



**GREEN  
CLIMATE  
FUND**

**Meeting of the Board**  
16 – 19 March 2021  
Virtual meeting  
Provisional agenda item 14

**GCF/B.28/02/Add.13**

23 February 2021

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# Consideration of funding proposals - Addendum XIII

## Funding proposal package for SAP021

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### **Summary**

This addendum contains the following six parts:

- a) A funding proposal titled "Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in Critical Watersheds";
- b) No-objection letter issued by the national designated authority(ies) or focal point(s);
- c) Secretariat's assessment;
- d) Independent Technical Advisory Panel's assessment;
- e) Response from the accredited entity to the independent Technical Advisory Panel's assessment; and
- f) Gender documentation.

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# Simplified Approval Process Funding Proposal

Project/Programme title:	Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in Critical Watersheds
Country(ies):	Timor-Leste (East Timor)
National Designated Authority(ies):	National Directorate for Climate Change (DNAC)Direcção Nacional para Alterações Climáticas (DNAC)
Accredited Entity:	Japan International Cooperation Agency
Date of first submission:	19.06.2020 V.1
Date of current submission/ version number	16.02.2021 V.12
If available, indicate GCF code:	5c9c9a4bb899346981533b0e



## Contents

### Section A **PROJECT / PROGRAMME SUMMARY**

This section highlights some of the project's or programme's information for ease of access and concise explanation of the funding proposal.

### Section B **PROJECT / PROGRAMME DETAILS**

This section focuses on describing the context of the project/programme, providing details of the project/programme including components, outputs and activities, and implementation arrangements.

### Section C **FINANCING INFORMATION**

This section explains the financial instrument(s) and amount of funding requested from the GCF as well as co-financing leveraged for the project/programme. It also includes justification for requesting GCF funding and exit strategy.

### Section D **LOGIC FRAMEWORK, AND MONITORING, REPORTING AND EVALUATION**

This section includes the logic framework for the project/programme in accordance with the GCF Results Management Framework and Performance Measurement Framework, and gives an overview of the monitoring, reporting and evaluation arrangements for the proposed project/programme.

### Section E **EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA**

This section provides an overview of the expected alignment of the projects/programme with the GCF investment criteria: impact potential, paradigm shift, sustainable development, needs of recipients, country ownership, and efficiency and effectiveness.

### Section F **ANNEXES**

This section provides a list of mandatory documents that should be submitted with the funding proposal as well as optional documents and references as deemed necessary to supplement the information provided in the funding proposal.

**Note to accredited entities on the use of the SAP funding proposal template**

- The Simplified Approval Process Pilot Scheme (SAP) supports projects and programmes with a GCF contribution of up to USD 10 million with minimal to no environmental and social risks. Projects and programmes are eligible for SAP if they are ready for scaling up and have the potential for transformation, promoting a paradigm shift to low-emission and climate-resilient development.
- This template is for the SAP funding proposals and is different from the funding proposal template under the standard project and programme cycle. Distinctive features of the SAP funding proposal template are:
  - *Simpler documents*: key documents have been simplified, and presented in a single, up-front list;
  - *Fewer pages*: A shorter form with significantly fewer pages. The total length of funding proposals should **not exceed 20 pages**, annexes can be used to provide details as necessary;
  - *Easier form-filling*: fewer questions and clearer guidance allows more concise and succinct responses for each sub-section, avoiding duplication of information.
- Accredited entities can either directly incorporate information into this proposal, or provide summary information in the proposal with cross-reference to other funding proposal documents such as project appraisal document, pre-feasibility studies, term sheet, legal due diligence report, etc.
- Submitted SAP Pilot Scheme funding proposals will be disclosed simultaneously with submission to the Board, subject to the redaction of any information which may not be disclosed pursuant to the [GCF Information Disclosure Policy](#).

**Please submit the completed form to:**

[fundingproposal@gcfund.org](mailto:fundingproposal@gcfund.org)

**Please use the following name convention for the file name:**

“SAP-FP-[Accredited Entity Short Name]-[yyymmdd]”

A. PROJECT/PROGRAMME SUMMARY					
A.1. Has this FP been submitted as a SAP CN before?			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
A.2. Is the Environmental and Social Safeguards Category C or I-3?			Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
A.3. Project or programme	<i>Indicate whether this FP refers to a combination of several projects (programme) or one project.</i> <input checked="" type="checkbox"/> Project <input type="checkbox"/> Programme	A.4. Public or private sector	<input checked="" type="checkbox"/> Public sector <input type="checkbox"/> Private sector	A.5. RFP	Not applicable
A.6. Result area(s)	<i>Check the applicable GCF result area(s) that the proposed project/programme targets. Indicate for each checked result area(s) the estimated percentage of GCF budget devoted to it. The summed up percentage should be equal to 100%.</i>  <b>Mitigation:</b> Reduced emissions from: <input type="checkbox"/> Energy access and power generation: <u>0</u> % <input type="checkbox"/> Low emission transport: <u>0</u> % <input type="checkbox"/> Buildings, cities and industries and appliances: <u>0</u> % <input checked="" type="checkbox"/> Forestry and land use: <u>100</u> %  <b>Adaptation:</b> Increased resilience of: <input type="checkbox"/> Most vulnerable people and communities: <u>0</u> % <input type="checkbox"/> Health and well-being, and food and water security: <u>0</u> % <input type="checkbox"/> Infrastructure and built environment: <u>0</u> % <input type="checkbox"/> Ecosystem and ecosystem services: <u>0</u> %				
A.a. <sup>1</sup> Total investment (GCF + co-finance)	Amount: 15,398,169 usd	A.a.1 Total GCF funding requested	Amount: 9,976,222 usd		
A.b. Type of financial instrument requested for the GCF funding	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Loan <sup>2</sup> <input type="checkbox"/> Equity <input type="checkbox"/> Guarantees <input type="checkbox"/> Others:				
A.7. Implementation period	84				
A.8. Total project/programme lifespan	240	A.9. Expected date of internal approval	4/30/2021 3:00:00 PM		
A.10. Executing Entity information	Japan International Cooperation Agency (JICA) No other entity will be engaged in the proposed project as the executing entity. Likewise, there is no other entity which would receive GCF proceeds for the project activities. ICA will enroll this role of EE mainly led by the JICA HQ (Headquarters) and JICA TL (Timor-Leste). By legal means, both have the same legal entity. More precisely, "JICA HQ" is the headquarters of JICA, while "JICA TL" is the branch office in Timor-Leste responsible for operations and management of the field. In practice, JICA HQ will act as the AE of the project and JICA TL will act as the de facto EE in the organizational set-ups for implementation of the project, but both will act as AE and EE in legal means as the whole JICA..				
A.11. Scalability and potential for transformation (Eligibility for SAP, max. 100 words)					
<b>1. Necessity of the nature based, people driven, climate solutions</b>  Timor-Leste has one of the higher rates of deforestation and forest degradation in the region, with annual deforestation rate 1.7% and forest degradation rate 5.8% (South and South-east Asia rates 0.31%). Deforestation and forest degradation are the major causes of fluctuation and increase of the national GHG					

<sup>1</sup> This fields will be automatically calculated in the OSS system.

<sup>2</sup> Senior loans and subordinated loans.

emissions from the LULUCF sector largely. The key drivers of deforestation and forest degradation are unsustainable natural resource management practices in the rural areas, such as shifting cultivation, expansion of farmlands, and animal free overgrazing. Meanwhile, 80% of the population are small scale farmers holding subsistence lifestyles for their staple food and livelihoods, forcing them to be highly vulnerable to predicted future climate change impacts. Decrease in crop yield and harvest patterns due to rainfall patterns and temperature rise threatens the community to livelihood loss and food insecurity. Hence, sustainable natural resource management among the most vulnerable communities is the key climate action for the country. The CBNRM (Community Based Natural Resource Management) mechanism was developed with 15-year experience of JICA's technical cooperation in TL proved effective in building capacities of the vulnerable farmers for sustainable community based farming and natural resource management. With expansion of the same mechanism over critical areas in the country, national GHG emissions is expected to decline. Moreover, the techniques introduced by the CBNRM mechanism will bring co-adaptation benefits to the most vulnerable, which is one of the salient features of this unique nature based climate mitigation model. Continuous incentives are also expected to be developed for the farmers in the project area to enable them to repeatedly engage in livelihood opportunities that will protect forests from deforestation and degradation, and sustain the nature based, people driven, climate solutions in TL.

## **2. Scaling up climate interventions based on 15 years of JICA's experience.**

This project will promote a proven CBNRM (Community Based Natural Resource Management) approach for national application in regions of Timor-Leste's most food-insecure forest adjacent communities. The CBNRM approach focuses on participatory development of natural resource management and climate resilient cropping practices that enable communities to forgo shifting cultivation and reduce GHG emissions from deforestation and forest degradation. The CBNRM mechanism has been developed from 15 years of JICA's experience learning from technical cooperation projects in Timor Leste. This is an innovative approach compared to previous development interventions, since it puts local communities at the center of the development of norms, rules and regulations on agricultural and forest land use, while also being integrated with a policy roadmap for national application. Its efficacy has been proven not only by the JICA CBNRM Projects, but also by other Development Partners<sup>[1]</sup> (DPs) in Timor Leste that have replicated and adopted the same methodologies in implementing their reforestation or agricultural projects. The success has led the government of Timor-Leste, especially General Director of Forest, Coffee, and Industrial Plants (DGFCIP) of the Ministry of Agriculture and Fisheries (MAF) to formulate, in 2017, the CBNRM roadmap (2021-2030) as a national program for implementation of the General Forest Regime Law. This proposed project will serve as the first phase of the national rural land use policy expressed in the CBNRM roadmap. It will initiate the CBNRM mechanism at the scale of four prioritized watersheds among the 14 priority watersheds targeted in the national roadmap. By implementing resilient cropping practices for food security, combined with the policy and legislative frameworks for watershed scale CBNRM, the CBNRM/ CF approach will be mainstreamed as the key policy instrument for transforming practices that have been responsible for forest landscape emissions in Timor-Leste. This policy transformation will engage the government, DPs, and the private sector to disseminate CBNRM climate resilient cropping technologies and sustainable forest management to the other priority watersheds. The project will directly benefit around 74 villages, which would cover 34 % of the 2030 target areas in the CBNRM roadmap, empowering about 12 % (148,100 persons) of Timor-Leste's population.

## **3. Policy transformation approach - Mainstreaming climate change:**

The CBNRM mechanism is a truly-people driven approach that incorporates informed community consent and support for norms and sanctions on agricultural and forest land use practices. Community norms that are collectively established at the village level are then reflected in watershed scale government management. Community support for these norms is enabled by the parallel establishment of more productive and resilient cropping system that makes further forest degradation from shifting cultivation unnecessary. CBNRM consultations in the 2.5 years of engagement enhances local people's capacity to design a land-use and natural resource management plan which can allow implementation of feasible farming practices, monitoring, mutual learning, and evaluation, while integrating local perspectives. This approach will allow local knowledge, cultures, perspectives, and traditional village governance capacity to be integrated with recent climate science and enable the development of a sustainable model persisting long after concessional finance ends.

This project will directly contribute to Timor Leste's nationally determined contribution (NDC) by implementing 2 out of 3 priority LUCF mitigation actions and 3 out of the 9 priority adaptation actions. This project will: i) directly address the main drivers of forest degradation, which are unsustainable land and forest management including shifting cultivation, to reduce CO<sub>2</sub> emissions from LUCF sector, ii) contribute to policy transformation through mainstreaming the CBNRM approach as the key mitigation measures into the national policy and legislative frameworks, iii) promote community-based sustainable and climate resilient livelihood options, which are replicable to local setting, acceptable by vulnerable communities, and effective in reducing local dependency on forest resources. The CBNRM approach with the livelihood options is the low-carbon and climate-resilient resource management model which can be easily introduced and replicated to other vulnerable countries and areas in Timor-Leste (i.e., areas where subsistence farming is the main livelihood activity and LUCF sector has a certain share of the national GHG emission).

#### **4. Sustainability and Strategic Exit-strategy:**

Post-project sustainability will be ensured with 3-step exit strategy to be taken by the proposed project with the support of JICA's Technical Expert Team (TET)<sup>[2]</sup> co-financing project. The first step is to strengthen government's own initiatives by institutional support and policy transition of extension services (to operate CBNRM / Community Forestry (CF) activities as business-as-usual). The second step is the enhancement of Development Partners' (DP) resource mobilization. This process has been embarked on already: the coordination made by MAF/DGFCIP has created widespread recognition and adoption of the CBNRM mechanism by the DPs other than JICA (e.g. World Bank, EU and FAO), which have led the expansion of the CBNRM in more than 30 villages, and around 100 villages are in the process of implementation to be completed by 2022. This demonstrates not only the effectiveness of the CBNRM approach, but also the high potential of replicability. Efforts for the mobilization of DP resource will be continued through DP coordination platform led by MAF/DGFCIP. The third and final step for the exit strategy is introduction of private investments and incentive mechanisms by enhancing Carbon offsetting schemes, which will contribute to continuously supporting farmers on their reforestation activities. Farmers will receive direct incentives for their continuous maintenance and protection of the planted trees, which would act not only as measures for mitigation, but also as alternative livelihood means to improve their climate resilience.

#### **5. Sustainable nature of the CBNRM mechanism and supporting co-finance project**

The CBNRM mechanism entails built-in incentives for the community to establish and sustain it by its nature of approach and activities. The tangible benefits brought by the CBNRM mechanism include: i) enhanced NRM governance with the development and enforcement of village-level NRM regulations, which regulates people's illegal acts/ economic activities (e.g. illegal tree cutting, forest fire, free animal grazing, and overexploitation of forest resources) and ii) increased and diversified production of food and cash crops through application of sustainable and climate resilient agriculture and introduction of additional sources of income by planting fruit trees and industrial plants (e.g. Dorian, Rambutan, Clove, Cacao, and Pepper). Local communities involved in the project activities enjoy those benefits created by institutional and technical facilitation under the support for establishment of the CBNRM mechanism over 2 years, such as monthly monitoring on the enforcement of the village NRM regulations (including community management of controlled burns) and promoting mutual support among community members for replication of key but labor-intensive techniques (e.g. bench terracing and compost making). Thus, a greater focus is put on implementation, replication, and monitoring by communities, all of which enable the communities to realize benefits from the CBNRM mechanism and gain incentives to continue the project activities in future on their own initiative. JICA will provide technical assistance (TET), as a co-finance project, which helps to expand the outputs of the proposed project to other watersheds through development of the policy and legislative frameworks for CBNRM/ CF expansion, including institutionalization and operationalization of the CBNRM roadmap.

[1] Such as World Bank, FAO, GIZ, and EU

[2] TET will be organized by experts hired by JICA from the private consulting firm/s; hence, its legal status is not the same as the one of JICA HQ or JICA-TL, which belong to the same legal entity.

