2.4)	1,000*	1,000*	
Agro-forestry systems for commodity production (Output 3.2.1)	2,200*		2,200*
Total	66,800	5,500	21,200

LDCF Core Indicator 3: Total number of policies/plans that will mainstream climate resilience: Cross-sectoral working group (CSWG) will be established (output 1.1.2) comprising representatives of relevant line ministries to work on integrating climate resilience and LDN into national policies and plans^[1], and address barriers to LDN and climate change adaptation. CSWG will review sector specific policies, plans and targets from represented line ministries and propose revisions to these to incorporate i) EbA and climate resilience; ii) LDN; and/or iii) agri-business development in support of poverty alleviation. To ensure the proposed revisions are applied, the CSWG will prepare a detailed action plan with assigned responsibilities for the validation and incorporation of all proposed revisions.” (output 1.1.5). At least two sectoral policies on food security and water will be revised and EbA will be mainstreamed in the national policy.

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LDCF Core Indicator 4: Total number of people trained (disaggregated by sex).

A total of 8,200 people (50% female) will receive training on climate change adaptation through the proposed project. Under Output 1.1.3, 200 government officials comprising 50% women^[155] will be trained on climate resilient integrated watershed development, to build support for the integration of this approach into policies and planning. At least 7,000 community members (50% female)^[156] in Dasidaro and Lacro Watersheds will receive training on climate change impacts and adaptation opportunities in small-scale farming landscape under Output 2.1.4. The training will focus on, *inter alia*: i) climate change impacts and adaptation; and ii) implementation, maintenance and management of EbA measures. Under Output 3.1.1, 2,500 members of farmer organisations and women's cooperatives will be trained on climate-resilient agroforestry for cocoa and vanilla production and business development. It is estimated that ~1,500 people will receive training under both Outputs 2.1.4 and 3.1.1 and that the total number of community members trained under the project will be ~8,000. Those trained under Outputs 3.1.1, 2.1.4 and 3.1.1 will be comprised of a population that is 50% female. A training-of-trainers model will be used under both outputs to facilitate upscaling and NGOs (e.g. Rikolto) will contribute to the capacity development under both.

GEFTF Core indicator 6: Greenhouse Gas Emissions Mitigated

The project will reduce carbon sources and increase carbon sinks, mitigating an estimated 2,896,517 tCO₂e over the 20 year lifespan – equivalent to ~145,000 tCO₂e per year. Using the Ex-Ante Carbon-balance tool produced by the FAO[157], the GHG emission reductions and carbon sequestration resulting from the project was estimated. First, the restoration of 4,500 ha of forest under Output 2.2.1 is expected to reduce emissions from deforestation by ~585,000 tCO₂e and increase carbon sequestration by ~715,000 tCO₂e. Second, the protection of the 10,500 ha of forest under Output 2.2.2 is expected to reduce emissions from deforestation by ~1,040,000 tCO₂e[158]. Third, the avoided emissions from improved management of grazing lands under Output 2.2.3 was estimated at ~165,000 tCO₂e. Fourth, the restoration and improved management of 1,000 ha of farmland under Output 2.2.4 is expected to increase carbon sequestration by ~18,000 tCO₂e. Finally, the establishment of agroforestry systems on 2,200 ha of unsustainably managed farms under Output 3.2.1 is expected to increase carbon sequestration by ~374,000 tCO₂e.

Innovation, sustainability and potential for scaling up

The proposed project is innovative in its approach to addressing global environmental challenges because it focuses on the land degradation-climate change vulnerability nexus and comprises integrated, multi-focal area interventions. The project will implement an ecosystem-based adaptation (EbA) model incorporating a focus on sustainable land management (SLM) and agri-business. This approach will both contribute to achieving LDN and increasing the resilience of local communities to the impacts of climate change. An innovative approach will be used to green and grey technologies to improve (under Outcomes 2.2 and 2.3) climate resilience. This integrated approach will include forest protection and restoration initiatives to the delivery of ecosystem services for water and food security in vulnerable watersheds. These EbA interventions will be combined with the development of small-scale water supply and storage infrastructure in water insecurity hotspots, which will be tailored to the local context and the needs of the community (Outcome 2.3). Best practice from related projects will inform the approach to developing partnerships between the GoTL, the private sector and rural communities to support small-scale farmers in the implementation of climate-resilient SLM and the transition to livelihoods based on agri-business. Through these partnerships, an innovative approach – combining agri-business with the empowerment of rural women – will be adopted, targeting capacity development at women's cooperatives and farmer organisations. This will improve access to markets and finance for small-scale farmers and to address barriers currently constraining the adoption of SLM (Outcome 3.1). Additionally, gender-responsive measures will be taken in all collaborative activities during all outputs. This focus on gender equity will feed into the sustainability of the project by ensuring: i) a diversity of knowledge and representation – particularly of those most vulnerable; ii) gender equality that aligns with SDG 5; and iii) the enabling of a widespread sense of ownership over the project implementation and maintenance among all stakeholders such that the project is continued, scaled up and replicated into the future.

The proposed project recognises that the effectiveness of EbA depends on it being adopted on communal land as well as on privately-owned farms. *Suco*-level landscape planning and institutional capacity development for the implementation of these plans (Outcome 2.1) will enhance the sustainability of the project interventions by embedding EbA into existing community governance systems. Community consultations during the CRIWDP process, and throughout the project, will ensure that EbA measures implemented under the project are gender responsive, locally appropriate and address the needs of the most vulnerable members of the community. Through community participation, specific plans will be developed for forest protection (Output 2.2.2), rangeland management (Output 2.2.3) and the sustainable use, maintenance and management of water infrastructure and resources (Outcome 2.3). These community-implemented plans will ensure that the project interventions to improve food and water security will have a long-term impact on the climate resilience of the target communities. Under Outcome 3.1, in addition to enabling innovation, the development of partnerships between the private sector and rural communities will improve the sustainability of the project. Specifically, mechanisms to improve market access and investment opportunities developed under the project will support the development and ongoing operation of agri-businesses beyond the project lifespan.

An enabling framework for the implementation of EbA will be developed at national level in Timor-Leste (Outcome 1.1). This will include the incorporation of EbA and land degradation neutrality into national policies and targets as well as an analysis of opportunities for agri-business development which will inform policy revisions and planning. Alongside this, financial planning and training activities under Outputs 1.1.2 and 1.1.3 respectively will enable sustainable funding approaches that extend beyond the grant lifespan. In line with this, the funding required for the SWMCs developed under Output 2.1.3 will be sustained beyond the project grant period through the improved financial planning for watershed management under Outcome 1.1 and the increased impact finance –

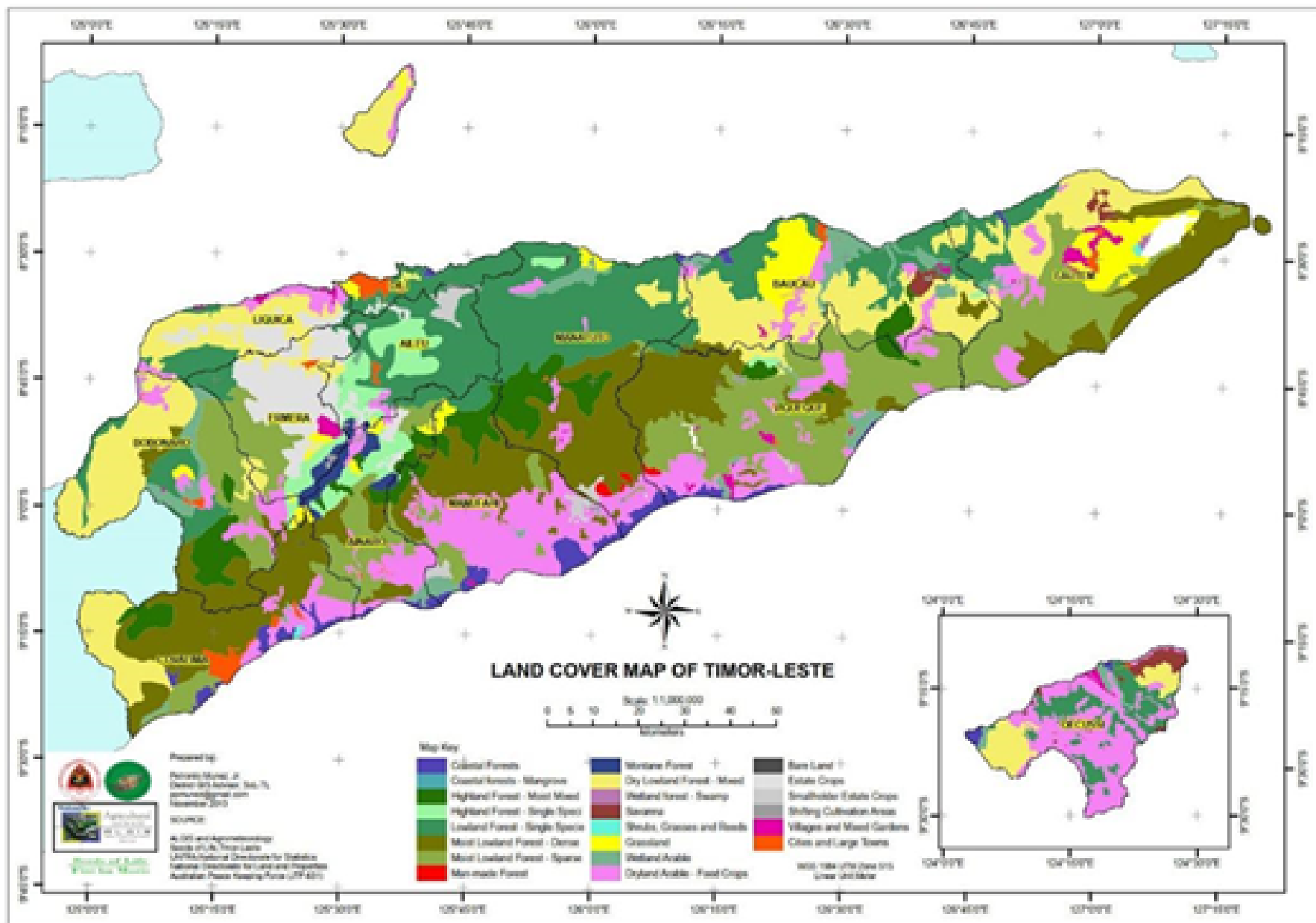
including training and agribusiness development activities – under Outcome 3.1. These initiatives – including the focus on their financial sustainability – will facilitate ongoing prioritisation of interventions to support climate change adaptation and LDN, supporting both the sustainability and replication of project interventions. Additionally, under Out

The production of high-resolution CCVAs at watershed level will provide a demonstration of the value of an improved evidence base for the upscaling of the CRIWDP process to other *sucos* in the priority watersheds. In addition, EbA-related monitoring data and lessons learned will be gathered throughout the project and disseminated to stakeholders and relevant national ministries (Outcome 4.1) to support the replication and upscaling across Timor-Leste of the EbA model, as well as the continual learning and improvement of the initiatives introduced by the project to ensure their sustainability. The policy briefs and best practice guidelines developed to communicate lessons learned from the project (Output 4.1.2) will be used to develop upscaling plans (Output 4.1.3) for the implementation of successful project interventions in two additional watersheds, in partnership with GoTL. In addition, engagement with the private sector to develop markets for traceable and sustainably grown commodities (Outcome 3.1) will support the upscaling of these interventions to other parts of the region. The Environmental and Social Management Plan, the stakeholder engagement plan and the gender Action Plan will ensure that the interests of all groups are included in the design of the project strategy to prevent conflict and promote stakeholder engagement and sustainability of the intervention plan.

In the current context of COVID-19, the proposed project will capitalise on opportunities for adaptation measures to contribute to green recovery processes. During PPG phase, the project-related risks associated with COVID-19 will be assessed, and opportunities for green recovery will be identified. All measures for capitalising on these opportunities will then be fully integrated into the project strategy and activities. The proposed project will respond to COVID-19 by proactively integrating COVID-19 into training activities under Outputs 2.1.4. This Output, focused on the CRIWDPs, will include specific training materials on water management, sanitation, hygiene, and human resilience against zoonotic diseases such as COVID-19. Additionally, training activities under Output 3.1.1 (on climate-resilient agribusinesses) will include materials on the opportunities for green growth – particularly regarding the ways in which investments in climate-resilient income-generating activities can stimulate local economies, create employment and livelihood security, and increase local resilience to recurrent zoonotic diseases. By raising awareness among stakeholders about the linkages between ecosystem resilience and human resilience to COVID-19, the proposed project will not only build momentum for implementing and scaling up climate-resilient agricultural interventions but also contribute to global green economic growth and sustainability efforts.

1b. Project Map and Coordinates

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



Democratic Republic of Timor-Leste



2. Stakeholders

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

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

NA

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

A field visit was conducted from 27 April to 5 May 2019 to inform the development of the proposed project. Government stakeholders were consulted, specifically from the Secretary of State for Environment, Ministry of Transportation and Communication and Ministry of Agriculture and Fisheries. In addition, representatives of international organisations working in Timor-Leste were consulted, including JICA, FAO and NGOs HIVOS (Humanist Organisation for Social Change), Conservation International, as well as RIKOLTO (via their Indonesia & Timor Leste office in Bali) – all with national programs in Timor Leste. The National Focal Point of the UNFCCC at the National University of Timor-Leste was also consulted during this field visit.

With JICA their various past and ongoing community-based management of natural resources and watershed development programs were discussed and necessary baseline documents obtained. As a result the Ministry of Agriculture and Fisheries, in collaboration with JICA has developed a best practices guidebook on community-based participatory planning for watershed management program. The GEF project design benefitted from the experience of HIVOS on the Raumoco Watershed program with regards community- participatory approaches for the development testing of alternative income generating activities to support NRM in watersheds.

Three sub-sites of the GEF-project selected watershed in Lautan district were visited and local communities were interviewed with regards their livelihoods, land-use and environment related problems as well as needs under the proposed project objective. Settlement included neighbourhood of Lospalos, Euquisi as well as Com, with the latter two in the lowlands; and characteristic of the area with regards lack of adequate drinking water, severe natural resource degradation and flood and drought damage due to both shifting cultivation, uncontrolled grazing, traditional and unproductive agriculture, due to typical geomorphology, as well as perceived impact of climate change resulting in poverty. Baseline information was obtained on e.g. challenges leading to low-level of community welfare, access to water, type of agriculture, crops, cropping systems and impact of climate change as perceived by villagers. Interviews did also discuss experience with villagers with past similar government or donor programs, their role, benefits and concerns, gender aspects (latter which seemed rather well done) – and which gave the GEF field team good insights in what counts for villagers and what we should not repeat or doing wrong. However, these baseline interviews were for reconnaissance purpose only, and included a fair sample of both village leaders, women, farmers, former Fretilin independence resistance army members, as well as few traditional leaders; yet none of the interviews was stratified or meant to generate statistically significant data.

Talks with corporate sector involved OLAM (Singapore office) regarding their value-chain participation in the ADB-led Inclusive, Sustainable, and Connected Coffee Value Chain Sub-project of the 'Agricultural Value Chain Development Project in Timor Leste'; the Global Director of the Rabobank Agri-3 Fund, as well as RIKOLTO (both their Bali office as well as their HQ staff) which has both a former and evolving sustainable Cocoa value chain, and agriculture community-development programs in Timor Leste. RIKOLTO already consulted with sustainable sourcing companies such as Mars and OLAM and obtained 'in-principle' interest, as well as has initiated talks with a Belgium impact investor – for the proposed Cocoa work under the GEF project. Additionally, at the onset of PIF conceptualisation talks were held with the Secretariat of the Sustainable Rice Platform, JICA, GIZ Indonesia office (dealing with TL) as well as RIKOLTO due to initial consideration to focus part of the GEF project on sustainable rice and watershed management. A short consultation was held with the owner of the

'Cooperativa Café Timor to gauge his interest in sustainable Cocoa or other commodities' development, yet this did not generate useful insights nor partnership. Note: additionally, RIKOLTO helped with the mapping and identification of prospective watersheds/districts for Cocoa development; as well as a summary of all past and ongoing commodity development and value chain donor programs.

A consultative and participatory approach, that ensures the full representation and participation of women in all and particularly decision-making processes, will continue to be used throughout project preparation and implementation. Consultations will include regular meetings, community focus groups and training workshops which will all be organised and conducted in a gender-responsive manner such that participation and gender-sensitive approaches are ingrained in collaborative processes. These processes will be conducted in alignment with up-to-date COVID-19 regulations to ensure the safety of all stakeholders (see mitigation strategy in Table 5).

An indicative list of stakeholders and their probable roles in project development and implementation are outlined in Table 5. This list of stakeholders and their contributions to the project will be refined and confirmed during the project preparation phase.

Table 5. Indicative list of stakeholders and their possible roles in project preparation and implementation.

Stakeholder list	Possible roles in the project
Government institutions	
Secretary of State for the Environment	Consulting on project design; recipients of policy campaign and capacity development; revising policies and targets according to sectoral expertise; coordinating with municipal authorities; users of knowledge management system
Secretary of State for the Support and Socio-Economic Promotion of Women	
Ministry of Transportation and Communication	
Ministry of Agriculture and Fisheries	
Ministry of Public Works	
Ministry of Social Solidarity and Inclusion	
Ministry of Tourism, Commerce and Industry	
Municipal governments	Coordinating local stakeholders; consulting on project design; issuing any relevant authorities or permits; users of knowledge management system
Community-level stakeholders	
<i>Suco</i> leadership	Participation in CRIWDP process; implementing plans; recipients of capacity development for CRIWDP implementation; coordinating <i>suco</i> -level SLM and EbA activities
Farmer organisations	Recipients of training on agri-business development; participating in CRIWDP process and implementing farm-level SLM and EbA activities
Women's organisations	
Community members in target <i>sucos</i>	Participating in CRIWDP process; implementing <i>suco</i> - and farm-level SLM and EbA activities

Private sector entities	
Rabobank	De-risking market investment into sustainable agri-business development
Olam	Providing a market for sustainably sourced commodities; investing in small-scale agri-business development
Mars	
National organisations	
Cooperativa Café Timor	Providing technical advice and lessons learned on agri-business development
Research institutions	
National University of Timor-Leste, Centre for Biodiversity and Climate Change	Providing scientific support; contributing to implementation of knowledge management system
International organisations	
Rikolto	Facilitating partnership development and sustainability commitments for food industry companies to work with small-scale farmers
JICA	Providing technical advice and lessons learned from community engagement
FAO	
GCF	
HIVOS	

3. Gender Equality and Women's Empowerment

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

Gender equality is enshrined in Article 17 of the Constitution of Timor-Leste and the State Secretary for Equality and Inclusion (SEPI) has been mandated to further this agenda^[1]. To this end, the Law Against Domestic Violence was passed in 2010 and SEPI has initiated a programme to build capacity for gender-responsive budgeting and gender mainstreaming across government ministries^[2]. Despite these efforts, gender inequality in Timor-Leste remains high, with a ranking of 124 out of 166 countries in terms of its Gender Development Index^[3]. Cultural and social practices relating to property rights, inheritance, marriage and bride price^[4] contribute to this inequality, restricting the social and economic independence of women^[5]. Norms and practices associated with Catholicism —relating, for example, to contraception and the role of women in households— can contribute to gender inequality^[6]. In addition, gender-based violence is a widespread problem, exacerbated by limited access to justice for women^[7].