## A.12. Project/Programme rationale, objectives and approach (max. 300 words)

### (1) Climate rationale:

#### *Mitigation*

#### 6. GHG emissions and Trends

Timor-Leste currently has one of the higher rates of deforestation and forest degradation. The annual deforestation rate in Timor-Leste was 1.7% per year and annual forest degradation rate was 5.8% (National Forest Conservation Plan, 2013). This rate is quite high compared to the annual deforestation rate in South and South-east Asia of 0.31%, and surrounding countries as 0.78%, 0.21%, 2.68% from Indonesia, Lao PDR, and Cambodia respectively in 2010-2020 (FAO, FRA2020). The forest cover of TL has declined from about 73.8% in 2003 (1,053,000 ha) down to 58% in 2012 (869,000 ha) with continuous decreasing trend. 184,000 ha of forest were lost, with 171,000 ha of dense forest converted into sparse forest (forest degradation) between 2003 and 2012 respectively [1].

7. Sustainable natural resource management that enables **the reduction of deforestation and forest degradation, is the key element for reducing the national GHG emission in Timor-Leste**. The national GHG emissions have shown an increasing trend, growing from 1,244 Gg CO<sub>2</sub> to 2,196 Gg CO<sub>2</sub> in 2005 and 2010 respectively (Intended National Determined Contribution (INDC), 2016 [2]). Past national annual

GHG emissions showed large fluctuation mainly attributed to the fluctuation of emissions from the LUCF sector. By sector, Agriculture and Forestry and Other Land Use (AFOLU) Sectors account for more than 80% of the national emissions among the four sectors<sup>[3]</sup>, of which 14~54% from LUCF sector ranging by the year. LUCF sector GHG emission are mainly caused by deforestation (forest and grassland conversion) and forest degradation (changes in forest types or woody biomass stocks). The government of TL therefore prioritized the forestry sector in its NDC as one of the key mitigation actions. By reducing the emission from protecting existing forests, particularly dense forests, and developing production forests in a large area to expand carbon sinks. Potential mitigation options proposed in the forestry sector are: protection of forest, customary forestry, rehabilitation of degraded lands, and afforestation and reforestation, representing from others options.

## **8. Drivers of deforestation and forest degradation and the GHG emission**

Shifting cultivation, expansion of farmlands, and animal free overgrazing, which are prevailing unsustainable natural resource management practices have been reported as the direct and indirect drivers of deforestation and forest degradation and responsible for most of TL's LUCF emissions. These practices, however, have been associated with the main livelihood options of vulnerable households in the country. It is estimated by a JICS study in 2012/2013<sup>[4]</sup> that about 27.6 million t-C have been emitted from forests in the country between 2003 and 2012 at a pace of 11.3 million t-CO<sub>2</sub> per year. Additionally, unsustainable land management and conversion are further accelerating deforestation. More intense drought and flood conditions are reducing production by traditional methods and accelerate further expansion of farmlands from forests for securing of subsistence crops.

## **9. Mitigation impact of the project**

Based on the results of the impact assessment of the past CBNRM introduced villages, the proposed project is expected to reduce GHG emissions from deforestation and forest degradation and enhance carbon sequestration through reforestation activities that will contribute to the reduction of CO<sub>2</sub> emissions of 4.4 million t-CO<sub>2</sub> eq over the project life span. The CBNRM approach introduced by the proposed project will materialize this expected impact by i) reducing unsustainable natural resource management practices, such as shifting cultivation, illegal exploitation and animal free grazing, and ii) promoting sustainable and climate adaptive livelihood practices to enable local farmers to use their own farms in more productive and sustainable manner or generate additional sources of income without causing damage to existing forests. Thus, the approach will directly address the major drivers of forest degradation. The proposed project is expected to cover 78,363 ha of existing forests, of which 16,242 ha dense forest, are expected to be sustainably managed by the village-level NRM regulations. The results of the assessment of the mitigation impact on CO<sub>2</sub> emission from forest degradation indicates that approximately 996,000 t-CO<sub>2</sub>eq would be reduced by the end of the project (2021-2028), and around 4,415,100 t-CO<sub>2</sub>eq over the 20-year lifetime of the project. Moreover, based on the assumption that the reduction rate of deforestation would be reduced at the same pace as forest degradation, the GHG emission reduction assessment indicates that the proposed project has the potential to result in the reduction of CO<sub>2</sub> emissions of around 993,200 t-CO<sub>2</sub>eq for the initial seven years and around 5,221,600 t-CO<sub>2</sub>eq over the 20-year lifetime, by adding both the reductions of emissions from deforestation and forest degradation. Additionally, 80% of the population are small scale

farmers who depend on subsistence farming for their staple food and livelihoods, forcing them to be highly vulnerable to predicted future climate change impacts.

### *Vulnerability of Local Communities*

## **10. Changes in climate variable, exposure and vulnerability**

Timor-Leste is considered as the top 12 most vulnerable countries at risk of disaster, due to its geographical location, topography and socio-economic conditions[5] and is one of the LDCs (Least Developed Countries) and SIDS (Small island developing states). Major climate hazards of (a) *rainfall variability* strongly influenced by monsoons and ENSO, and (b) *extreme weather events* (especially strong winds) attributed from tropical cyclones, are increasing the intensities of droughts, floods, landslides and soil erosions[6]. Historical occurrence of these climate-hazard attributed secondary impacts demonstrates that strong wind and flood are the key secondary hazard impacts in TL, whose frequency have increased 10 times and 5 times more in the 2006-2013 compared to 1950-2004, respectively. The steep topography and widespread deforestation are further exposing the population to these secondary climate hazard impacts, given the high dependency (80%[7]) of the total population on forest natural resources, mainly relying their livelihood on subsistence agriculture (e.g., shifting cultivation on sloping lands). Particularly, local communities living in hilly and mountainous area are identified as highly vulnerable, not only to hazardous events caused by climate change but also climate variability such as fluctuation of rainfall patterns during the rainy season (see Annex 2 Chapter 2 for more details). Local vulnerability to climate variability is one of the major underlying causes for accelerated deforestation and forest degradation by communities using traditional practices of shifting cultivation. A lack of capacity to adopt proven cropping and agroforestry systems resilient to climate change is a key barrier the project will overcome to enable communities to regenerate and conserve neighboring forests.

## **11. Climate risks**

Climate change has already caused a significant impact on the TL's ecosystems and inhabitants. Climate variability and climate-related hazardous events (such as i) fluctuation of rainfalls in the wet cropping season, ii) long dry spell in the wet season, particularly at the initial stage of the season, iii) landslides and severe soil erosion caused by long and heavy rains, and iv) strong winds) have resulted in severe damages to local livelihoods in Timor-Leste (e.g., future maize crop yield is predicted to decrease up to 5-20%). These impacts are projected to intensify in the future decades. Climate change is one of the key challenges that the most vulnerable communities have faced for stabilization of their livelihoods. Especially, reduction of crop yields and damages in crops have often caused severe food security issue, which often leads to opening of new farms in existing forests for crop production. Among others, local communities in hilly and mountainous areas are extremely sensitive to these climate change conditions, given their high dependence on subsistence harvest, living on steep terrains, and limited support from GoTL's extension services. Their vulnerability has been aggravated by unsustainable natural resource management practices as well as their consequences including deforestation and forest degradation. Under such circumstances, the vulnerability of local communities, particularly those in hilly and mountainous areas, would increase and forest degradation and deforestation would further progress.

## 12. Potential

### Potential positive impacts of the project

The proposed project is expected to generate the following climate impacts in the target watersheds: i) reduced CO<sub>2</sub> emissions from deforestation and forest degradation through promotion of truly community-based village level NRM, ii) increased carbon sequestration through community-based forest and land regeneration, and iii) strengthened local adaptive capacity with resilient and diverse local livelihoods. Moreover, a Technical Expert Team (TET) which will be hired for implementation of the proposed project will provide technical support to develop an enable environment for iv) expansion of the same climate interventions beyond the four target watersheds through policy implementation, institutional development, MAF's extension service enhancement, active donor coordination and incentive mechanism development for sustainable natural resource management.

### (2) Objectives of the Proposed Project:

13. The purpose of the project is to enhance the capacity of vulnerable upland communities as well as relevant government and non-government field officials to reduce forest degradation and deforestation through adopting the CBNRM mechanism with sustainable and climate resilient livelihood options in the selected four (4) priority watersheds (namely Lacro, Comoro, Tafara, and Caraulun). This implies the paradigm shift objectives on contributing to i) reduction of CO<sub>2</sub> emissions by conserving and enhancing the forest carbon stocks and carbon sequestration through sustainable forest resource management with enhancement of the climate resilience of the most vulnerable communities in the priority watersheds.

14. The proven CBNRM mechanism is composed of the following:

- a. Participatory land use and forest management planning (PLUP) (Participatory development of i) future land use plans and ii) village-level NRM regulations);
- b. Development and enhancement of local institutions (rules and organizational arrangements);
- c. Local and regional multi stakeholder platforms for natural resource governance; and
- d. Enhancement of local capacity for sustainable and climate adaptive livelihood options through community-based adaptation planning, technical transfer of climate resilient agriculture, agroforestry, horticulture development, reforestation/ afforestation, and livelihood improvement.

## 15. Policy transition

The effectiveness of the CBNRM approach has been tested and proven in the field by several Ministry of Agriculture and Fisheries (MAF) development partners' projects, notably the JICA CBNRM Project and other bilateral donors and NGOs. The GoTL, particularly DGFCIP of MAF, intends to mainstream the

CBNRM approach as the key instrument for implementation of the forest sector policy and the Law on General Forest Regime. To this end, MAF/DGFCIP has taken its initiatives to develop the CBNRM roadmap and operate and use the MAF DP coordination meetings for promotion of the CBNRM mechanism to mainstream the approach in not only MAF/ DGFCIP's plans but also MAF DP's programs.

### **(3) Scalability**

#### **16. Scalability of the CBNRM and proposed interventions to be scaled up**

Widespread recognition and adoption of CBNRM practices by the DPs (e.g. World Bank, EU and FAO) have led the natural expansion of the CBNRM approach scaling up to 100 villages by 2022. This demonstrates not only the effectiveness of the CBNRM approach, but also the high potential of scalability. This scalability nature of the CBNRM approach will further be enhanced by the Forest sector donor coordination platform initiated and led by MAF/DGFCIP. This platform has proven experience as the place where MAF DPs have learned and improved the CBNRM approach through DPs collaboration. Thus, this platform is expected to act as the catalyzer for spreading out the CBNRM mechanism outside of the target area. It is noted that MAF/DGFCIP has made a commitment<sup>[8]</sup> to use the institutional arrangement as well as the national program under the process of official issuance (CBNRM roadmap) for further scale-up of the CBNRM mechanism beyond the 4 target watersheds in collaboration with MAF DPs, NGOs, and private sector.

#### **17. Built-in incentives of the project to engender behavior change**

The CBNRM approach will be designed with built-in incentives at the village level for the farmers to adopt its systems and techniques. Three types of incentives are incorporated in the processes of the CBNRM mechanism. The first device is to use the traditional customs as the basis for village-level NRM regulation establishment, and so as to ensure local institutional readiness and incentives for operation. The second incentive is the incorporation of the traditional mutual support system in hands-on training courses to facilitate replication of the proposed sustainable and climate resilient livelihood options by local communities. The last incentive is that the CBNRM mechanism, particularly the village level NRM regulations, can work for keeping public order and preventing social conflicts in local communities. In addition, at the ground level, as farmers investment are made in tree crops, farmer self-interest in preserving these investments provides an incentive to avoid letting fires get out of control.

In addition to these built-in incentives, the CBNRM approach will lay a foundation to introduce private sector investments by introducing carbon offset programs. PLUP could identify degraded lands in villages and motivate local communities in restoration of such lands through reforestation/ afforestation. The proposed project will fully use the existing experiences of carbon offset programs certified by internationally recognized schemes, initiated by national and Australian NGOs in Timor-Leste. Carbon offsetting programs would be aimed to be developed as an incentive mechanism to continuously support farmers changing current practices aside from the capacity development activities.

### **(4) Rationale for Use of GCF Funding:**

18. As stated above, through DP coordination made by MAF/DGFCIP, the CBNRM-related activities, namely PLUP/CCVA, NRM monitoring with the village regulations, and hands-on training/ micro programs, have been adopted by several MAF DPs. Yet their adoptions tend to be still partial, not comprehensive, picking up only some elements/activities of the CBNRM approach (e.g., only PLUP), following their own project agenda and purposes. There is still a need to promote an integrated approach, which entails PLUP/ CCVA, NRM monitoring, and the productive measures (e.g., farm- and forest-based micro programs), towards the establishment of sustainable and climate-change resilient communities.

The CBNRM approach is mainstreamed as a national program (CBNRM roadmap). The proposed project will be the first comprehensive intervention to implement the CBNRM roadmap, addressing climate change mitigation as well as adaptation. Out of the 14 high priority watersheds, it targets 4 watersheds (Laclo, Comoro, Tafara, and Caraulun), while MAF DPs have started some elements of the CBNRM in many of other 10 watersheds. The proposed project could demonstrate the importance of taking a comprehensive approach and thereby act as a catalyst for bringing in other DPs/finance to further expand the CBNRM mechanism or complement the existing efforts that have been already made by some DPs in other 10 watersheds.

[1] The National Forest Conservation Plan (NFCP) in 2013 defines forests in accordance with the FAO's definition stated in the FRA Working Paper (1998), namely “forests are lands of more than 0.5 ha with tree crown cover of more than 10%, of which trees should be able to reach a minimum height of 5 m at maturity in situ.” The NFCP also classifies the forest land into two types: dense forest and sparse forest, according to the following definitions: i) Dense forest: forest of which canopy density is 60% and above; and ii) Sparse forest: forest of which canopy density is between 10% and 60%.

[2] Government of the Democratic Republic of Timor-Leste, 2014, Timor Leste's Initial National Communication to UNFCCC

[3] According to the NDC, four sector was set as: Energy, Agriculture, Land-Use Change & Forestry, and Waste.

[4] JICS, 2013, Forest Conservation Plan (Draft)

[5] United Nations University-EHS, 2016, World Risk Report 2016

[6] Government of the Democratic Republic of Timor-Leste, 2014, Timor Leste's Initial National Communication to UNFCCC

[7] General Directorate of Statistics and Ministry of Agriculture and Fisheries, 2018, Timor Leste Agricultural Census 2019 Instructions Manual for Field Staff

[8] “Draft Policy Recommendations for CBNRM Expansion (2020)” under finalization by DGFCIP for MAF Minister Submission.