Education and literacy levels have also contributed to gender disparities. More than half of the women over the age of 25 in Timor-Leste (58%) have never been to school, compared with 43% of men aged 25 and over^[8]. There are also differences in literacy rates between men and women, with 63% of men and 52% of women over the age of 15 being literate. School enrolment has rapidly increased since 2002 and by 2010 94% of girls and 92% of boys at primary school age were enrolled in schools^[9].

Timorese women, particularly in rural areas, are less likely than men to be formally employed (only ~27% of women compared with ~56% of men are classified as being in the formal labour force) and many women are dependent on subsistence agriculture for their livelihoods^[10]. While agricultural work is generally shared between women and men, women often have additional domestic responsibilities that reflect traditional gender roles — including caring for children and elderly people, cooking and cleaning^[11]. These roles predispose women to the impacts of climate change and land degradation by limiting their mobility and placing the burden of collecting water and firewood on them^[12]. In addition to this unpaid work burden, gender equality in Timor-Leste is negatively impacted by the customary systems of land ownership and inheritance. Despite legal provisions to ensure equal rights to inheritance, land ownership is predominantly transferred through male lines as a result of imbedded customary practices^[13].

Participation of women in decision-making is limited at national-, *suco*- and household-level. While 38% of the Timorese parliament was made up of women in 2012 (an increase from 25% in 2002), only ~2% of *suco* and *aleida* chiefs^[14] and 29% of civil servants are women^[15]. The role of women in household-level decisions is also restricted as men are usually considered head of the household and control family finances^[16]. Additionally, access to financial services is limited for women in rural areas of Timor-Leste. In some cases, this is attributed to cultural practices where women require their husband's consent and in others it is attributed to difficulty in navigating systems as a result of illiteracy^[17]. These combined factors negatively impact the ability of women to make decisions about livelihood changes and effectively implement measures to adapt to climate change and reduce their vulnerability.

The proposed project will promote gender equality and the empowerment of women in several ways. Interventions have been designed to take into account the: i) gender-differentiated vulnerability to climate change; ii) different roles and livelihood activities of men and women in rural communities and preferences for EbA measures; and iii) differences between men and women in terms of access to resources and services. Women will be specifically included in all community consultations — which will be conducted in a gender-responsive manner to ensure full representation (with 50% women present) and participation, including in decision-making processes^[22]. Activities that increase access to finance and develop capacity for EbA will also be designed to address gender-specific barriers to accessing finance for EbA. The design of water supply and storage infrastructure and the management systems for this infrastructure will consider the different uses of water and access requirements of men and women, as well as considering people with disabilities in their design. In addition, gender considerations will be incorporated into policy and target development activities at national level as well as watershed-level CCVAs. During the project preparation phase, a gender analysis and action plan will be developed, which will be used to further refine the project design and develop gender-responsive indicators for the proposed project. In addition to the above, the GEF policy on gender equality will be applied throughout development and implementation of the proposed project^[23].

¹ GoTL. 2002. Constitution of the Democratic Republic of Timor-Leste. Available at: http://timor-leste.gov.tl/wp-content/uploads/2010/03/Constitution_RDTL_ENG.pdf.

² Japan International Cooperation Agency (JICA). 2011. Timor-Leste Country Gender Profile: Final Report.

³ The Gender Development Index (GDI) of Timor-Leste is 0.868. It is calculated from the sex-disaggregated Human Development Index (HDI) as the ratio of female HDI to male HDI, where 1 indicates gender parity. The indicator incorporates the three dimensions of the HDI: health (measured by female and male life expectancy at birth), education (measured by female and male expected years of schooling for children and mean years for adults aged 25 years and older); and command over economic resources (measured by female and male estimated GNI per capita).

⁴ UNDP. 2015. Human Development Index. Work for Development. Briefing note for countries on the 2015 Human Development Report. Timor-Leste

⁵ A bride price or dowry is an amount of money given by the groom and his family to the bride's family patrilineal communities. It is the most financially significant of the bride gifts and is not part of matrilineal ceremonies.

⁶ Asian Development Bank (ADB). 2014. Timor-Leste Country Gender Assessment.

⁷ JICA. 2011. Timor-Leste Country Gender Profile: Final Report

⁸ ADB. 2014. Timor-Leste Country Gender Assessment.

[9] OECD. 2019. Available at: <https://www.genderindex.org/wp-content/uploads/files/datasheets/2019/TL.pdf>

[10] ADB. 2014. Timor-Leste Country Gender Assessment.

[11] ADB. 2014. Timor-Leste Country Gender Assessment.

[12] The World Bank. 2019. A Gender-Sensitive Insight of Poverty Mapping for Timor-Leste.

[13] ADB. 2014. Timor-Leste Country Gender Assessment.

[14] ADB. 2014. Timor-Leste Country Gender Assessment.

[15] Green Climate Fund (GCF). 2019. Gender Assessment. FP109: Safeguarding rural communities and their physical assets from climate induced disasters in Timor-Leste.

[16] Kieran, Caitlin, Sproule, Kathryn, et al., "Examining Gender Inequalities in Land Rights Indicators in Asia," Agricultural Economics (United Kingdom) 46 (2015): 119–38, <https://doi.org/10.1111/agec.12202>.

[17] Thu, Pyone Myat, Scott, Steffanie, & Niel, Kimberly P. Van, "Gendered Access to Customary Land in East Timor," GeoJournal 69, no. 4 (2007): 239–55, <https://doi.org/10.1007/s10708-007-9094-8>.

[18] Municipalities in Timor-Leste are divided into *sucos* or villages, which are further divided into *aldeias* or communities.

[19] ADB. 2014. Timor-Leste Country Gender Assessment.

[20] Timor-Leste Population and Housing Census. 2010. Analytical Report on Gender Dimension. Volume 4. Reported in GCF. 2019. Gender Assessment. FP109: Safeguarding rural communities and their physical assets from climate induced disasters in Timor-Leste.

[21] GCF. 2019. Gender Assessment. FP109: Safeguarding rural communities and their physical assets from climate induced disasters in Timor-Leste.

[22] This will include considering household and childcare responsibilities of women in the timing and venue of consultations, as well as having female facilitators.

[23] Global Environmental Facility. GEF Policy Series - GEF Policy on Gender Equality. Available at: <https://www.thegef.org/publications/gef-policy-series-gef-policy-gender-equality>

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

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

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

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Through engagement and collaboration with private sector and NGO partners, the proposed project will address the barriers of limited access to markets and finance for small scale farmers for agricultural commodities. In collaboration with international NGOs focussing on small-scale agriculture (for example, Rikolto), commodity buyers in the food industry (for example Mars and Olam) will be engaged to develop commitments to sourcing sustainable and traceable commodities. These commitments will be designed to enhance the application of SLM practices in commodity production systems and to build climate resilience. Based on these commitments, small-scale farmers will be incentivised to transition to sustainable commodity production systems. Private sector partners will engage with farmer organisations and women's cooperatives to develop capacity and provide technical assistance for achieving sustainability certification standards, enhancing access to commodity markets. Local financial institutions and capital intermediaries (for example the Rabobank Agri-3 Fund) will be engaged to develop de-risked impact investment opportunities to offer finance to farmer organisations and women's cooperatives. This will enable small-scale farmers to invest in the transition to agroforestry systems for commodity production. Financial mechanisms developed through these partnerships will be gender-sensitive and accessible to small-scale farmers through farmer organisations and women's cooperatives. This finance will enable farmers to develop agri-businesses and to transition to practicing climate-resilient SLM, with project support reducing the risk to the investors. Engagement with prospective private sector partners will be undertaken during the PPG phase of the proposed project to ensure the maximum impact of these partnerships during project implementation.

5. Risks to Achieving Project Objectives

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 6. Risks and mitigation measures for the proposed project.

#	Risk	Potential consequence	Mitigation measure	Probability (P) & Impact (I) (1–5)	Risk rating (R) & Category (C)
1	Food production for local consumption decreases as a result of the conversion of land used for subsistence agriculture to agroforestry systems for commodity production and the capacity of affected individuals to purchase food is not increased or is only increased after some time through income from commodity production.	Vulnerability to climate change and food insecurity are increased for vulnerable community members.	Participatory climate-resilient integrated watershed development planning (CRIWDP) will be undertaken with detailed input from communities to ensure that food security is not compromised through project interventions. EbA initiatives implemented during the project will be designed to increase agricultural productivity and food security through the increased provision of ecosystem goods and services.	P = 2 I = 5	R = High C = Social
2	There is conflict among stakeholders regarding land-use in the CRIWDP process.	Project interventions are delayed or a lack of community buy-in results in a failure of <i>sucos</i> to implement plans and effectively adopt climate-resilient SLM practices.	The CRIWDP process will be professionally facilitated and include mechanisms for conflict resolution. The process will be aligned with traditional <i>tara bandu</i> practices ^[1] and in this way will make use of existing community systems for conflict resolution.	P = 2 I = 3	R = Modest C = Social

3	The private sector is unwilling to invest in supporting the development of agri-businesses and the adoption of climate-resilient SLM because of the high risk of investing in Timor-Leste.	Markets for commodity crops remain inaccessible to small-scale farmers and there remains limited scope to increase income from sustainable agribusiness and therefore limited incentives for farmers to adopt the EbA model.	A feasibility assessment will be undertaken during project preparation, including engagement with private sector partners to determine how best to facilitate private sector investment. A strategy for de-risking investments will also be developed and implemented as part of the project.	P = 2 I = 3	R = Modest C = Economic
4	Investment mechanisms designed under the project are not context-appropriate and/or are only accessible to specific groups and therefore do not improve access to finance for the most vulnerable small-scale farmers.	Existing inequalities are further entrenched and vulnerable farmers continue to have limited access to capital and are therefore unable to transition to sustainable agribusiness. Uptake of climate-resilient SLM practices at farm level remains limited and private sector financing is not effectively utilised.	Comprehensive research and community engagement will be undertaken during project preparation to ensure investment mechanisms are appropriate for the target communities and that access to these opportunities is equitable. Lessons learned and best practices from other projects in Timor-Leste and the region will be used to inform project design during the PPG phase to maximise its impact.	P = 2 I = 2	R = Low C = Social
5	EbA technologies and practices implemented under the project are not maintained by communities and are degraded after the project lifespan.	There is little change from the baseline vulnerability to climate change and land degradation scenario.	Maintenance of project interventions and ongoing implementation of EbA practices will be incorporated into the CRIWDPs generated under the project to facilitate community commitment to the sustainability of the interventions. Monitoring and evaluation will be conducted throughout the project.	P = 2 I = 2	R = Low C = Social

			ect to assess the impact a nd effectiveness of interve ntions which will help to m obilise government suppor t for upscaling of the EbA model.		
6	Extreme climate eve nts and natural haza rds, including landsli des, drought, floods and fires at project s ites during project i mplementation dam age or destroy SLM and EbA measures i mplemented throug h the project.	The implementation of the project will be stopped or delayed as communities rec over from the impac ts of the extreme ev ents and fires.	During the project implem entation, high rainfall varia bility in rainfall trends may impact on the effectiveness of water harvesting in Co mponent 2. Extreme rainf all events associated with tropical cyclones and asso ciated soil erosion and floo ding may affect climate re silient agriculture and agri business development in C omponent 3. Droughts co uld affect water stress for crops and water demand f or livestock. The PPG pha se will determine what saf eguard measures would b e needed to ensure that th e interventions implement ed are effective and that th e project is not implement ed by adverse climate eve nts. For example, water ha rvesting structures should be built to account for do mestic needs and extreme s in rainfall variability. Lan dscape restoration should be carried out in a way that does not detract from peo ple's livelihoods today, fun ction as windbreaks to ter	P = 2 I = 3	R = Modest C = Environm ental

			<p>ction as windbreaks to targeted farms where feasible, as well as being most effective in the drought conditions (e.g Assisted Natural Regeneration). The Watershed Committees should develop disaster risk reduction plans in the event of extreme climate events.</p> <p>A disaster risk and response plans will be put in place in collaboration with selected communities in the ESMP for the project.</p>		
7	Gender-inequitable contexts in Timor-Leste may pose challenges for achieving the results of the gender responsive interventions.	Collaboration between stakeholders and implementation of interventions may effectively engage females and subsequently lead to project maladaptation.	During project preparation phase, in-depth research, gender analysis and action plan will be developed to refine project design and develop gender-responsive indicators and interventions.	P = 2 I = 4	R = Modest C = Social
8	COVID-19 pandemic resurgence during PPG phase and/or implementation.	This would likely result in restrictions regarding: i) the congregation of people, and ii) national and international travel. Thus, stakeholder engagement could be hindered, and project implementation delayed – particularly activities related to capacity development and adaptation interventions.	<p>In a resurgence scenario, the proposed project will follow Government protocol related to COVID-19. The risks related to COVID-19 will be evaluated during PPG phase and mitigation measures will be integrated into planned project activities and budgets.</p> <p>Possible arrangements include that: i) meetings and workshops will take place in outdoor spaces, with soc</p>	P = 2 I = 3	R = High C = Social

			<p>ial distancing and hygiene measures applied; ii) meetings and workshops will be organised in smaller groups, with a larger number of events such that all stakeholders are engaged and that at the same total number of beneficiaries are reached; iii) physical meetings may be replaced with virtual meetings (via Skype, Zoom or an similar platform); iv) capacity building and training may be conducted via videos, online training modules, webinars, and/or podcasts; and v) protective equipment will be provided to all implementing partners and beneficiaries and full access to sanitation points will be ensured.</p> <p>Should national or international travel restrictions be implemented as part of Government COVID-19 regulations, virtual consultations, workshops, and training can be organised.</p>		
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[1] *Tara bandu* is a traditional Timorese custom used to regulate behaviour and resolve conflict through public agreement. Further information available at: <https://asiafoundation.org/resources/pdfs/TaraBanduPolicyBriefENG.pdf>

6. Coordination

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

UNEP will be the lead GEF Implementing Agency for this project. The project will be executed at the national level by the lead executing agency the Directorate of Climate Change – State Secretary for the Environment. The directorate will coordinate and execute the project together with Ministry of Agriculture and Fisheries; Ministry of State Administration (municipal governments) as well as other key technical partners, especially RIKOLTO with regards sustainable agriculture, community development, and marketing, sourcing and impact financing support with corporate partners. Additionally, given the broad scope of the project, the PPG will look into the need for additional expertise and partnership during CEO ER phase. Additional EAs will be identified and detailed roles and responsibilities will be discussed and finalized after consultation during CEO ER phase.

A Coordination Committee will be established to support the implementation of the proposed project and facilitate coordination between the project and parallel investments, based on the member agencies involved in the cross-sectoral working group on climate resilience and LDN established under Output 1.1.2. The Committee will meet at least biannually and will be chaired by a representative of the Secretary of State for the Environment. In addition to this representative, other government stakeholders, including the Ministry of Agriculture and Fisheries, and the Ministry of Social Solidarity and Inclusion will be represented on the Committee. Private sector stakeholders, representatives of the project management teams for other projects, including the GCF UNDP project, and community organisations will also be a part of the Coordination Committee. An indicative list of relevant stakeholders is provided in Section 2. The Committee will support coordination between the proposed project and other relevant projects to maximise synergies and avoid duplication.

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Reporting requirements and templates are an integral part of the UNEP legal instruments, to be signed with the Executing Agency. The project M&E plan will be consistent with the GEF Monitoring and Evaluation policy. Coordination with GEF and other initiatives will be ensured through the Directorate of Climate Change, UNEP and e.g. RIKOLTO with regards corporate engagement such as stated in section 4.

Several projects have been designed to address land degradation, climate change adaptation and agri-business development in Timor-Leste. The proposed project will coordinate with these GEF and non-GEF initiatives to: i) facilitate the incorporation of lessons learned into project design[1]; ii) promote synergies between projects' activities; and iii) prevent duplication of effort and resources. Details of relevant projects are given below.

The Strengthening targeted national capacities to improve decision-making and mainstreaming global environmental obligations into national development priorities project is being implemented by UNDP between 2018 and 2023. The project has received a US\$1.45 million grant from GEF with US\$1.5 million co-finance. It aims to strengthen the institutional capacity of the GoTL to implement its obligations under the UNFCCC, UNCCD and the Convention on Biodiversity. Components of the project will include strengthening knowledge management and inter-ministerial coordination for planning and decision making. The proposed project will coordinate with UNDP and the project management team to ensure that synergies relating to policy- and decision-making and knowledge management are maximised as well as to prevent duplication of effort.

A US\$3.4 million grant from GEF as well as US\$12.3 million co-finance will support the project **Securing the long-term conservation of Timor-Leste's biodiversity and ecosystem services through the establishment of a functioning Nation Protected Area system and the improvement of natural resource management in priority catchment corridors**, which is being implemented between 2018 and 2021. The project will be executed through a partnership between the Ministry of Agriculture and Fisheries (MAF), the Ministry of Commerce, Industry and Environment (MCIE) and Conservation International Timor-Leste. It aims to establish a functioning National Protected Area system as well as address land and forest degradation through community-based natural resource

management (CBNRM) and restoration of degraded lands in priority catchments. The proposed project will build on lessons learned regarding community engagement in natural resource management and methods for catchment reforestation from this project. This will contribute to ensuring the efficiency and effectiveness of the proposed interventions.