## B. PROJECT/PROGRAMME DETAILS

### B.1. Context and baseline (max. 500 words)

#### 1. Climate rationale of the project

#### 1.1 Estimated GHG Emissions from Land Use Change at National Level

**19. Sectoral GHG emission:** A GHG inventory made in the Initial National Communication (INC) submitted to UNFCCC in 2014 shows that the total GHG emission in 2010 was 1,482 Gg CO<sub>2</sub>-eq per year, of which 65% is from the agriculture sector, followed by energy (17%), land use change and forestry (LUCF) (14%), and waste (4%). Emissions from the Agriculture occur as a result of: i) forest and grassland conversion; ii) enteric fermentation; iii) emissions from agriculture soils; and iv) rice cultivation.

Historical emissions in the period from 2005 to 2010 varied from 1,245 to 2,196 Gg CO<sub>2</sub>-eq, mainly attributed to the fluctuation of emission from LUCF sector, as shown below. The NDC stresses that 'emissions from agriculture, forests, and other land uses are the main sources of GHG emissions' in TL. Therefore, the forestry and agriculture sector are set as the key sector by the TL government's mitigation action priorities and are expected to play a significant role in mitigating climate change in TL.

**Table 1-1 : Sectoral GHG emission sources of TL**

Sources	2005	2006	2007	2008	2009	2010
Energy	200	207	313	262	222	251
Agriculture	883	901	957	997	933	966
<b>LUCF</b>	<b>115</b>	<b>1,037</b>	<b>734</b>	<b>441</b>	<b>225</b>	<b>206</b>
Waste	47	52	54	56	58	60
<b>Total</b>	<b>1,245</b>	<b>2,196</b>	<b>2,059</b>	<b>1,756</b>	<b>1,438</b>	<b>1,492</b>

Source: Timor-Leste's Initial National Communication, 2014

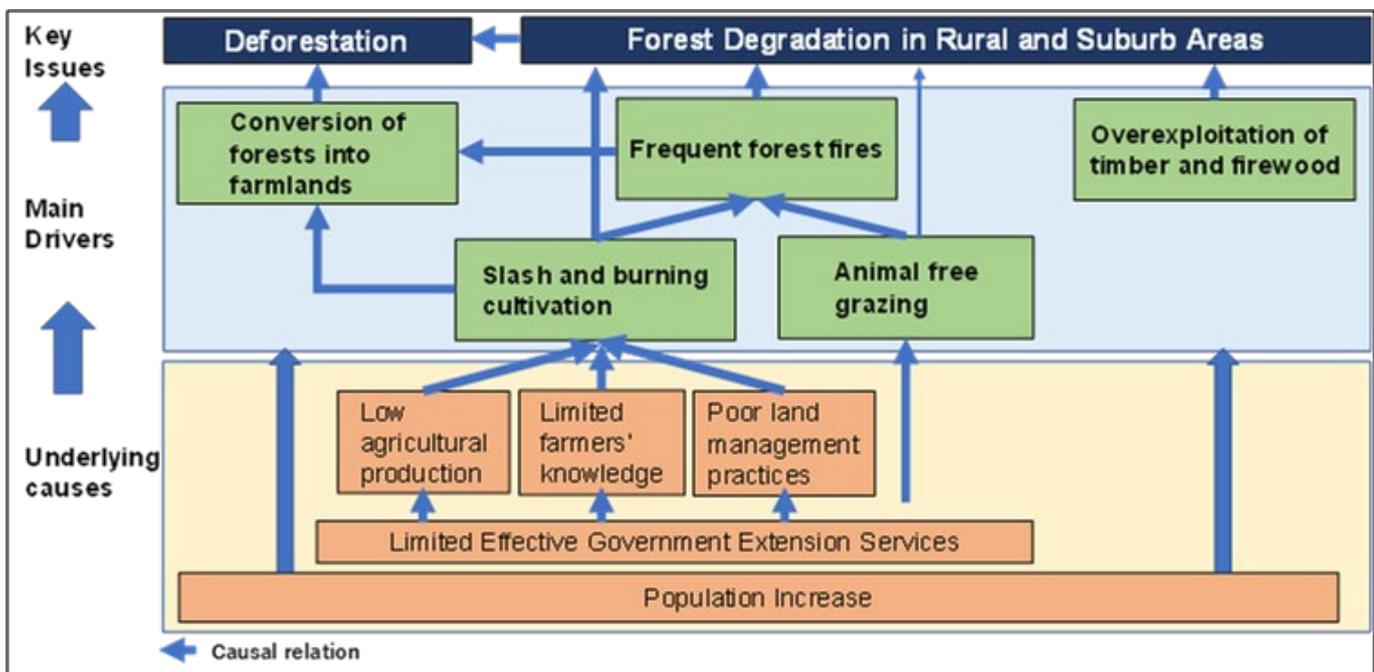
**20. Emission from LUCF:** Within the estimation of GHG emission from LUCF, deforestation (conversion of forest into grassland or non-forest lands) was considered as the main source of emission (100%<sup>[1]</sup>), while carbon sequestration in forests, woodlots, and croplands was considered to have the largest potential for carbon offset. In addition to deforestation, GHG emissions from forest degradation was considered as another major emission source. The Forest Conservation Plan (2012) indicates that around 170,000 ha of dense forests have been converted into sparse forests between 2003 and 2012, while around 184,000 ha of total forests have disappeared for the same period.

**21. Estimated GHG Emissions from LUCF:** The CO<sub>2</sub> emissions from forests due to deforestation and forest degradation between 2003 and 2012 are estimated at around 37,0 million t-CO<sub>2</sub>-eq and 64.3 million t-CO<sub>2</sub>-eq, respectively, assuming that dense forests of around 170,000 ha were converted into sparse forests and around 184,000 ha of sparse forests changed into non-forest lands for the same period. The emissions

originating from forest degradation is estimated to account for more than 60% of those from forests between 2003 and 2012.

## 22. Main Drivers of deforestation and forest degradation

Main and direct driver of deforestation is the conversion of forests into farmlands, which is mainly led by shifting cultivation. Forest degradation has been caused by shifting cultivation and forest fires, which is often attributed to shifting cultivation as well as free animal overgrazing. Overexploitation of timber and fuel woods are another main driver of forest degradation in suburb areas, such as Metenalo and Hera in Dili Municipality, while in rural areas, low productivity, limited farmers' knowledge and poor land management are the underlying causes of expansion of farmlands through shifting cultivation (see Annexes 2 and 5 for more details).



Sources: Analysis of JICA based on Timor-Leste Country Environment Analysis by WB (2009), Environment Assessment of Country Partnership Strategy 2016-2020 by ADB (2015), and Draft National Forest Sector Policy prepared by FAO (2017)

## 1.2 Estimated GHG Emissions from Deforestation and Forest Degradation in the Target Watersheds

23. **Estimated GHG Emissions in the Target Watersheds:** The CO<sub>2</sub> emissions from deforestation and forest degradation in the target four watershed are estimated under the same assumption, i.e., i) dense forests were changed into sparse forest while sparse forests were converted into non-forest areas; and ii) forest biomass removed from dense and sparse forests were released as carbon dioxide in the atmosphere.

The estimated CO<sub>2</sub> emissions from deforestation and forest degradation in the four target watersheds between 2003 and 2012 are estimated at 11.3 million t-CO<sub>2</sub> and 19.0 million t-CO<sub>2</sub>, respectively.

24. Among the four watersheds, the estimated GHG emissions in Caraulun watershed was the largest (13.3 million t-CO<sub>2</sub> in total, 5.1 million t-CO<sub>2</sub> from deforestation, and 8.2 million t-CO<sub>2</sub> from forest degradation), followed by Tafara watershed (7.2 million t-CO<sub>2</sub> in total, 3.1 million t-CO<sub>2</sub> from deforestation, and 4.1 million t-CO<sub>2</sub> from forest degradation). Those in Laclo and Comoro watersheds are estimated at around 5.0 million t-CO<sub>2</sub> in total. In all the watersheds, the estimated emissions from forest degradation are higher than those from deforestation. Particularly, about 80% of the emissions in Laclo watershed is due to forest degradation.

25. **Site-level Deforestation and Forest Degradation Driver Analysis:** Drivers of deforestation and forest degradation vary slightly from site to site as summarized below.

#### Driver Analysis by Watershed (Degrees of impacts relative to other target watersheds)

Target watershed	Deforestation and Forest Degradation Status <1	Deliberation on the drivers for DF/DG
Caraulun (South-central TL)	DF: Medium (-3.93% p.a) DG: High (-7.02% p.a)	The main driver of the acceleration of forest degradation is the prevailing traditional farming (shifting cultivation). Upland farmers in the target watersheds rely on such farming practices due to the limited agriculture/forestry technical supports and interventions from MAF development partners. The impact of forest fire is considered less, based on the village level vulnerability assessment (See Sec 6.4).
Tafara (South-western TL)	DF: Medium (-3.24% p.a) DG: High (-8.62% p.a)	Forest fire is considered the main cause of forest degradation in the watershed. Many cases of wild/ forest fires, caused by local communities burning their farms for land preparation, has been reported by local communities in the monthly monitoring undertaken in the CBNRM project villages. The number of cases in Laclo was far beyond the one in the Comoro watershed. Strong winds often reported by locals in the sampled communities in the Laclo watershed, constantly resulted in uncontrolled wildfire.
Laclo (North-central TL)	DF: Low (-0.68% p.a) DG: Medium (-3.47% p.a)	The high rate of forest degradation is attributed to forest fires and overexploitation of timber and firewood. Fires are often caused by shifting cultivation, while overexploitation of timber and firewood are due to high demands along with population growth and urbanization in the suburbs of Dili town.

Note: DF: Deforestation, DG: Forest Degradation

High > - 5.0 % p.a > Medium > - 3.0 % > Low

Source: JICA (2020)

Forest degradation (or degradation of dense forests) play the pivotal role to GHG emissions in the LUCF sector in Timor-Leste, therefore, mitigation actions to reduce shifting cultivation, forest fires and their underlying causes, such as conventional farming practices with less land management and animal free grazing are crucial. Unless such issues are properly addressed, CO<sub>2</sub> emission from forest degradation and deforestation would increase at the current or higher paces as the population increases. Future climate events leading to crop failure, such as drought and long rains, would further accelerate the pace of forest degradation along with expansion of shifting cultivation areas.

26. Local communities in the target watersheds, specifically those in hilly and mountainous areas, are the main agents of deforestation and forest degradation in the watersheds. They have practiced shifting cultivation, animal free grazing, and exploitation of forest resources for securing their livelihoods. As they are also the most vulnerable communities to climate variability and its related hazards, their climate vulnerability should also be addressed to reduce the pace of deforestation and forest degradation in addition to protection of forests from shifting cultivation and forest fires. Hence, the community-based natural resource management approach, which is effective in protecting forests and also strengthening local livelihood resilience to climate variability, is considered as a promising and cost-effective intervention for mitigation of GHG emission in LUCF sector with adaptation co-benefits.

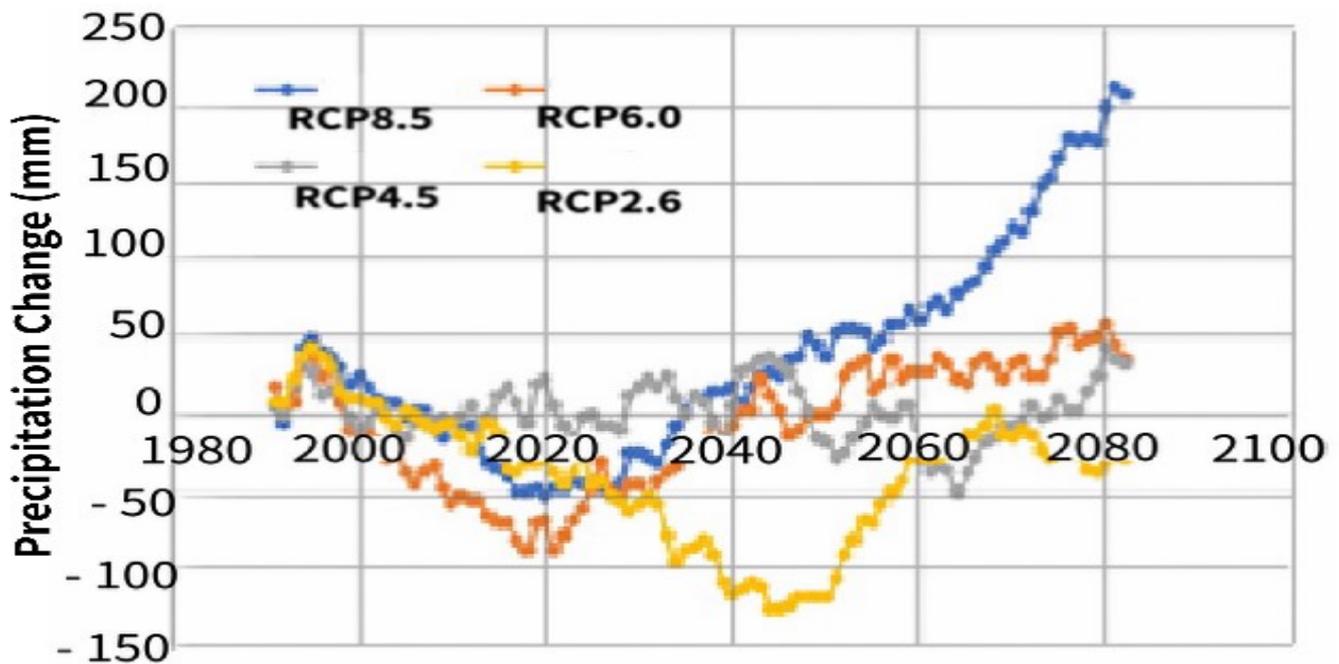
## 1.2 Potential Effects of Climate Change on Local Livelihoods

### ■ Explorative vulnerability assessment (scenario-driven assessment)

27. **Historical analysis** of climate data indicates that Timor-Leste is undergoing global warming, experiencing annual mean temperature increase at a rate of approx. 0.016% per year and is likely to further increase. Long-term trends and perception in TL from 1953 to 2009 demonstrates the significant variability among the nation annually. Seasonal rainfall pattern also largely fluctuated regardless of the wet or dry seasons. Climate hazards are exposing the nation to hazardous events. Historical trends in 1950-2015 indicates significant increase in hazardous events, such as Flood, Landslide, Strong wind, and forest fire. Especially, Strong wind and Flood are the key secondary hazard impacts in TL, with its frequency increasing 10 times and 5 times more in the 2006-2013 compared to 1950-2004 respectively (see Chapter 2 and 6 of Annex 2 for more details).