[2]
From 2013–2019, a partnership between NCBA CLUSA², Cooperativa Café Timor and Cooperative Business International implemented the **Timor-Leste Agribusiness Development** project. The project was financed through a US\$9.2 million grant from the United States Department of Agriculture (USDA) Commodity Credit Corporation. The aim of the project was to link smallholder farmers of coffee, cocoa, cassava and other commodity crops with international markets. The proposed project will build on the lessons learned from this project regarding engagement with the private sector and improving access to finance in order to maximise the effectiveness of interventions to support agribusiness development. Specific lessons from this project include the importance of engaging with entire value chains as well as the need to improve access for farmers to equipment and inputs to enable them to increase and sustain agricultural productivity. These lessons have informed the design of interventions under Component 3 of the proposed project.

Through a partnership between Hivos, MAF and GIZ, the €490,000 **IA4RA Raumoco Watershed** project was implemented from 2016–2019. The project sought to address the impacts of land degradation and climate change on the food-water-energy nexus in six *sucos* in Lautém Municipality. During the PPG phase, the lessons learned from this project will be used incorporated into the design of the proposed project, specifically relating to: i) the introduction of context-appropriate “agro-ecological” technologies; ii) rainwater harvesting and collection; and iii) the planting of trees in agricultural landscapes to improve ecosystem service provision. The agricultural extension system capacitated during this project will also provide a blueprint for the incorporation of extension services into the proposed project.

The **Coffee and Cocoa Agri-business Opportunities (CACAO)** project is a partnership between the National Cooperative Business Association and the New Zealand Ministry of Foreign Affairs and Trade. Through the project, US\$10.5 million is being invested in training farmers and providing equipment and inputs to support the cultivation of coffee and cocoa, in partnership with Cooperativa Café Timor. The project is being implemented from 2015 to 2020 with the aim of increasing household income for small-scale farmers. The proposed project will build on the agri-business model implemented under the CACAO project to: i) engage further with private sector partners; ii) improve access to markets and finance for small-scale farmers growing other commodities; and iii) ensure the long-term resilience of small-scale farmers to the impacts of climate change.

The European Union (EU) and GIZ have invested €30.2 million into a project entitled **Partnership for Sustainable Agroforestry**. The project is being implemented from 2017–2022 in Manatuto, Baucau, Viqueque and Lautém municipalities, with the main aim of improving market access and value chains for agroforestry products and improving institutional support for agroforestry. Interventions under the project include: i) supporting the establishment of new agroforestry systems; ii) training farmers and extension officers; iii) supporting the development of small businesses; iv) participatory land-use planning; and v) policy development. The proposed project will build on the ongoing activities of the Partnership for Sustainable Agroforestry in several ways. Firstly, under Component 2 and 3, the proposed project will extend the agroforestry approach into additional municipalities in the Dasidaro and Lacleo watersheds. Secondly, under Component 3, the proposed project will adapt the training materials and community engagement methodologies implemented by the Partnership for Sustainable Agroforestry and extend this training to additional farmers organisations and women's cooperatives. Thirdly, under Component 3, the project will extend support to small business development by creating incentives for private sector buyers to invest in sustainable agriculture and developing a portfolio of bankable impact investments. Finally, through the strengthening of climate-resilient watershed development planning under Component 2, the proposed project will further the participatory land-use planning objective of the Partnership for Sustainable Agroforestry.

Under the GCF Readiness and Preparatory Support Programme, the programme entitled **Enhancing human resources, systems and procedures in Timor-Leste to effectively engage with the Green Climate Fund** was submitted in June 2019. It is being implemented by the National Directorate for Climate Change, General Directorate for Environment, and the Secretary of State for Environment under the Coordinating Minister for Economic Affairs from 2020–2022. The programme will build on the country's initial 2017–2018 GCF Readiness Programme, which included: i) the establishment of communication and consultation processes; ii) the development of a set of national climate investment priorities, and the development of a manual to guide GCF project development; and iii) the finalisation of a national GCF project development manual. The current readiness programme is accessing ~US\$700,000. It aims to: i) communicate the important outcomes of the initial project to a comprehensive range of stakeholders; ii) elaborate a national monitoring and evaluation system based on the initial scoping work; iii) develop a range of financing strategies; iv) build on initial scoping work to develop a national accredited entity; and v) develop a set of projects based on the national climate investment priorities identified in the initial project. The vulnerability assessments undertaken under Component 2 of the proposed project will build on the improved modelling and mapping of climate change impacts under Outcome 1 of the GCF Readiness Programme. The proposed project will also make use of the increased national capacity for climate change adaptation resulting from Outcome 1 of the GCF Readiness

Programme. In addition, the project will be aligned with the adaptation and climate finance strategy development undertaken under Outcome 4 of the GCF Readiness Programme. Under Component 3 of the project, specific work on developing private sector partnerships to support the financing of climate change adaptation will be undertaken. Components 1 and 4 of the proposed project will build upon on the ongoing GCF Readiness Programme by contributing to national monitoring and evaluation methods information and developing the country's climate-resilient agricultural knowledge base

The **Pacific Adaptation to Climate Change and Resilience Building (PACRES)** is an ongoing programme funded by the European Union's flagship initiative, the Global Climate Change Alliance Plus (GCCA+), which is assisting the world's most vulnerable countries in addressing climate change. PACRES is a programme financed through the African, Caribbean and Pacific Group of States (ACP Secretariat) and the EU for the implementation of the Intra-ACP GCCA+ Programme. The amount invested is €12 million (~US\$14 million). The project started in January 2018 and is expected to end in June 2022. Its scope is regional, and it is being carried out in 15 Pacific countries^[3], with the aim to "strengthen support for partner countries in climate negotiations and in implementing the Paris Agreement, enhance national^[4] and regional climate change strategies and scale up climate change adaptation pilots in five countries, with a focus on ecosystem-based solutions"^[4]. Intra-ACP GCCA+ PACRES interventions include: i) improving information sharing and the development of national capacity to address climate change and build disaster resilience through training, studies and research opportunities; ii) strengthening regional networks and enhancing knowledge sharing amongst ACP regions; and iii) engaging the private sector to address climate change and build disaster resilience^[5]. The proposed project will build on the activities of PACRES by building the resilience of local communities to climate change through agroforestry – an ecosystem-based climate-resilient agricultural technique – in the Dasidaro and Laclo watersheds. The proposed project will develop national government capacity for climate change adaptation as well as improving knowledge management and information sharing through Components 1 and 4, respectively. These activities will complement the focus of the PACRES on improving information sharing and developing capacity for climate change adaptation, which will be implemented, in part, through training, studies and research opportunities. Component 2 will also build knowledge about gender-specific climate change vulnerability, which will further Timor-Leste's overall climate change adaptation knowledge production and dissemination. Additionally, the proposed project's focus on developing climate resilient agricultural business models (Component 3) links to activities under PACRES to engage the private sector to address climate change and build disaster resilience.

[1] Gender-related information and lessons learned from these projects that may feed into the proposed project aims will be assessed during the project preparation phase.

[2] National Cooperative Business Association CLUSA International is an American initiative that aims to support the development of cooperative enterprises.

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7. Consistency with National Priorities

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

Yes

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

The proposed project is aligned with the strategies and plans described in the table below.

Table 7. Alignment of proposed project with the national policies, strategies and plans of Timor-Leste^[1].

National Strategies/Plans	Alignment
National Action Programme to Combat Land Degradation (LDNAP), 2008	The LDNAP recognises the urgent need for the implementation of sustainable land management and to provide a suite of incentives for farmers to adopt these practices. The proposed project will contribute to five of the Action Programmes identified in this document, namely: i) sustainable agriculture and forestry development; ii) poverty alleviation programmes, including enabling agricultural diversification; iii) public education and awareness; iv) improvement of the legislative framework and policies for sustainable land management; and v) rehabilitation of degraded lands and protection of water resources.
National Adaptation Programme of Action (NAPA), 2010	As with the NDC, food security is identified as a priority sector for adaptation in the NAPA. The proposed project is closely aligned with the adaptation programme for this sector and will also contribute to developing national institutional capacity for addressing climate change, which is one of the other priorities. Specifically, the project aims to strengthen cross-sectoral coordination at national government level and to develop community-level capacity for climate change adaptation. In addition, addressing water availability, accessibility and quality are identified as adaptation priorities in the NAPA. Under Output 2.3 of the proposed project, key adaptation options for the water sector, as identified in the NAPA, will be implemented. This includes the protection of water sources, and enhancement of water harvesting, distribution and management in targeted <i>sucos</i> .

Strategic Development Plan, 2011–2030	The Strategic Development Plan of Timor-Leste sets out national priorities and a guiding framework for the country until 2030. Awareness raising and education on environmental issues as well as climate change adaptation are recognised as important initiatives for building “Social Capital”. The development of small businesses based on the agricultural sector is also identified as an important component of rural development. The proposed project is aligned with these national priorities to facilitate environmentally sustainable economic development.
Initial National Communication to the UNFCCC (INC), 2014	The proposed project will contribute to implementing prioritised adaptation actions identified in the INC. These priorities include watershed management to improve water supply for agriculture – which is aligned to project activities to restore watersheds – and improved coordination between sectors to facilitate adaptation. The INC also highlights the key adaptation programmes identified in the National Adaptation Programme of Action. Alignment of the proposed project with these programmes is detailed above.
National Strategy and Action Plan for Gender and the Private Sector, 2014–2017	The proposed project will contribute to the goals of this Strategy and Action Plan, which include: i) creating an enabling environment for rural women to start small businesses; ii) improving access to markets; and iii) improving access to credit and financial services. The project will also provide training for women in target <i>sucos</i> to support these goals.
MAF Agriculture Sector Development Medium Term Operation Plan, 2014–2018	The proposed project will contribute to the programmes identified in this plan to improve access to markets and value addition for small-scale farmers, to support the development of an enabling environment and to incorporate natural resource management and sustainable agricultural practices into agricultural development.
National Biodiversity Strategy and Action Plan (NBSAP) 2011–2020, 2015	Strategic Actions 3 and 4 under Priority Strategy 1 of the NBSAP aim to promote sustainable agricultural practices and develop policies to support sustainable land management. The proposed project will contribute to realising these goals by training farmers in the implementation of sustainable farming methods and contributing to the development of an enabling policy environment for sustainable land management.
Nationally Determined Contribution (NDC), 2015	Adaptation measures for improved food security are identified in the NDC as a national priority. These measures include promoting agroforestry, watershed management and sustainable land management as well as reforesting degraded land and conducting education and awareness to support sustainable agricultural practices. The proposed project will contribute to the implementation of these measures and to achieving the goal of promoting permanent agriculture rather than shifting cultivation, so contributing to both climate change adaptation and reducing land degradation.
Zero Hunger Challenge: National Action Plan for a Hungry	One of the aims of this Action Plan is to increase the income and productivity of smallholders. The proposed project will contribute to this aim by addressing the recognised n

er and Malnutrition Free Timor-Leste, 2015–2025	eed to improve access to finance for smallholders and to partner with the private sector to improve rural incomes. The Action Plan also acknowledges the importance of addressing vulnerability to climate change and variability.
National Policy on Forests, 2017	The proposed project is aligned with the Forest Policy's objective of preventing deforestation and forest degradation. Land-use planning initiatives undertaken through the project will support rural communities to sustainably manage forest resource use and restoration activities will improve the supply of ecosystem goods and services from forests to rural <i>sucos</i> .
Land Degradation Neutrality Target-Setting Process (LDN TSP) Country Report, 2018	The proposed project will contribute to achieving targets to reduce land degradation in Timor-Leste over a targeted area of 22,200 ha, including through sustainable management of priority watersheds and by supporting community-level governance of natural resources. The project will also address barriers to achieving LDN targets identified in the report by improving the accessibility of financing for SLM on small-scale farms and building capacity for the implementation of SLM practices.
Agricultural Mechanisation Policy, 2018	One of the objectives specified in the Agricultural Mechanisation Policy is to promote the development of agri-business in an environmentally sustainable way. The proposed project aligns with this objective and contributes to the need identified in the policy for “government-enabled, private sector-led and producer/community-owned” enterprises and strengthened value chains.

[1] During the project preparation phase, further policies and plans will be examined for relevant gender related information to feed into the proposed project.

8. Knowledge Management

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

Knowledge management will be an important consideration under all components of the proposed project but will be specifically addressed through Component 4. Lessons learned^[1] during project implementation – in addition to those from past and current aligned initiatives – will be collated and disseminated to inform the upscaling and replication of climate-resilient SLM initiatives. A strategy for collecting and disseminating relevant knowledge, best practices and lessons learned will be developed and implemented under Output 4.1.2. Results and lessons from M&E of project impacts conducted under Output 4.1.1 will also be made accessible to stakeholders and decision-makers to facilitate replication and upscaling across Timor-Leste, including to inform the development of an upscaling plan under Output 4.1.3. Further details of the project’s approach to knowledge management will be determined during the project preparation phase in consultation with the relevant stakeholders.

^[1] With a specific focus on women business and gender-related lessons learned.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Section 3: Safeguard Risk Checklist

Screening checklist	Y/N/ Maybe	Justification for the response (please provide answers to each question)
Guiding Principles (these questions should be considered during the project development phase)		
GP1 Has the project analyzed and stated those who are interested and may be affected positively or negatively around the project activities, approaches or results?	Y	A preliminary analysis of stakeholders and beneficiaries has been conducted. A more comprehensive assessment will be undertaken during the project development phase
GP2 Has the project identified and engaged vulnerable, marginalized people, including disabled people, through the informed, inclusive, transparent and equal manner on potential positive or negative implication of the proposed approach and their roles in the project implementation?	N	Extensive and inclusive stakeholder engagement will be undertaken during the project development phase, including engagements with vulnerable and marginalized people.
GP3 Have local communities or individuals raised human rights or gender equality concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	N	Initial stakeholder engagements were held in May 2019. Further, extensive community engagement will be undertaken during the project development phase.
GP4 Does the proposed project consider gender-balanced representation in the design and implementation?	Y	Consideration has been given to gender-balanced representation in all relevant project activities, including training and the development of community governance systems. A detailed gender assessment and action plan will be developed during the project development phase.
GP5 Did the proposed project analyze relevant gender issues and develop a gender responsive project approach?	Y	An initial assessment of gender issues has been conducted and used to inform the project design. A detailed gender assessment and action plan will be

		detailed gender assessment and action plan will be developed during the project development phase.
GP6 Does the project include a project-specific grievance redress mechanism? If yes, state the specific location of such information.	N	A grievance redress mechanism for the project will be developed during the project development phase.
GP7 Will or did the project disclose project information, including the safeguard documents? If yes, please list all the webpages where the information is (or will be) disclosed.	N	Safeguard-related information will be disclosed as required during the project development phase.
GP8 Were the stakeholders (including affected communities) informed of the projects and grievance redress mechanism? If yes, describe how they were informed.	N	Further stakeholder consultations including providing information about the grievance redress mechanism will be undertaken during the project development phase.
GP9 Does the project consider potential negative impacts from short-term net gain to the local communities or countries at the risk of generating long-term social or economic burden? [1]	Y	The project has been designed to provide short- and long-term benefits through the restoration and protection of ecosystems and the goods and services they provide. A more detailed analysis of the risks and benefits associated with the project will be undertaken during the project development phase.
GP10 Does the project consider potential partial economic benefits while excluding marginalized or vulnerable groups, including women in poverty?	Y	The project has been designed to target marginalized and vulnerable groups, increasing incomes of rural communities with a specific focus on women. Further assessments will be undertaken to ensure that the benefits of the project are equitable and do not contribute to further marginalizing any groups during the project development phase.
Safeguard Standard 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management		
<i>Would the project potentially involve or lead to:</i>		
1.1 conversion or degradation of habitats (including modified habitat, natural habitat and critical natural habitat), or losses and threats to biodiversity and/or eco	N	The proposed project targets the restoration of degraded ecosystems and protection of habitats and ecosystem services. No natural habitats will be

systems and ecosystem services?		converted for agriculture.
1.2 adverse impacts specifically to habitats that are legally protected, officially proposed for protection, or recognized as protected by traditional local communities and/or authoritative sources (e.g. National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)?	N	The project targets communal agricultural land, rangeland and forests. No land will be converted and forest ecosystems which may be in protected areas will be protected and restored.
1.3 conversion or degradation of habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	The proposed project targets the restoration of degraded ecosystems and protection of habitats and ecosystem services. No natural habitats will be converted for agriculture.
1.4 activities that are not legally permitted or are inconsistent with any officially recognized management plans for the area?	N	Alignment between the watershed development plans compiled under the project and any existing watershed management plans or land-use plans will be ensured as part of the consultative process of compiling these plans.
1.5 risks to endangered species (e.g. reduction, encroachment on habitat)?	N	No natural habitats will be converted or degraded under the proposed habitat.
1.6 activities that may result in soil erosion, deterioration and/or land degradation?	N	One of the primary objectives of the proposed projects is to reduce land degradation and prevent soil erosion. The activities have been designed with this objective.
1.7 reduced quality or quantity of ground water or water in rivers, ponds, lakes, other wetlands?	N	Through the restoration and protection of natural ecosystems and the improvement of agroecosystem management practices, the project will seek to improve groundwater infiltration and water retention in ecosystems in the watersheds.
1.8 reforestation, plantation development and/or forest harvesting?	Y	Forest restoration is an activity under the project. This will largely be done through assisted natural regeneration, but may include some manual reforestation. Species used for this activity will be locally indigenous.
1.9 support for agricultural production, animal/fish production and harvesting	Y	The project will support the cultivation of traceable, sustainable commodity crops, including cocoa and vanilla as well as supporting low external inn