28. **Future climate projections:** The mean temperature is predicted to increase at least 1 °C by 2035 and 0.5-3.5 °C from 2035 to 2100 as a result of climate change. Rainfall in the wet season is expected to increase by 20% by 2070. Scenario-driven analysis indicates that the RCP 6.5 and 8.5 scenarios predicts constant increase in annual rainfalls until 2080. By area, spatial rainfall patterns are expected to change from 2011 to 2100, with reduced rainfall in the western and southern parts and increase in northern coast and central parts of the country. Precipitation is predicted to increase from July to October by more than

10%, and decrease in the initial months of the rainy season (November-December). Climate analysis predicts the extreme rainfall to be less frequent but more severe, and occurrence of heatwaves to be more severe and longer. In El Nino years, less rainfall and longer dry spells are expected, and in La Nina years, longer and heavier rains are likely to occur in the rainy season (see Chapter 2 and 6 of Annex 2 for more details).



### Projections of Future Changes in Annual Rainfalls

(Tafara and Comoro Watersheds and Mountain Part of Laclo Watershed)

Source: Climate Inspectors of the National Center for Atmospheric Research (NCAR), USA

29. **Site-level Future projections:** Based on the future climate projections, site-level (watershed-level) future climate change impact projections are shown in the table below. Possible climate changes of precipitation and temperature as well as in seasonal trends under the RCP scenario 4.5 in the target watersheds are predicted below.

Watersheds (Location)	Precipitation	Temperature	Seasonal trends
Caraulun (South-central TL)	<ul style="list-style-type: none"> <li>- Overall increasing trend up to 2045 (initially starting with slight decrease by 2030)</li> <li>- Decrease substantially from 2045 to 2065</li> <li>- Increase substantially from 2065 to 2080</li> </ul>	Steady increase, especially in the lowland area	Rainfall reduction especially in SON (September, October, November), affecting maize planting Rainfall increase especially in MAM (March, April, May) and JJA (June, July, August), intensifying the latter part of the rainy season (incl. prolonging it)
Tafara (South-western TL)	- Ditto	Steady increase	Ditto
Laclo (North-central TL)	- Ditto	Steady increase, especially in lowland area	Rainfall increase especially in MAM and JJA, intensifying the latter part of the rainy season (incl. prolonging it)
Comoro (Northern TL)	- Ditto	Ditto	Ditto

Source: JICA

30. **Future projection of Climate impacts (risks):** It is expected that climate change impacts such as increased air temperature, changes in rainfall pattern and intensity will reduce agriculture productivity and, therefore, adversely impact the livelihoods of the communities. The temperature and rainfall fluctuations would directly cause the decrease of crop yields, while heat waves and long rains would adversely affect livestock yields. As pointed out above, crop failure will accelerate resource exploitation by vulnerable communities for securing their livelihoods, which will eventually result in progression of deforestation and forest degradation.

31. A shortage of water, particularly in the hilly and mountainous areas, are also predicted to give direct and negative impacts on the local people's livelihoods (more than 30% of the lands in the watersheds have more than 15 degrees (or 27%) of slopes). These negative impacts is predicted to become more severe in the El Nino and La Nina years; ENSO events will reduce rainfall and/or extend dry spells during the dry season, and bring longer and heavier rains during the rainy season. The crop production will be severely affected by the expected increase of extreme climate events, which are often associated with ENSO. The following table shows climate-related potential impacts particularly on crop production and water resources.

i) Crop Production

Hazard	Predicted Climate Risks	Predicted Adverse Impacts on Crop Production
Temperature	<ul style="list-style-type: none"> <li>■ Increase in minimum temperature during the growing period</li> </ul>	<ul style="list-style-type: none"> <li>■ Crop damage due to high temperature in the growing season, while partially, limited areas of the nation may experience increase the crop yields.</li> </ul>
	<ul style="list-style-type: none"> <li>■ Increase of temperature during the growing period.</li> </ul>	<ul style="list-style-type: none"> <li>■ Crop growth negatively affected due to water scarcity.</li> <li>■ Increase in pest infestations, resulting in crop yield decrease.</li> <li>■ Livestock productivity decrease due to high heat, particularly in the dry season.</li> </ul>
Rainfall	<ul style="list-style-type: none"> <li>■ Strong rains</li> </ul>	<ul style="list-style-type: none"> <li>■ Land degradation and/or loss of soil fertility intensifies, due to increased surface soil erosion.</li> </ul>
	<ul style="list-style-type: none"> <li>■ Fluctuation in the rainy season</li> </ul>	<ul style="list-style-type: none"> <li>■ Significantly decrease the growth of crops, particularly in the initial stage, that will highly likely to cause crop failure.</li> </ul>
	<ul style="list-style-type: none"> <li>■ Long rains in the growing period and post-harvesting season</li> </ul>	<ul style="list-style-type: none"> <li>■ Damage the root systems of crops, resulting in crop failure.</li> <li>■ Insufficient Maize drying that cause significant postharvest losses of maize grains during the storage period.</li> </ul>
Winds	<ul style="list-style-type: none"> <li>■ Strong winds</li> </ul>	<ul style="list-style-type: none"> <li>■ Damage to maize growth and decrease the productivity.</li> </ul>

ii) Water Resources

Hazard	Predicted Climate Risks	Predicted Adverse Impacts on Water Resources
Temperature	<ul style="list-style-type: none"> <li>■ Temperature increase</li> </ul>	<ul style="list-style-type: none"> <li>■ Water runoff and surface water in rivers, streams and ponds may reduce due to increase in evaporation.</li> <li>■ Irrigation water shortage or reduction of livestock raising, resulting in crop and livestock production decrease.</li> </ul>
Rainfall	<ul style="list-style-type: none"> <li>■ Rainfall shortage</li> </ul>	<ul style="list-style-type: none"> <li>■ Water shortage of the natural springs used as drinking water by rural communities, particularly in hilly and mountainous areas.</li> </ul>
	<ul style="list-style-type: none"> <li>■ Long rains</li> </ul>	<ul style="list-style-type: none"> <li>■ Water contamination due to landslide and soil erosion in hilly and mountainous areas, and floods and salt-water intrusion in lowland areas.</li> </ul>

■ Focused vulnerability assessment (village-level assessment)

32. Future projection of Climate impacts based on village-level vulnerability assessment:

Bottom-up vulnerability assessment approach were taken by conducting participatory focus group discussions at selected 8 villages in the target watersheds from 2017 to 2020 to analyse and collect the major climate-concerns based on local perspectives and historical experiences. Local communities in the target watersheds raised the shortage of rain, drought increase, and strong winds as the most critical threats to their life. These are based on their historical experiences and was in align with the national level assessment. This village level assessment showed that most respondents in the target watersheds had a clear understanding of what was directly affecting their lives and livelihoods in terms of climate trends and the wider environment over the long term, which was in align with the aforementioned scenario based assessment. The potential climate impacts discussed and identified by local communities living in the watersheds based on their experiences are summarized below (see Pre-FS 6.4 for more details). This assessment have demonstrated that Climate Change is already happening and impacting the village.

Climate Issues	Historical village-level Experiences
Strong Wind	<ul style="list-style-type: none"> <li>■ Usually happened from January to February and cause a serious impact on crops and houses in extensive areas in the village.</li> <li>■ Damaged houses, maize, coffee, banana and other crops in farms.</li> </ul>
Little Rain/Drought	<ul style="list-style-type: none"> <li>■ The volume of water at sources become less, and it creates social conflicts in the village.</li> <li>■ Water becomes less, and villagers can only use one particular water source, which seems to have more water than others do. Villagers worry about the availability of water in the future.</li> </ul>
High Temperature	<ul style="list-style-type: none"> <li>■ Many fruit trees such as rambutan, durian, and mangos die due to high heat.</li> <li>■ Increased dust in a village, which often leads to throat sickness or cold.</li> <li>■ The high heat also kills some small animals, such as pigs and chicken.</li> </ul>

■ Integrated vulnerability assessment

33. **Climate drivers/ vulnerabilities:** The vulnerabilities at national and community levels, are illustrated below. These vulnerabilities are expected to further accelerate the potential climate impacts/risks on crop production by possible climate variability.

**Possible Climate Variability**

- Reduction and fluctuation of rainfalls during the rainy season, particularly in November and December
- Occurrence of heavy and strong rains in the middle of the rainy season, January and February
- Occurrence of long rains in April and May, which is the post-harvesting season of Maize
- Increase of rainfalls during the dry season
- Increase of temperature in both the rainy and dry season
- Occurrence of strong winds

**Potential Climate Risks**

- Crop damage due to the shortage of water in the field
- Reduction of soil fertility and lowering of crop productivity
- Occurrence of landslide/ erosion in hilly and mountainous areas
- Crop damage caused by pests & diseases due to long rains
- Post harvest loss due to long rains
- Crop damage caused by strong winds
- Occurrence of forest fires in the dry season
- Loss of livestock animals and houses due to climate-related events
- Shortage of water or occurrence of flood in the downstream area

**Vulnerability**

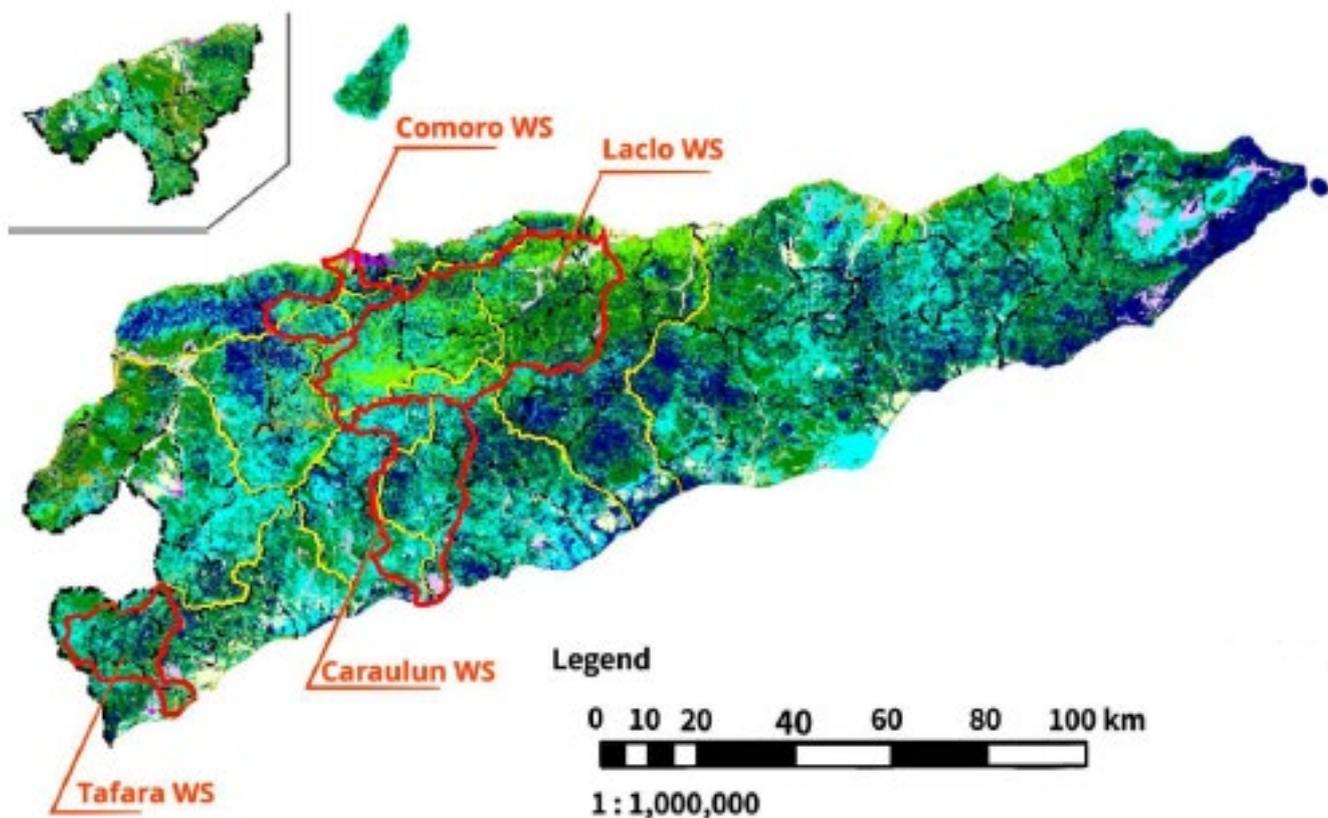
**National Level:** Lack capacity to foreseen the climate variability, Limited extension services, Lack of allocation of irrigation systems, Limited countermeasures against landslide,  
**Community Level:** Limited sources of stable income, Limited knowledge on sloping and climate resilient agriculture, Lack of farm input, Limited rural infrastructure, Living in traditional/ tin-roof houses, Limited sources of water, Traditional way of animal raising, and Shifting cultivation or burning lands for farming.

2. Target Watersheds

34. Out of the 14 high priority watersheds selected by MAF/DGFCIP in the national program (CBNRM Roadmap), four watersheds (Laclo, Comoro, Tafara, and Caraulun) are selected by MAF/DGFCIP as target watersheds for the proposed project. Target areas were selected based on following three criteria: i) high potential risks of climate change to communities, including not only in the upper watersheds but also downstream areas; ii) less overlap with existing or pipelined MAF development partners' interventions; iii) high GHG emission reduction potential from deforestation and forest degradation, and iv) consistency with the existing GoTL's policies.

35. The results of the evaluation of the priority watersheds are described in Section 6.1 of Annex 2 Pre-Feasibility Study attached to this funding proposal, and also summarized below.

- High scoring watersheds: Caraulun, Tafara, Laclo and Comoro
- Medium scoring watersheds: Lois, Seisal, Sahen, Iralaloro (or Vero), Be Lulic, and Dilor
- Low scoring watersheds: Cuha, Irabere, Tono, Quelan



**Figure 1-1: Locations of the Target Watersheds**

*Source: Based on Forestry Map presented in National Forestry Conservation Plan (2013*

36. The vulnerability to climate change and the potential for GHG reduction and carbon sequestration in the four target watersheds are presented in the table below.

**Table 1-2 : Potential Risks of Climate Change and GHG Reduction Potential of the 4 Target Watersheds**

Watershed	Potential risks of climate change	DPs Activities	Potential of reduction of GHG and enhanced carbon uptake
Caraulun	The upper part of the watershed has a high risk of landslide, while the lower part of the area is prone to flooding. The extent of damage caused by landslides and floods are predicted to increase due to further enhanced climate change occurrence.	Limited (only FAO)	About 52% (or 333 km <sup>2</sup> ) of the watershed is covered with forest, of which 38% (or 128 km <sup>2</sup> ) is dense forest. The area has a high potential of reducing GHG emission and stabilizing carbon sequestration and carbon stock by protection and regeneration of the existing forest and halting deforestation and degradation.
Tafara	Flood is the major climate-related hazard, which have affected people living in the watershed, particularly those in the downstream area of the watershed. The extent of damage caused by floods are predicted to increase, due to the increase of the frequency of long and strong rains. Furthermore, the area is likely to face severe damage due to long drought in the future, projected to have more than 10 months of dry period as explained in the future scenario.	None	The potential of GHG reduction is lower here than in the other 3 watersheds, with a higher potential for carbon uptake, by community protection and regeneration of the large degraded forest areas that are at various stages of regeneration. The present dense forest coverage rate is the 4th lowest out of the 14 priority watersheds. Also in this watershed, there is a risk of forest fire increase, due to the predicted increase in dry months.
Laclo	Drought and rainfall variability are the major causes of crop failure in the watershed, particularly in the hilly and mountainous areas where maize is the predominant plant. Due to the increase of dry period in the future, crop production in uplands are predicted to decline. Furthermore, the paddy production under the Laclo irrigation system, one of the largest irrigation systems in the country, may face negative damage due to water shortage.	Some (JICA, FAO, Mercy Corp)	This watershed has about 705 km <sup>2</sup> of forests, of which 173 km <sup>2</sup> is dense forest. As the trend of deforestation and forest degradation in the watershed were seen to be higher among the priority watersheds due to unfavorable climate conditions and frequent forest fires. The climate conditions in the watershed may get more severe (or drier) than present.
Comoro	The watershed has the main water catchment for the capital Dili city. Hence, the potential risk of water shortage in Dili city may increase along with the increased dry periods in the future. In addition to the water shortage in the downstream area, the crop productivity is predicted to decline due to long drought and rainfall variability in the future.	Limited (JICA, CI)	Like in the case of Tafara watershed, the total forest cover in the watershed is lower than other watersheds, and the total area of the catchment is about 232 km <sup>2</sup> . Deforestation led by the conversion of forests into farms along with the population increase may have progressed in the area over the last decades. There is an increasing number of community based forest regeneration initiatives, particularly in areas with Eucalyptus rootstock.

37. Coordination and collaboration with other development partners in the project area have already been established through regular MAF DPs coordination meetings as well as bi-lateral collaboration developed by the previous and on-going CBNRM projects. This multi-donor collaboration will continue and function as a coordinating body to adjust the project interventions of MAF DPs to avoid overlap of the investment and more importantly supplement each other to generate synergy effects.

38. Although this proposal tentatively selected the target villages as shown in Paragraph 56 (more details of the selection are given in Section 8.2 of Annex 2 Pre-Feasibility Study attached to this funding proposal), the potential overlap with other DPs interventions will be checked in the DPs coordination meetings prior to the implementation of the field activities.

### ***3. National Policies and Plans***

39. The GoTL has addressed climate change as one of the most crucial issues. Timor-Leste government ratified the United Nations Framework Convention on Climate Change (UNFCCC) (2006), and Kyoto Protocol to UNFCCC (2008), and Paris Agreement (2017). The GoTL have submitted the National Adaptation Program of Action (2010), 1<sup>st</sup> National Communication Report (2014) and Nationally Determined Contribution (NDC) to the UNFCCC in 2016. The NDC notes that cooperation and assistance from the international community are required to increase TL's capacity to adapt to climate change and to explore opportunities to mitigate GHG emissions while supporting sustainable development. Therefore, GoTL articulates the importance of expanding existing successful programmes that support both mitigation and adaptation, due to the high potential of leveraging supports.

40. The following governmental documents are significantly relevant to the GoTL's approaches to climate change, particularly relating to the forestry and land management sectors.

#### **■ First NDC (2016)**

- Mitigation

Agricultural sector: two major mitigation actions were identified in the NDC: livestock management and sustainable climate resilient agriculture instead from slash and burn practices.

LUCF sector: this proposed project will directly address 4 priority mitigation actions out of the identified 6 mitigation actions in the LUCF sector. Rehabilitation of degraded lands; customary forestry such as 'Tara Bandu'; enhance protected areas; and afforestation and reforestation.

- Adaptation

9 prioritized adaptation interventions were identified in the NDC. Although the proposed project focuses on mitigation of climate change, the project will also directly contribute to 3 of them as described below:

- 1) Food Security: Reduce vulnerability of farmers and pastoralists to increased droughts and flood events by improving their capacity to plan for and respond to future climatic conditions and improve national food production.
- 2) Forests, biodiversity resilience: include ecosystem management in national planning to develop sustainable, on-going programme, nurseries and community awareness development.
- 3) National institutional capacity development for climate change: such as capacity development, support for key non-governmental institutions in low emissions and climate resilient development planning, including national NGOs and research/educational institutions. Promote sub-national capacity development for improved adaptation planning and implementation.

■ Draft CBNRM Roadmap (2021-2030)

The draft CBNRM Roadmap has been drafted by the MAF/DGFCIP taskforce in 2019 with an aim to protect and improve existing forests in the 14 high priority watersheds by promoting the CBNRM mechanism. The CBNRM roadmap is a 10-year strategic plan for introduction of the CBNRM mechanism in more than 317 villages concerned with the 14 high priority watersheds to protect around 367,000 ha of forests in the watersheds. MAF/DGFCIP aims to adopt the roadmap as a national program to mainstream CBNRM and CF as main tools for sustainable forest and watershed management in the country. Similarly, as clearly highlighted in the NDC, this proposed project will directly contribute, and is in alignment with the following governmental policies as well.

- Draft National Climate Change Policy
- National Adaptation Program of Action (NAPA 2010)
- National Forestry Policy (2008 and revised in 2018)
- National Strategic Development Plan (2011-2030)
- Forest Conservation Plan (2012-2023)

41. In addition to the national policies and programs, the two legal documents listed below also clearly states key actions to be taken to address the climate change issues, which this proposed project will directly contribute to implementation.

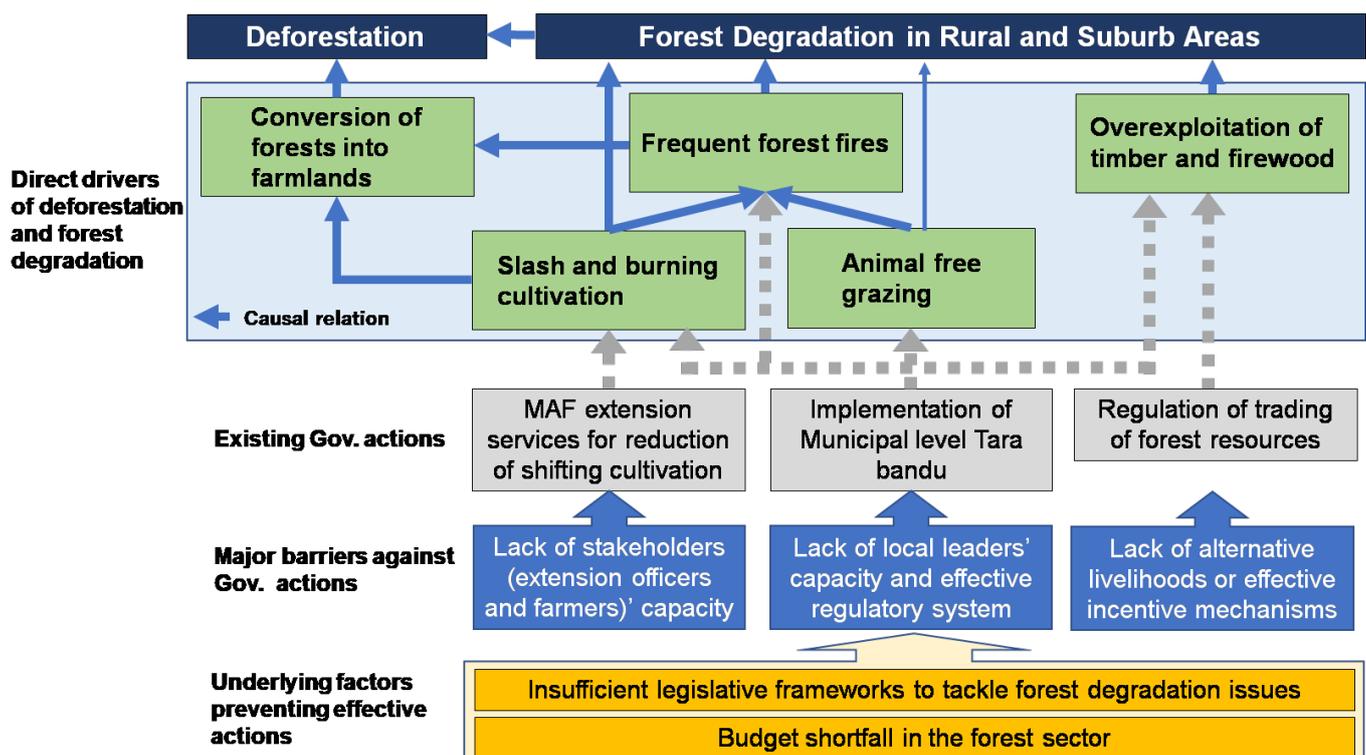
- Environmental Basic Law (Environmental Framework Law) in 2012
- Law of the General Regime of Forests in 2017

#### 4. Major Barriers and Proposed Activities

42. The GoTL, particularly MAF/DGFCIP and municipal administrative offices, have put their efforts to reduce the pace of deforestation and forest degradation caused by shifting cultivation, forest fire and overexploitation over years through i) provision of agricultural extension services, ii) enforcement of municipal level *tara bandu* regulations, and iii) introduction of regulatory measures to control trading of forest resources. Nevertheless, such interventions have not necessarily brought significant improvement as the GoTL expected, mainly due to the following barriers among the government actions.

- Lack of local capacity for transformation of conventional farming into sustainable practices
- Lack of local leaders' capacity and effective regulatory system for sustainable NRM
- Lack of alternative livelihoods and effective incentive mechanisms to enable local communities to protect forests

There are also underlying factors preventing the implementation of effective government measures, namely i) limited legislative framework to tackle deforestation and forest degradation issues and ii) budget shortfall for MAF extension services, in addition to the major barriers directly affecting the government actions. The figure below illustrates how the major direct and underlying barriers affect the government activities.



Source: JICA (2020)

43. The major and underlying barriers to emission reduction are further examined with the proposed activities to address these barriers as tabulated below.

Major Barriers	Elements of the barriers	Descriptions	Proposed activities to overcome the barriers
Lack of local capacity for transformation of conventional farming into sustainable ones	Lack of MAF field officials' and NGO staff's capacity to provide effective extension services	In general, government officials have less experience in village-level participatory assessments and planning, such as; participatory rural appraisal; participatory land use planning, and climate change vulnerability assessment. As a result, the governmental services provided to locals are rather stereotyped than site-specific; therefore, they do not respond well to the complexities of social and natural contexts in rural areas. Simultaneously, many extension officers have less knowledge on: i) sloping agriculture, ii) climate resilient agriculture, iii) agroforestry, and iv) permaculture or sustainable upland farming. Limited knowledge hinders them from providing comprehensive agricultural extension support, which is more effective for solving problems that farmers face because of the complexity and difficulty to solve with a single technique.	<ul style="list-style-type: none"> <li>■ Provision of training and guidance to field level government officials (Activities 2.4.1 and 3.2.1)</li> </ul>
	Lack of local farmers' capacity to transform their conventional way of farming	Due to a lack of knowledge or support from MAF field officials, it is not easy for local communities to transform their conventional way of farming into sustainable and climate resilient ones. The current farming practices, such as shifting cultivation, are the main cause of land and forest degradation in rural areas, and to make matters worse, have kept local farmers living conditions at subsistent level, highly vulnerable to climate variables.	<ul style="list-style-type: none"> <li>■ Participatory assessment of their farming and land use practices through PLUP and CCVA (Activity 1.1.1)</li> <li>■ Implementation of micro programs/ FFSs on sustainable and climate resilient livelihood options and CF (Activities 2.1.1 and 2.2.1)</li> </ul>
Lack of local leaders' capacity and effective regulatory system for sustainable NRM	Lack of village leaders' capacity for sustainable NRM	In general, local leaders are eager to minimize the occurrence of forest fire and any illegal acts which disturb the peace and order situations in their villages. Nevertheless, their conflict solving ability is generally low and not sufficient to address such issues properly. Based on the experiences of JICA CBNRM Projects, local leaders had no idea of what to do except the customary ceremony for reducing forest fires, animal grazing, and any other environmentally destructive activities.	<ul style="list-style-type: none"> <li>■ Enhancement of local governance capacity through i) formulation and implementation of village-level NRM regulations, and ii) formation and operations of sub-watershed level coordinating platforms (Activities 1.1.1, 1.2.1, and 1.2.2)</li> </ul>
	Lack of effective regulatory systems for NRM	A lack of effective regulatory systems is another issue on sustainable village-level NRM. Local communities in Timor-Leste have traditionally relied on the customary governance system, which is based on the verbal instructions with the traditional ritual ( <i>Tara bandu</i> ). Generally, such system does not last for years along with the lack of village leaders' governance capacity. This is the reason why many government and non-government interventions with <i>Tara bandu</i> were not necessarily effective for forest protection particularly in the post-project period.	<ul style="list-style-type: none"> <li>■ Formulation of effective village-level regulatory systems in a participatory manner with full use of traditional knowledge and customary norms (Activity 1.1.1)</li> <li>■ Enhancement of local leaders' capacity for implementation of the village-level regulation systems Activity 1.2.1)</li> </ul>

Lack of alternative livelihoods and effective incentive mechanisms to enable local communities to protect forest	Limited alternative livelihood options	In general, economic conditions of local communities living in hills and mountains in the country are still at subsistent level. They have heavily relied on shifting cultivation and forest resources for their livelihoods with less alternative sources of income. Hence, it is not easy for local communities to change their practices (for crop production as well as other livelihood purposes) and such practices are banned by the government/ municipal regulations.	■ Enhancement of local livelihoods through diversification of livelihood options (Activity 2.1.1)
	Lack of incentive mechanism for forest protection	At this moment, there is no sufficient incentive for local communities to protect natural forests except their ecosystem services; hence, it is difficult for local communities, particularly in the suburb areas, to forgo the commercial exploitation of natural forest resources as a source of cash income. A certain incentive mechanism should be designed and introduced along with legalization of sustainable operations and management of village level production forests.	■ Introduction of an incentive mechanism for reforestation and forest protection and legalization of community-level management of production forests (Activities 2.2.1 and 2.3.1)
Insufficient legislative framework to address deforestation and forest degradation		This is raised as another issue to be addressed for effective implementation of the government laws and policies. In the TL forest sector, National Forestry Policy and Law on the General Regime of Forest are in place; however, their subordinate instructions for actual implementation have not been issued yet. CBNRM and CF, which are key approaches for the proposed project, do not have specific legislative and regulatory frameworks for supporting their implementation at this moment, though they are defined as key instruments for implementation of the National Forestry Policy and Law on the General Regime of Forest. The limited budget allocation is often attributed to the insufficient policy and legislative supports; hence, legislative frameworks for CBNRM and CF should be developed for sustainable forest management.	■ Development of new government legislative and technical documents, such as ministerial order <sup>1</sup> for mainstreaming CBNRM/ CF, standard operating procedures for CBNRM/ CF, technical manuals for climate resilient agriculture, seedling production/ reforestation, etc. (Activity 3.1.1)
Budget shortfall for government interventions		The lack of governmental budget on the forestry sector is the pivotal issue that both MAF/ DGFCIP and MAF DPs have faced to accommodate sustainable interventions with impactful scale. A lack of lawmakers' understanding of the importance of forest protection or watershed conservation is one of the reasons for less government financial support for the forest sector. It is also important to consider the integration or institutionalization of conservation measures into economic development works or government regular activities to ensure their sustainability.	■ Institutionalization of the sub-watershed level coordinating platforms as the government official organizations (Activity 3.3.1) ■ Enhancement of lawmakers and decision makers' understanding of the importance of sustainable NRM through knowledge sharing (Activity 3.4.1)