		and vanilla as well as supporting low external input sustainable agriculture (LEISA) on small-scale farms.
1.10 introduction or utilization of any invasive alien species of flora and fauna, whether accidental or intentional?	N	During the project development phase, assessments will be undertaken to ensure that none of the plants used during the project are invasive species.
1.11 handling or utilization of genetically modified organisms?	N	Locally grown cultivars of cocoa and vanilla will be used for the proposed project activities.
1.12 collection and utilization of genetic resources?	N	
Safeguard Standard 2: Climate Change and Disaster Risks		
<i>Would the project potentially involve or lead to:</i>		
2.1 improving resilience against potential climate change impact beyond the project intervention period?	Y	Through ecosystem-based adaptation and improved forest, rangeland and farm management practices, the climate resilience of rural communities will be enhanced beyond the project lifespan.
2.2 areas that are now or are projected to be subject to natural hazards such as extreme temperatures, earthquakes, extreme precipitation and flooding, landslides, droughts, severe winds, sea level rise, storm surges, tsunami or volcanic eruptions in the next 30 years?	Y	The project will target areas in the two priority watersheds that are identified as particularly vulnerable to climate change by IVA undertaken at country level. One of the major criteria was water scarcity. Based on it, the areas vulnerable to the impacts of droughts as well as those that are at risk of extreme precipitation, flooding and landslides have been selected. The project has been designed to focus on addressing these vulnerabilities and reducing the risk of climate-related natural hazards. The design has been informed by climate change projections and an analysis of expected climate-related risks, including food and water insecurity and extreme climate events.
2.3 outputs and outcomes sensitive or vulnerable to potential impacts of climate change (e.g. changes in precipitation, temperature, salinity, extreme events)?	Y	The agricultural systems, including LEISA and sustainable commodity production systems introduced through the project, as well as the ecosystems restored may be vulnerable to the impacts of climate change.

		<p>ate change, including changes in temperature and extreme events. However, the restoration of ecosystems and ecosystem function will increase the resilience of the landscape and local communities. The climate change vulnerability assessment conducted under the project will inform the watershed development plans, and the project will ensure that water infrastructure designs and materials as well as the plant species used are selected according to their climate change resilience.</p>
2.4 local communities vulnerable to the impacts of climate change and disaster risks (e.g. considering level of exposure and adaptive capacity)?	Y	<p>The project will target areas in the two priority watersheds that are identified as particularly vulnerable to the impacts of climate change. This will include areas that are vulnerable to the impacts of droughts as well as those that are at risk of extreme precipitation, flooding and landslides. During the project implementation, high rainfall variability in rainfall trends may impact on the effectiveness of water harvesting in Component 2. Extreme rainfall events as well as storm damage associated with tropical cyclones and associated soil erosion and flooding may affect climate resilient agriculture and agri-business development in Component 3. Droughts could affect water stress for crops and water demand for livestock. The PPG phase will determine what safeguard measures would be needed to ensure that the interventions implemented are effective and that the project is not excessively impacted by adverse climate events. For example, water harvesting structures should be built to account for domestic needs and extremes in rainfall variability. Landscape restoration should be carried out in a way that does not detract from people's livelihoods today, function as wind breaks to (project) targeted farmland where feasible, as well as being most effective in the drought conditions (e.g Assisted Natural Regeneration). The Watershed Committees should develop disaster risk reduction plans in the event of extreme climate events.</p>

		The project will focus on addressing these vulnerabilities and reducing the risk of climate-related natural hazards. In addition, gender and safeguards assessments conducted during the project development phase will inform additional consideration of intersectional vulnerabilities within these communities. A disaster risk and response plans will be put in place in collaboration with selected communities in the ESMP for the project.
2.5 increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	N	The proposed project will not directly increase emissions of greenhouse gases or black carbon and is likely to decrease these as a co-benefit of project interventions. Fire management will be incorporated into the forest protection measures implemented under the project and ecosystem protection and restoration is likely to increase sequestration rather than emission of greenhouse gases.
2.6 Carbon sequestration and reduction of greenhouse emissions, resource-efficient and low carbon development, other measures for mitigating climate change	Y	The project is likely to increase the capacity of natural ecosystems in the target watersheds to sequester carbon dioxide through the restoration and protection of these ecosystems. However, this will be a co-benefit of the project and will not be measured as it is not one of the main project objectives.
Safeguard Standard 3: Pollution Prevention and Resource Efficiency		
<i>Would the project potentially involve or lead to:</i>		
3.1 the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	N	No pollutants are anticipated to be released from any project interventions.
3.2 the generation of waste (both hazardous and non-hazardous)?	Y	No hazardous waste is anticipated to be generated through the proposed project interventions. Some organic waste may be generated through project activities. It is anticipated that this waste will

		be composted or recycled and, where possible, used as input into the regenerative agricultural systems developed under the project.
3.3 the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	N	No hazardous materials will be manufactured, traded, used or released from any project interventions.
3.4 the use of chemicals or materials subject to international bans or phase-outs? (e.g. DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol , Minamata Convention , Basel Convention , Rotterdam Convention , Stockholm Convention)	N	Chemicals and materials subject to international bans and phase-outs will not be used during the proposed project interventions.
3.5 the application of pesticides or fertilizers that may have a negative effect on the environment (including non-target species) or human health?	N	Hazardous pesticides and fertilizers are not anticipated to be used during the proposed project. The farming systems to be promoted under the project will emphasise low external input practices and will develop capacity for sustainable and regenerative agriculture.
3.6 significant consumption of energy, water, or other material inputs?	Y	Proposed project activities include the development of small-scale water infrastructure. The design for this infrastructure will be finalized during the project development phase. The small scale of the infrastructure and use of local materials will minimize the material inputs required for this activity and the infrastructure will be designed to increase water use efficiency for target communities.
Safeguard Standard 4: Community Health, Safety and Security		
<i>Would the project potentially involve or lead to:</i>		
4.1 the design, construction, operation and/or decommissioning of structural elements such as new buildings or structures (including those accessed by the public)?	Y	The project will include the design, construction and operation of small-scale water supply, storage and distribution infrastructure.
4.2 air pollution, noise, vibration, traffic, physical hazards, water runoff?	N	The project is not anticipated to lead to air pollution, noise, vibration, traffic, physical hazards or water runoff.

		er runoff.
4.3 exposure to water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable or noncommunicable diseases?	Maybe	The project is not anticipated to lead to exposure to diseases. During the project development phase, detailed designs of the proposed water infrastructure will be developed, taking into consideration best practice for minimizing the risk of vector- and water-borne diseases. In addition, management of COVID-19 will be considered in the design of stakeholder consultations and community gatherings, as required at the time. By the end of July 2020, Timor-Leste had only 25 confirmed cases of COVID-19.
4.4 adverse impacts on natural resources and/or ecosystem services relevant to the communities' health and safety (e.g. food, surface water purification, natural buffers from flooding)?	N	The project targets the improved delivery of ecosystem services and protection of natural resources. The project is not anticipated to lead to adverse impacts on natural resources or ecosystem services.
4.5 transport, storage use and/or disposal of hazardous or dangerous materials (e.g. fuel, explosives, other chemicals that may cause an emergency event)?	N	The project is not anticipated to involve hazardous or dangerous activities.
4.6 engagement of security personnel to support project activities (e.g. protection of property or personnel, patrolling of protected areas)?	N	The project is not anticipated to engage security personnel.
4.7 an influx of workers to the project area or security personnel (e.g. police, military, other)?	N	All labour required for the proposed project is expected to be sourced from the target communities. Therefore, an influx of workers into the project area is not expected.
Safeguard Standard 5: Cultural Heritage		
<i>Would the project potentially involve or lead to:</i>		
5.1 activities adjacent to or within a Cultural Heritage site?	N	The target areas of the proposed project are not within or adjacent to a Cultural Heritage site.
5.2 adverse impacts to sites, structures or objects with historical, cultural, artistic, traditional or religious value	N	The proposed is not anticipated to impact cultural heritage sites or tangible forms of cultural heritage

<p>if historical, cultural, artistic, traditional or religious values or to intangible forms of cultural heritage (e.g. knowledge, innovations, practices)?</p>		<p>heritage sites or tangible forms of cultural heritage. The impact of project interventions on intangible forms of cultural heritage, particularly related to local ecological and traditional knowledge will be assessed during the project development phase.</p>
<p>5.3 utilization of Cultural Heritage for commercial or other purposes (e.g. use of objects, practices, traditional knowledge, tourism)?</p>	N	<p>The proposed project is not anticipated to use cultural heritage for commercial purposes.</p>
<p>5.4 alterations to landscapes and natural features with cultural significance?</p>	Maybe	<p>The proposed project will include interventions to restore and protect landscapes. The impact of these interventions on landscapes of cultural significance will be assessed during the project development phase.</p>
<p>5.5 significant land clearing, demolitions, excavations, flooding?</p>	N	<p>The proposed project is not anticipated to lead to any significant land clearing, demolitions, excavations or flooding.</p>
<p>5.6 identification and protection of cultural heritage sites or intangible forms of cultural heritage</p>		
<p>Safeguard Standard 6: Displacement and Involuntary Resettlement</p>		
<p><i>Would the project potentially involve or lead to:</i></p>		
<p>6.1 full or partial physical displacement or relocation of people (whether temporary or permanent)?</p>	N	<p>The project is not anticipated to lead to the displacement or relocation of people.</p>
<p>6.2 economic displacement (e.g. loss of assets or access to assets affecting for example crops, businesses, income generation sources)?</p>	N	<p>The watershed development planning and selection of sites for project interventions will be undertaken through consultative and participatory processes to ensure that the project interventions do not lead to economic displacement of any communities or community members.</p>
<p>6.2 involuntary restrictions on land/water use that deny a community the use of resources to which they have traditional or recognizable use rights?</p>	N	<p>The watershed development plans and community conservation agreements will be developed through consultative processes to ensure that any restrictions on the use of land, water or other natural resources are aligned with traditional use rights and are undertaken voluntarily by all community members.</p>