### 5. Past project experience and scalability

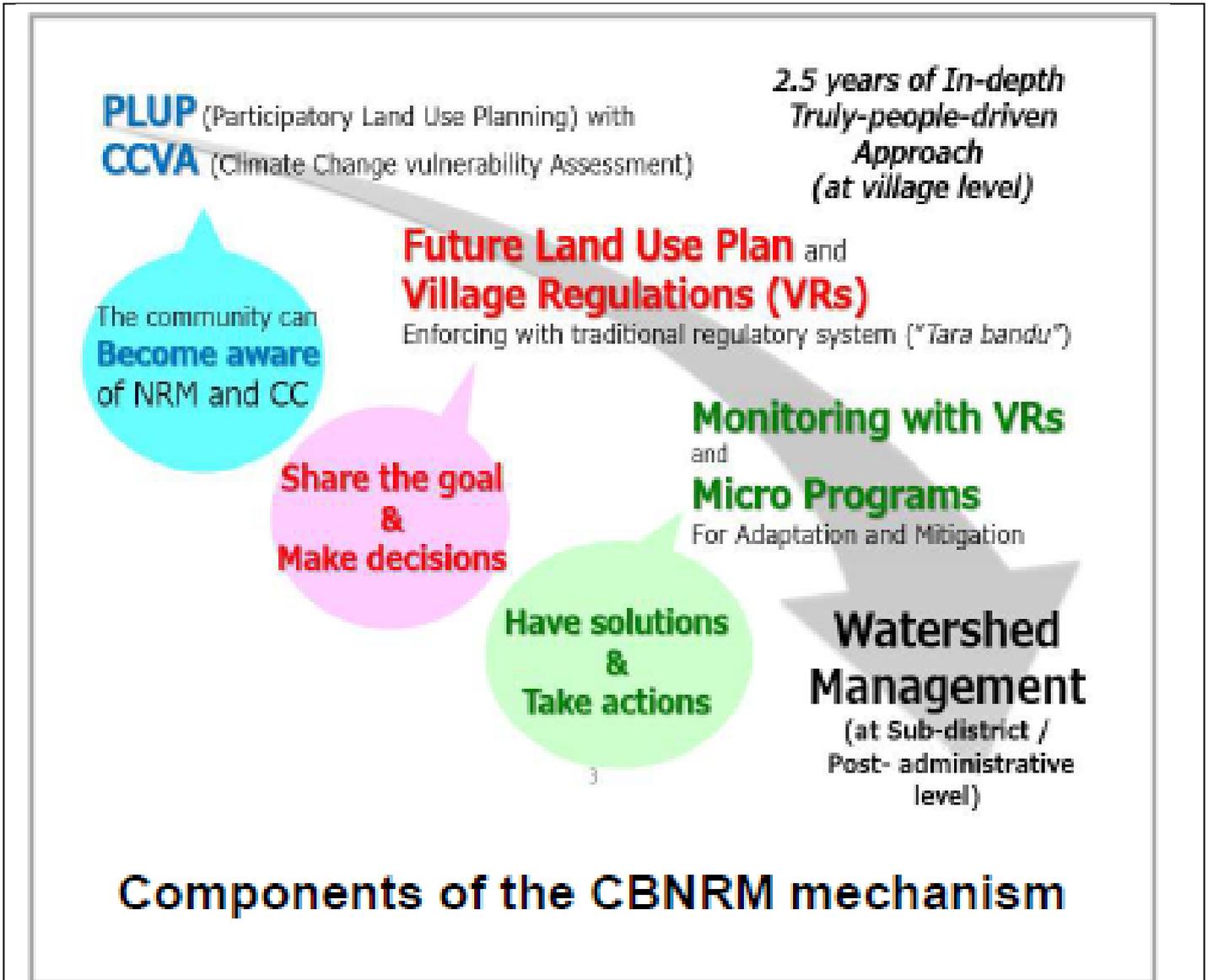
#### More than 15-year experience of JICA's technical cooperation with MAF/DGFCIP on the CBNRM mechanism

44. The CBNRM mechanism was tested and its efficacy has been proven based on over 15 years of JICA's experience in TL, The first cooperation provided by JICA was 'The Study on Community-Based Integrated Watershed Management in Laclo and Comoro River Basins (2005-2010)', which analysed the natural and socio-economic conditions of the both the watersheds and developed watershed management plans with possible measures to be taken by local communities, including Participatory Land Use Planning (PLUP) and sustainable upland farming with sloping agriculture techniques. The outputs of this study were fully taken into action by 'The Project for Community-Based Sustainable Natural Resource Management (CBNRM) Phase1 (2010-2015),' which established the model of the CBNRM mechanism in the six villages in Aileu Municipality, while documenting methodologies (e.g. through development of operational guidelines and technical manuals) and developing capacities of MAF/DGFCIP officials for

implementation. The endeavours of this project have been advanced by 'The Project for Community-Based Sustainable Natural Resource Management (CBNRM) Phase 2 (2016-2021)', which has been i) formulating the roadmap for CBNRM expansion, as a national program on CBNRM, over the 14 priority watersheds in the country, ii) assisting MAF/DGFCIP in stakeholder coordination such as DPs and NGOs, and iii) building wider stakeholders' (e.g. MAF officers, staff of other DPs and local NGOs) capacity for implementing and expanding the CBNRM mechanism through their participation in field implementation. So far, the CBNRM roadmap is at the final stage to be approved by MAF together with policy recommendations for effective implementation of the roadmap; more than 10 DPs have been participating in DP coordination to discuss issues and harmonise their actions for effective and efficient support to the forestry sector in Timor-Leste; and 35 officers of local NGOs / other DP projects have been trained on CBNRM methods and more than half of them have been engaged in the CBNRM activities under different DP projects.

#### What is the CBNRM mechanism?

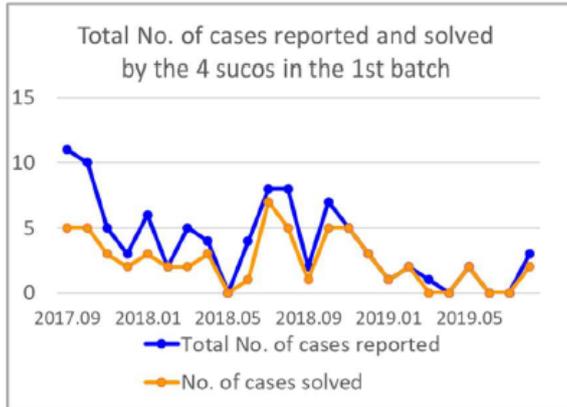
45. The CBNRM mechanism is a truly-people-driven approach, taking approximately 2.5 years for one term, to develop the capacities of local communities for sustainable management of forests and other natural resources with changes of human behaviours on land and forest uses. It starts with PLUP combined with Climate Change Vulnerability Assessment (CCVA) for 4 to 5 months, which makes the communities recognize what kinds of resources they have (incl. forestry, land, water sources) and how their behaviours affect such resources, rendering themselves more vulnerable to climate change. Through the process, they are put in the centre of making decision over what should/ should not be done for the future. They formulate Future Land Use Plan and Village Regulations (VRs), which are inaugurated with the customary ceremony named Tara-bandu. Since then, they undertake monthly monitoring on the enforcement of the VRs at least over 2 years with assistance from an external organization (e.g., NGO), coping with incidents such as forest fire, illegal exploitation of forest resources, and free-grazing animals. In parallel with the VR monitoring, the CBNRM mechanism offers Micro programs/ Hands-on training e.g. of sustainable upland farming with sloping agricultural techniques, seedling production/ tree planting, and small-scale cottage industry development. This makes the community change their land uses, transforming their conventional farming/ livelihood practices (e.g., shifting cultivation) to sustainable and climate resilient livelihood options (e.g., fixed farming with climate resilient agriculture, and fruit/ industrial trees plantation establishment) Once the CBNRM mechanism is established at village level, Watershed Management Council (WMC) is organised mostly at Post-administrative level, so as to coordinate necessary collective actions for inter-village issues such as large-scale forest fire.



### Components of the CBNRM mechanism

#### Evaluation on the efficacy of the CBNRM mechanism

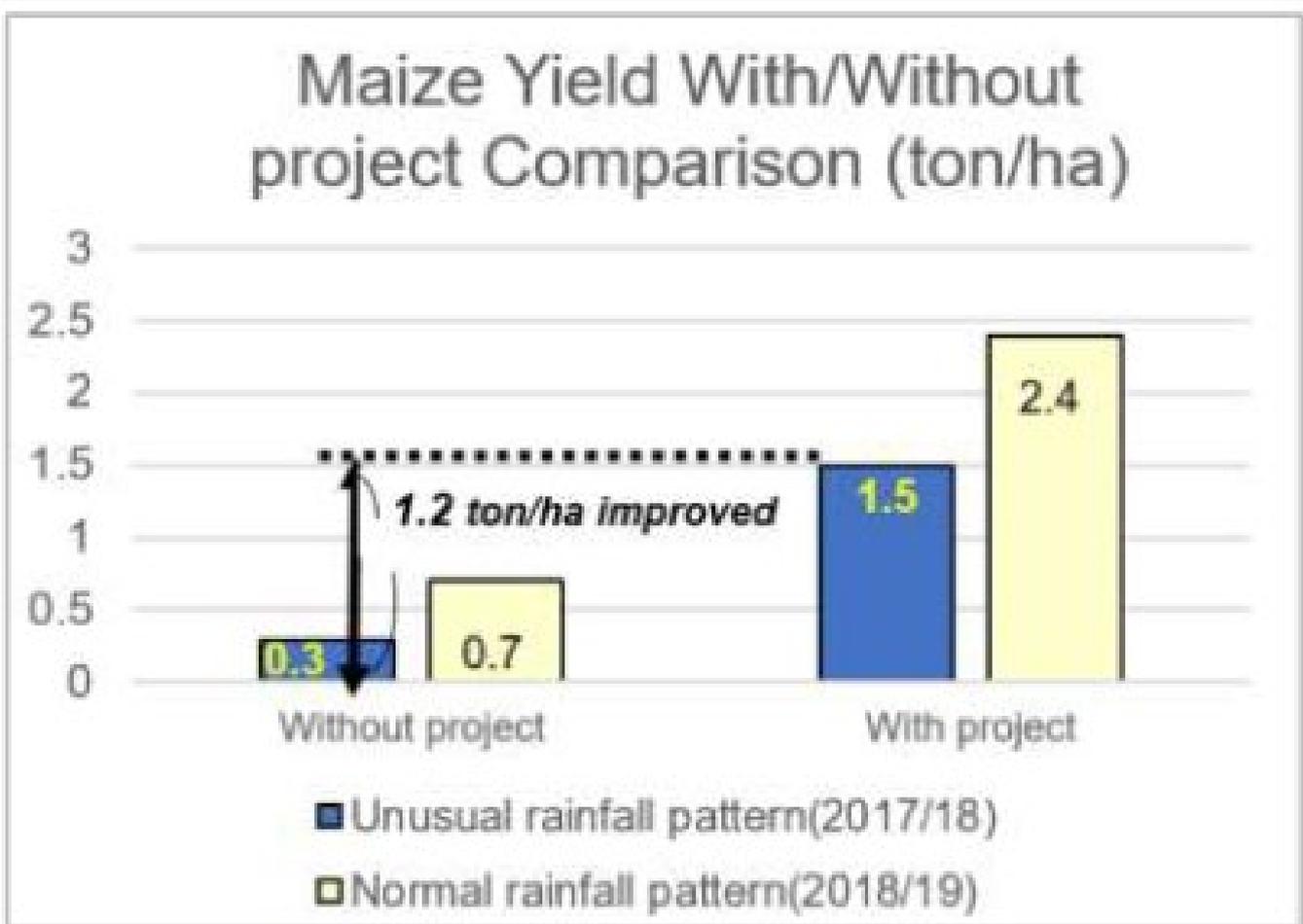
46. The evaluations hitherto conducted for the CBNRM mechanism have proven that it is an effective approach for enabling local communities to take effective measures for climate change mitigation and adaptation on their own initiatives based on their traditional system of mobilizing people and controlling human acts. PLUP with village-level NRM regulations (VRs) and its enforcement through regular monitoring in the CBNRM project villages have reduced the incidence of forest fire caused by villagers' activities (e.g., shifting cultivation), illegal exploitation, and free grazing animals as local leaders' governance capacity has been enhanced. The figure and table below present the effectiveness of the regulatory mechanism of CBNRM in the project villages, which demonstrate the declining tendency of the occurrence, while the proportional increase in solving the cases with collective actions.



Numbers of the Illegal Cases on NRM reported and solved by Communities in the target 4 villages (sucos)

Monitoring period (Semi-annual interval)	No. of cases reported	No. of cases solved	% of the solved
Sept.2017 - Feb.2018	37	20	54%
Mar.2018 - Aug.2018	29	18	62%
Sept.2018 - Feb.2019	20	17	85%
Mar.2019 - Aug.2019	6	4	67%

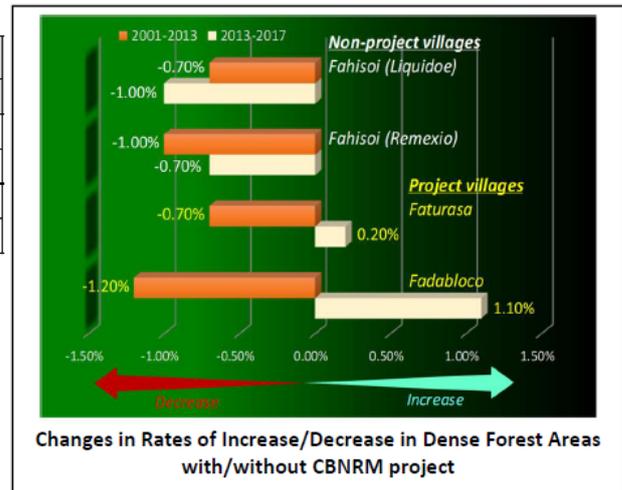
47. Microprograms/ Hands-on-training have brought about positive tangible impacts on the livelihood of the community. For example, the average yield of maize has increased with introduction of sustainable upland farming with sloping agriculture techniques, which include the use of improved seeds, compost application, terracing/ contour ditching, mix planting, and introduction of cover crops (See the figure at the right side for yield comparison with the farm without the CBNRM project). This helps communities produce sufficient staple crops, even when facing irregularity in rainfalls. For another instance, a number of trees including fruit and industrial trees (e.g. Dorian, Rambutan, Clove, Cacao, and Pepper) were planted under the program on seedling production/ tree planting. The program has provided additional sources of income for the communities, as they planted those seedlings in their own private lands with standard planting techniques. Seedlings have been protected with the enforcement of the VRs particularly from animals being freely grazed. Due consideration is also given to gender issues in home economy: there is a series of hands-on training on food processing (e.g. chip production and mushroom cultivation), which generates substantial cash income for female community members and reducing their climate vulnerabilities. Because of such tangible benefits, the communities have changed their conventional livelihood activities, particularly shifting cultivation practice, to more sustainable and climate resilient options (e.g., fixed farming with sustainable and climate resilient agriculture techniques). This is considered as another reason why the incidence of fire has reduced after the CBNRM mechanism was in place.



48. As indicated above, the CBNRM mechanism has contributed to the conservation and even restoration of degraded forests. The satellite image analysis was conducted by JICA CBNRM Project with visual interpretation using aerial photography and SPOT satellite imageries taken in 2001, 2013, and 2017. Dense forest area change in the CBNRM villages in comparison with non-CBNRM villages, before and after the introduction of the CBNRM mechanism were analysed. As shown in the table and the figure below, the areas of dense forest had increased in the CBNRM villages from 2013 to 2017 after introducing the CBNRM mechanism in 2010/2011, while those in the non-project villages had continuously reduced throughout the assessment period from 2001 to 2017. This suggests that the CBNRM mechanism would be effective in halting the pace of forest degradation (degradation of dense forests). Although the analysis was limited to the assessment of dense forest areas, there is no denying that the CBNRM mechanism could reduce the progress of deforestation (i.e. the process of changing sparse forest into other land uses), since the communities have applied their VRs wherever necessary for protection, regardless of dense/ sparse forests.

**Demonstrated Changes in Dense Forest Areas in the Sampled Villages**

Project/ Non-project	Village	Size of Dense Forests (ha)			Decreasing/ Increasing Rate (%/year)	
		2001	2013	2017	2001-2013	2013-2017
Non-project village	Fahisoi (Remexio)	434.9	385.6	374.3	-1.00%	-0.70%
	Fahisoi (Liquidoe)	175.2	160.7	154.5	-0.70%	-1.00%
Project village	Fadabloco	443.3	384.2	401.3	-1.20%	1.10%
	Faturasa	837.6	773	778.5	-0.70%	0.20%



Built-in incentives for the community to establish and sustain the CBNRM mechanism

49. With the positive impacts stated above, the CBNRM mechanism entails built-in incentives for the communities to adopt its systems and techniques. First, it is established based on traditional customs that have been engaged by rural communities over years, which assures institutional readiness and incentives for operations. For example, the VRs developed by PLUP are inaugurated with *Tara-bandu*, a traditional system of prohibiting acts that cause any problems disturbing a peaceful life, which are not necessarily limited to NRM / climate change issues. It has no legal enforcement but could function often more, especially in rural areas where the government regulatory system is not so strongly enforced. *Tara-bandu*, by its nature, has driving forces for enforcement of rules and mobilizing people for collective actions on accounts of the respects of community members to their traditional wisdom and peer monitoring pressures.

50. Micro projects/ Hands-on training, which last over 2 years, is designed not only for participants to learn skills and knowledge at demonstration plots or training workshops, but also to put into practice what they have learned in their own plots or as part of their livelihood activities. For instance, community members, who understand the effects of sustainable upland farming at demo plots in the 1<sup>st</sup> year, will practice it in their respective farms in the 2<sup>nd</sup> year. Behind this application process are two factors built in the training courses. The first factor is based on the philosophy of “Seeing is Believing” : they observe better results of the 1<sup>st</sup> year trail in the demo plots, and then have interest in the application of such techniques to their own farms. The second is the facilitation of helping each other particularly for replication of the labour- intensive practices (e.g. bench terracing and compost making), using traditional mutual support system (so-called “*Harosan*”). In general, shifting cultivation is not easy to embark on, as it requires more energy, times for commuting to farms and human resources for land preparation and weeding. Sustainable upland farming also requires significant amount of labour force for initial set-ups, such as digging of compost pit and application of soil conservation measures (e.g., bench terraces), but running and operation costs at later stage are lower than those of shifting cultivation, as the practice requires less labour force for weeding and land preparation in the consecutive years. The second factor of *Harosan* facilitation could eradicate the disadvantage of sustainable upland farming, offering enabling environment for each member to apply techniques. And once the permanent farm is established, they have incentives to maintain it, as they can enjoy more production in a stable manner. The same principle be applied to the

seedling production and tree planting program, in which local communities decide types of trees and plant selected trees in their own lands with the traditional mutual support system (*Harosan*). The communities take good care of seedlings as they considers seedlings as important assets for the communities to generate additional income in future. This mind set has also motivated local communities not to graze animals freely or put a light to his/her farm so as to protect such valuable trees planted in their own plots.

51. The last incentives for the community to sustain the CBNRM mechanism is that it can keep public order and prevent social conflicts in the communities. Without the CBNRM mechanism, there are no strong rules on regulating and controlling community acts. Hence, forest fires, illegal exploitation, grazing animal and even theft of properties (e.g., animals, crops, fruits, and other properties) used to prevail within a village. Hence, there is a well-known bitter experience of reforestation projects that seeding planted by the community members were eaten by animals owned by other members in the same village. After/ With the establishment of the CBNRM mechanism, however, these chaotic cases have not been observed.

#### Scalability and Potential for Expansion

52. The CBNRM mechanism has an innovative feature, which is hardly seen in other development interventions: it starts with PLUP/CCVA to build the consensus of the community on how to use land. This community consensus provides strong impetus for effective implementation of projects, be it of agriculture and forestry/ reforestation. Due to this value proposition, several DPs have started adopting the CBNRM-related techniques, particularly PLUP/CCVA, as part of their activities. As of April 2020, PLUP/CCVA has been introduced by MAF DPs in more than 30 villages, and around 100 villages are in the process of introduction of PLUP by 2022. As far as the 14 priority watersheds targeted by the CBNRM roadmap is concerned, there are on-going initiatives by several DPs, such as World Bank-SAPIP and EU-PSAF in there. The following table shows how many villages are covered by the existing DP projects as well as the proposed projects. The data imply that the roadmap is already somehow being implemented for the expansion of the CBNRM mechanism with on-going and future initiatives by different DPs.

#### **Number of Villages being/ will be Covered by Different Projects in the 14 watersheds**

No.	Watershed	Number of Villages	WB-SAPIP	EU-PSAF	JICA	Others	To be covered by the GCF project	Remaining
1	Lois	110	18	0	0	1	0	91
2	Caraulun	36	4	0	0	1	30	1
3	Be Lulic	20	12	0	0	0	0	8
4	Seisal	39	0	4	0	8	0	27
5	Laclo	65	2	1	11	8	36	7
6	Comoro	27	0	0	6	3	13	5
7	Tafara	18	0	0	0	1	10	7
8	Cuha	13	0	0	0	0	0	13
9	Irabere	30	5	7	0	3	0	15
10	Iralaloro/Vero	13	0	3	0	0	0	10
11	Dilor	10	0	3	0	2	0	5
12	Sahen	17	0	5	0	1	0	11
13	Quelan	4	0	0	0	0	0	4
14	Tono	16	6	0	0	0	0	10
Total		418	47	23	17	28	89	214

Note: Some villages overlap more than one watershed.

Source: JICACBNRM (2020)

53. Not only PLUP/CCVA but also other components or techniques of the CBNRM mechanism have been replicated by MAF DPs. Hands-on training on sustainable upland farming and the establishment and operation of WMCs have also been implemented by several MAF DPs, such as World Bank-SAPIP, FAO and some international NGOs. Thus, the CBNRM mechanism contains many components / elements for other stakeholders to adopt according to their needs and interests, which demonstrates its scalability and potential for expansion.

54. Though the CBNRM-related activities, namely PLUP, CCVA, and hands-on training/ micro programs, have been adopted by MAF DPs, there is still a need to promote an integrated approach, combination of the regulatory measures (e.g., PLUP and local governance enhancement) with the productive measures (e.g., CF, farm- and forest-based micro programs, and livelihood improvement options), for establishment of sustainable forest management mechanism. The existing MAF DPs projects have often adopted the CBNRM approach partially as they have their own project agenda and purposes. The proposed project will be the first intervention to implement the CBNRM roadmap with due consideration to climate change mitigation as well as adaptation. Hence the project will play an important role in demonstrating the importance of the national roadmap with the cost-effective way to mitigate CO<sub>2</sub>

emissions from forests simultaneously with reduction of local climate vulnerability in rural areas in Timor-Leste.

55. It is also worth noting that the expansion of the CBNRM mechanism has been accelerated by the DP coordination meetings led by MAF/DGFCIP. The coordination platform was established in 2017. More than 10 DPs working in the forestry and watershed management sectors have participated in the meetings. With MAF/DGFCIP initiatives, the CBNRM approach was introduced and promoted to MAF DPs in the meetings, and the approach itself has been evolved and improved through collaboration with MAF DPs. This coordination system will continue during and after the proposed project, implying that the CBNRM approach could be adopted by future DP projects and integrated into their project interventions. Lessons learned through the implementation of the proposed project will also be shared in the meeting so that they could be effectively used for the future projects (See Sub-section C4 and E5 also).

56. As the proposed project will just cover 4 watersheds out of the 14 priority watersheds, MAF DPs will be further encouraged by MAF to scale up the integrated CBNRM approach in the remaining watersheds through the DP coordination platform. The policy and legislative frameworks to be developed by the proposed project for mainstreaming the CBNRM/ CF approach will also give a good boost to replication of the CBNRM approach by MAF DP beyond the four target watersheds.

[1] Timor-Leste's Initial National Communication, 2014

## B.2. Project/Programme description (max. 1,000 words)

### 1. Theory of Change of the Project

57. The overarching goal of the proposed project is to contribute towards the reduction of GHG emissions through reducing forest degradation and deforestation by 80% from the current level in Timor-Leste, through national level expansion of the CBNRM/ CF approach, which will catalyse further governmental, private, and developing partner investments for nature-based climate solutions.

58. If the existing forests in Timor-Leste, particularly in the 14 priority watersheds, are well managed and protected from further degradation and deforestation through promoting the proven CBNRM (Community Based Natural Resource Management)/CF (Community Forestry) approach, developed through JICA's 15 years of experience, then the annual GHG emissions from LULUCF sector will decline by approximately 80 % compared to the average between 2005 and 2010, and enable the implementation of the national CBNRM roadmap, because the proposed project with the MAF/DGFCIP commitment to mainstream the CBNRM/ CF approach for sustainable forest management in Timor-Leste can: i) reduce forest fire and forest overexploitation through inclusive and participatory natural resource management and regulatory frameworks and coordinating platforms to run the approach as an everyday practice, which will ii) enhance sustainable livelihood practices, instead of conventional ones e.g., shifting cultivation to realize

the effective climate mitigation action in the country, with stable institutionalization by iii) developing an enabling environment to further scale up the CBNRM/CF mechanism with adequate policy support, capable human resources, and financial back-up in collaboration with MAF development partners, international funding institutions, and private sector.

59. To realize the above-mentioned goal, the proposed project is designed to: i) demonstrate the efficacy of the CBNRM/ CF approach for reduction of GHG emissions from LULUCF sector and enhancement of other forest ecosystem services by using the results of the proposed projects in the 4 target watersheds; ii) build the legislative frameworks for CBNRM/ CF implementation on the existing law and policy; iii) mobilize additional finance from MAF DPs and international donors utilizing the existing MAF DPs coordination platform led by MAF/ DGFCIP with proven results of the proposed project; and iv) enhance the MAF and NGO field officers' capacity as the national service providers for CBNRM/ CF replication and scaling-up as their business as usual basis.

60. In the project framework, the proposed project aims to achieve the GHG emissions reductions from forest degradation and deforestation in the target 74 villages of the 4 target watersheds by directly addressing the major barriers which have significantly affected the past and on-going MAF as well as MAF DPs interventions for sustainable forest and land management in Timor-Leste, namely; i) insufficient local governance capacity for sustainable forest and natural resource management; ii) lack of local farmers' capacity to transform their conventional farming practices, namely shifting cultivation, into improved sustainable farming with climate resilient co-benefit; and iii) lack of alternative income generating opportunities for local communities to change their conventional farming and resource management practices which have significantly caused damage on forest resources.

61. In addition to the interventions to address the field-level issues on sustainable forest management, providing the new climate model for the most vulnerable, the proposed project will build in the component to address the institutional and policy weakness in scaling up the low-carbon NRM model (i.e., CBNRM/ CF mechanism) within the project framework to enhance the potential for a paradigm shift toward the low-carbon development path to slow growth in GHG emissions from the LULUCF sector.

62. Toward those ends described above, the project will undertake the following project components (Components) and project activities (Activities). These Activities are closely interlinked to achieve the project outputs as illustrated in the diagram of the “Theory of Change” in the next page.