6.3 risk of forced evictions?	N	No forced evictions are anticipated to result from the proposed project.
6.4 changes in land tenure arrangements, including communal and/or customary/traditional land tenure patterns (including temporary/permanent loss of land)?	Maybe	Land tenure arrangements in parts of Timor-Leste are unclear and have not been formalized. The proposed project will work closely with traditional governance systems to ensure that project activities are aligned with traditional and equitable systems of land use and customary tenure.
Safeguard Standard 7: Indigenous Peoples		
<i>Would the project potentially involve or lead to:</i>		
7.1 areas where indigenous peoples are present or uncontacted or isolated indigenous peoples inhabit or where it is believed these peoples may inhabit?	Y	<p>Approximately 50% of the population of Timor-Leste are considered to be indigenous peoples. Indigenous peoples can be divided into two main groups: i) Austronesian groups, including the Tetun, Mambai, Tukudede, Galoli, Kemak and Baikeno peoples; and ii) Papuan groups, including the Bunak, Fataluku and Makassae peoples. These people live mainly in Dili and along the northern coast.</p> <p>The populations of the target watersheds are likely to include indigenous peoples. However, these groups are well known and not isolated.</p>
7.2 activities located on lands and territories claimed by indigenous peoples?	Maybe	Land tenure arrangements and claims on land by indigenous peoples have largely not been formalized in Timor-Leste and the land ownership system is still under development. The impact of the project on indigenous peoples and territories will be assessed during the project development phase.
7.3 impacts to the human rights of indigenous peoples or to the lands, territories and resources claimed by them?	Maybe	Customary land ownership and land rights have largely not been formalized in Timor-Leste. During the project development phase, an assessment of the impact of the project on the rights and practices of indigenous peoples will be undertaken.

		es of indigenous peoples will be undertaken.
7.4 the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	Y	Land tenure arrangements and claims on land by indigenous peoples have largely not been formalized in Timor-Leste and the land ownership system is still under development. It is likely that the target communities in the proposed project will include indigenous peoples.
7.5 adverse effects on the development priorities, decision making mechanisms, and forms of self-government of indigenous peoples as defined by them?	N	Extensive participation of and engagement with local communities and traditional governance structures will be incorporated into the design and implementation of the proposed project. It is not anticipated that the project will have adverse effects on the self-government of local communities, including indigenous peoples.
7.6 risks to the traditional livelihoods, physical and cultural survival of indigenous peoples?	Maybe	The proposed project will promote the adoption of climate-resilient alternative livelihoods, including the production of commodity crops. Extensive collaboration and engagement with communities throughout design and implementation of the project will be undertaken to find the most sustainable livelihood options that fit their traditional practices and increase their resilience.
7.7 impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	Y	The proposed project will include the use of traditional natural resource management practices such as <i>Tara Bandu</i> . An assessment of the impact of the project on the Cultural Heritage of indigenous people will be undertaken during the project development phase to ensure that the project has no adverse impacts in this regard.
Safeguard Standard 8: Labor and working conditions		
8.1 Will the proposed project involve hiring or contracting project staff ?	Y	
<i>If the answer to 8.1 is yes, would the project potentially involve or lead to:</i>		

8.2 working conditions that do not meet national labor laws or international commitments (e.g. ILO conventions)?	N	Project staff are not anticipated to be subjected to adverse working conditions, occupational health and safety risks or forced labour.
8.3 the use of forced labor and child labor?	N	
8.4 occupational health and safety risks (including violence and harassment)?	N	
8.5 the increase of local or regional unemployment?	N	The project is anticipated to increase employment in target communities.
8.6 suppliers of goods and services who may have high risk of significant safety issues related to their own workers?	N	The project is not anticipated to result in safety risks to the suppliers of goods and services.
8.7 unequal working opportunities and conditions for women and men	Maybe	Equitable access to economic opportunities and gender-sensitive working conditions have been considered in the initial design of the project. During the project development phase, a comprehensive gender assessment and action plan will be developed to inform the final design of the project.

[1]For example, a project may consider investing in commercial shrimp farm by clearing the nearby mangrove forest to improve the livelihood of the coastal community. However, long term economic benefit from the shrimp farm may be significantly lower than the mangroves if we consider full costs factoring safety from storms, soil protection, water quality, biodiversity and so on.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
CCA core indicator	
Timor-Leste GEF_UNEP_Core Indicator Worksheet	
Timor-Leste_SRIF_final	
LOE	
Timor-Leste GEF_PIF_final	

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

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

Name	Position	Ministry	Date
Joao Carlos Soares	Director General for Environment	Directorate of Climate Change – State Secretary for the Environment	9/8/2020

ANNEX A: Project Map and Geographic Coordinates

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

Figure 2. Land cover map of Timor-Leste. Produced by Seeds of Life, Timor-Leste^[1]

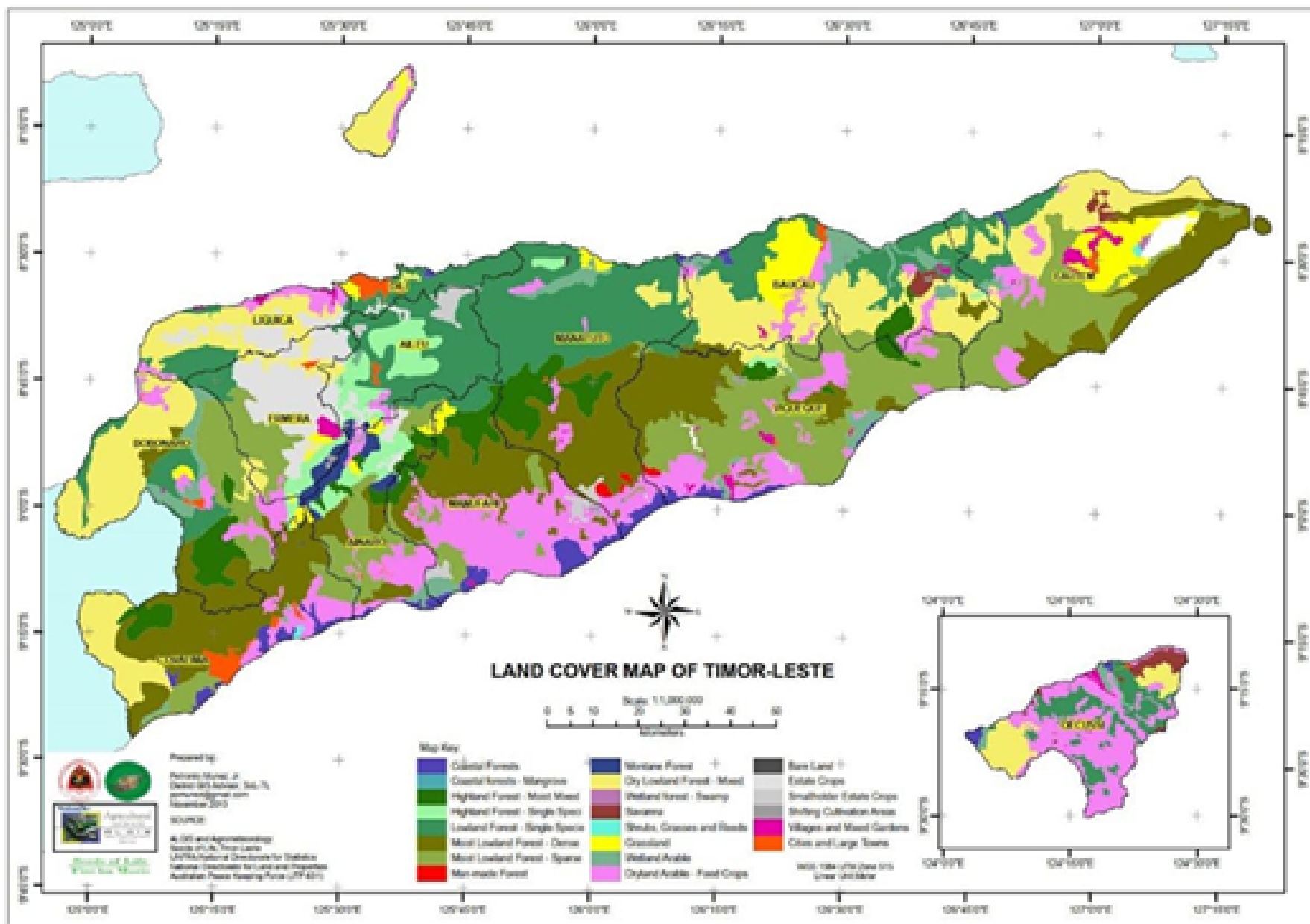


Figure 3: Proposed targeted watersheds