■ Component 1: Establishment of people driven NRM system, which consists of i) participatory assessment and planning (Activity 1.1.1), ii) participatory sustainable NRM with village regulations (Activity 1.2.1), and iii) enhancement of local coordination for sustainable NRM at sub-watershed level (Activity 1.2.2)

■ Component 2: Reinforcement of food security and livelihood diversification through implementation of micro programs/ FFSs on sustainable and climate resilient livelihoods effective for reducing CO<sub>2</sub> emissions,

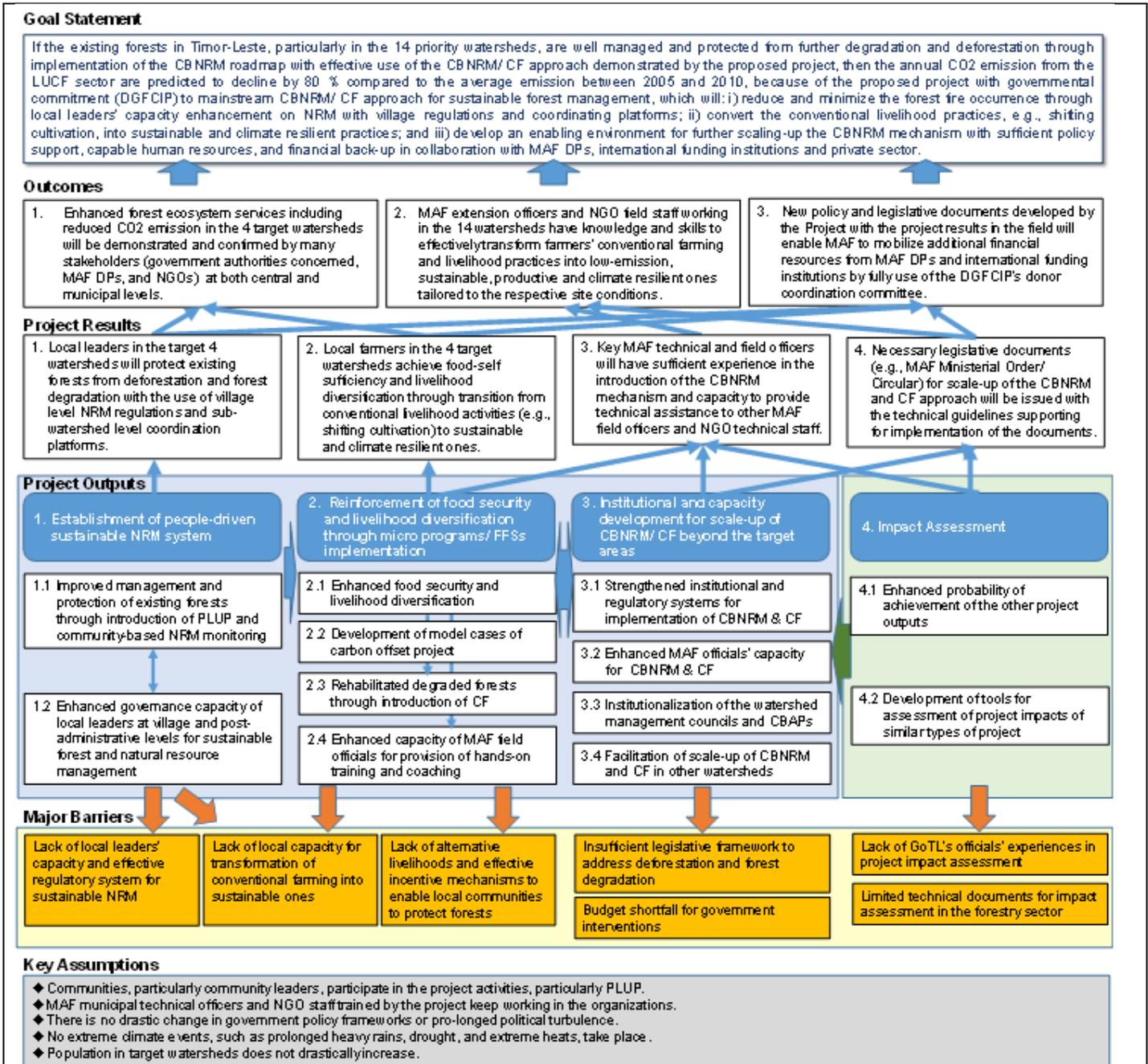
which contains i) assistance in transformation of conventional farming and livelihood practice into low emission and sustainable ones (Activity 2.1.1); ii) development of an incentive mechanism for reforestation (Activity 2.2.1); iii) promotion of CF as a sustainable forest management scheme (Activity 2.3.1); and iv) capacity building of MAF field officials concerned with the target watersheds on CBNRM (Activity 2.4.1).

■ Component 3: Institutional and capacity development for scale-up of CBNRM/ CF beyond the target areas, which consists of i) issuance of new government order or circular for promotion of CBNRM/ CF (Activity 3.1.1); ii) capacity building of MAF and NGO officials working in non-target watersheds (Activity 3.2.1); iii) institutionalization of the project outputs to enhance sustainability and scalability (Activity 3.3.1); and iv) effective knowledge sharing among key stakeholders, particularly law makers (Activity 3.4.1).

■ Component 4: Impact assessment, composed of i) establishment of baseline conditions for impact assessment (Activity 4.1.1); ii) evaluation of the project impacts with established methodologies for impact assessment (Activity 4.1.2); and iii) development of technical references for assessment and evaluation of similar projects in future (Activity 4.2.1).

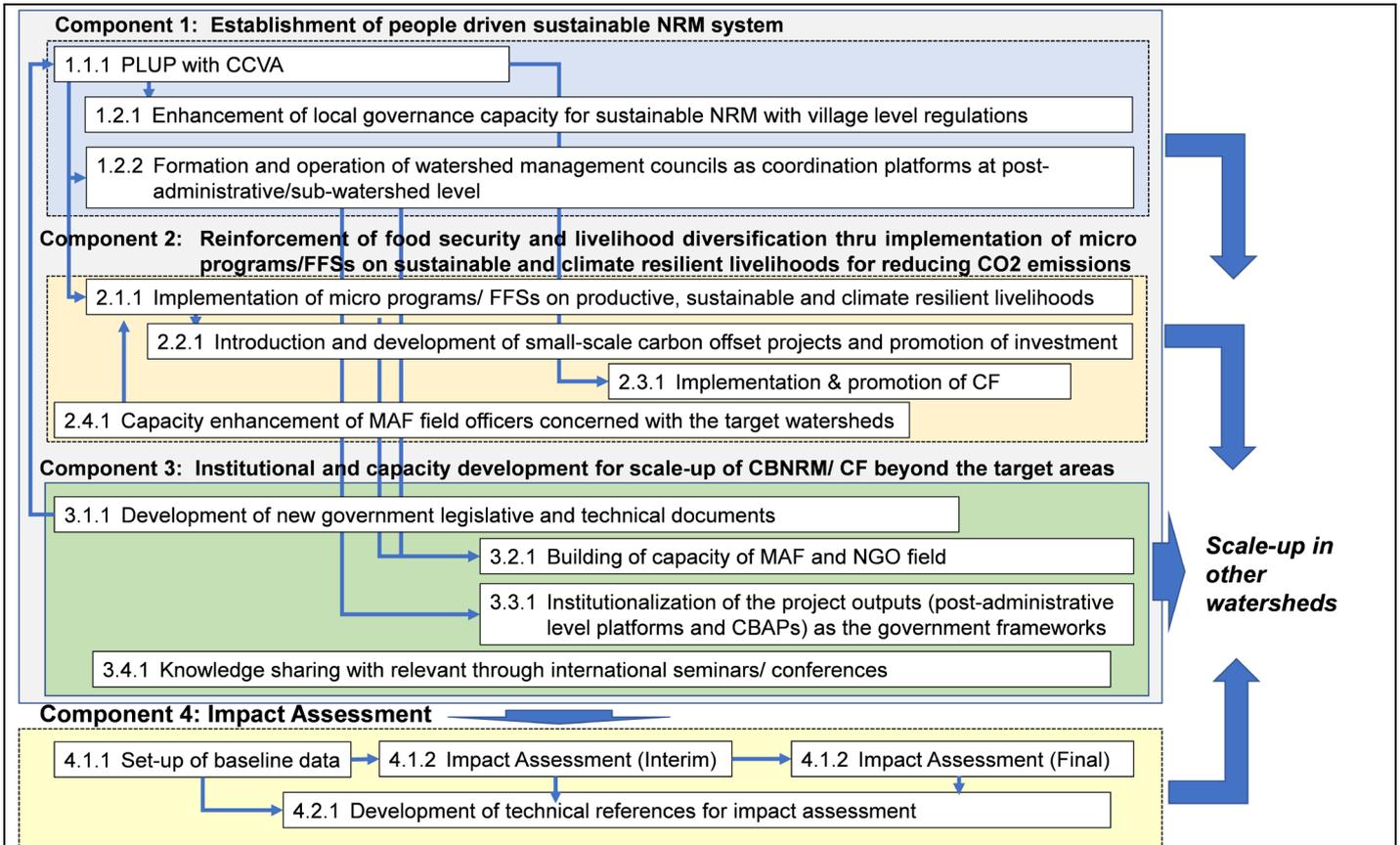
63. It is noteworthy that the aforementioned outcomes will be achieved through implementation of the project activities under the assumptions of: i) the current forestry sector policy aimed at the sustainable forest management is maintained; ii) climate change mitigation actions, particularly reduction of GHG emissions from LULUCF sector, will remain as the priority area of MAF DPs working in the forestry sector; iii) MAF/ DGFCIP will continuously monitor the target villages' performance in sustainable forest management and provide necessary technical assistance/guidance to ensure the sustainability of the project effects; and iv) MAF and NGO technical officials trained by the project will not widely leave from their current job status. Under these assumptions of political and institutional stability, and with an effective institutional and policy support from the proposed project, the overarching goal is expected to be achievable to transform the nation into a low-carbon development pathway through proposed truly people driven sustainable natural resource management as a nature-based climate solution.

64. The diagram of the “Theory of Change (ToC)” of the proposed project is illustrated below.



## 1. 1 Overall Picture of the Components and Activities of the Proposed Project

65. As illustrated below, the three Components and 10 outputs are interrelated with each other. The Activities will be implemented in an integrated approach for the low-carbon development pathway.



In principles, the Activities will be implemented under the different contract packages or different modalities, but in a coordinated manner. Most of them, except Activities 1.2.1, 1.2.2, 4.1.1 and 4.1.2, directly link to the respective project outputs (e.g., Output 1.1 to Activity 1.1.1), while Activities 1.2.1 and 1.2.2 and Activities 4.1.1 and 4.1.2 each share one project output, i.e., Output 1.2 and Output 4.1, as such Activities are interrelated with each other in achieving those project outputs, though they will be implemented by different contract packages or modalities. The table below shows the interrelationships between the Activities and the project outputs

Output	Activity
Output 1.1	Activity 1.1.1
Output 1.2	Activities 1.2.1 and 1.2.2
Output 2.1	Activity 2.1.1
Output 2.2	Activity 2.2.1
Output 2.3	Activity 2.3.1
Output 2.4	Activity 2.4.1
Output 3.1	Activity 3.1.1
Output 3.2	Activity 3.2.1
Output 3.3	Activity 3.3.1
Output 3.4	Activity 3.4.1
Output 4.1	Activities 4.1.1 and 4.1.2
Output 4.2	Activity 4.2.1

66. Though there are 125 villages whose jurisdictional areas are partially or fully overlapping with the 4 target watersheds, a total of 74 villages in the watersheds are tentatively selected as target villages with budget consideration. The criteria used for selection were: i) GHG emission reduction potential, ii) potential risks of climate change to local livelihoods; iii) no or less overlap with existing or pipelined MAF development partners' interventions; and iv) geographical occupancy in the watersheds. The process and results of the evaluation and selection of the target villages are described in Section 8.2 of Annex 2 Pre-Feasibility Study attached to this funding proposal. The table below shows the number of villages selected in the respective municipalities and post-administratives concerned with the target watersheds.

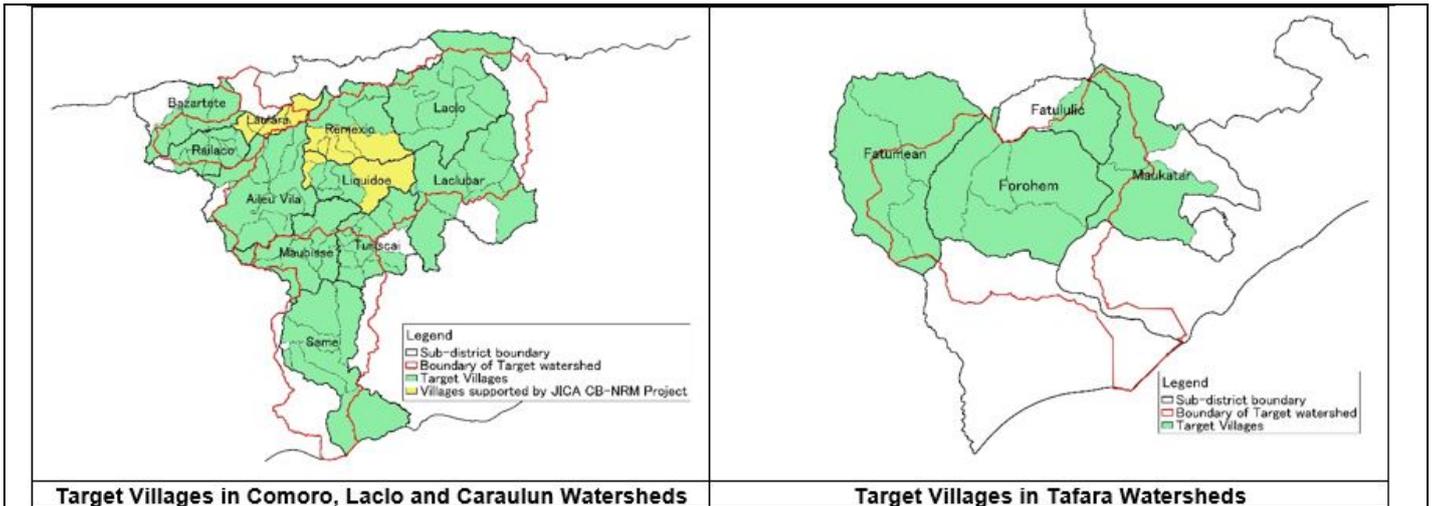
Watershed	Municipality	Post Administrative	No. of villages *
Caraulun	Aileu	Aileu Vila	2*
	Ainaro	Maubisse	6*
	Manufahi	Same and Turiscai	13
Tafara	Covalima	Fatululic, Fatumean, Forohem and Maukatar	10
Laclo	Aileu	Aileu vila, Liquidoe and Remexio	14*
	Ainaro	Maubisse	4*
	Manatuto	Laclo and Laclubar	9
	Manufahi	Turiscai	4
Comoro	Aileu	Aileu vila and Remexio	3*
	Ermera	Railaco	8
	Liquica	Bazartete	4

Note: \* There are villages whose area overlaps with more than two watersheds.

The selected 74 target villages will cover 34% of the area aimed to be covered under the national CBNRM Roadmap.

67. The target villages will be reviewed in consultation with MAF DPs in the DGFCIP coordination platforms in the beginning of the project to avoid unnecessary overlap on similar interventions. In case some of the village need to be replaced due to possible overlap with MAF DPs interventions similar in nature to the proposed project, JICA will select the replacement in collaboration with MAF/ DGFCIP using the criteria shown in Para 61. In case that the target village have support from other MAF DPs projects but not in the fields similar to the interventions of the proposed project (e.g., water supply development and market development), the villages will be considered as potential target sites as such interventions could strengthen the effects of the CBNRM approach.

68. Out of 74 villages, six villages have already developed the future land use plan and village regulations with assistance from MAF DPs projects, and another six villages are expected to have agricultural development support from the on-going projects, i.e., PSAP[1] (GIZ-EU project), SNAP[2] (GEF project), and To'os Ba Moris Diak (TOMAK, DFID - Australian Aid project). Below figure below shows the locations of the target villages in the respective watersheds.



[1] Partnership for Sustainable Agroforestry (PSAP)

[2] Securing the long-term conservation of Timor-Leste's biodiversity and ecosystem services through the establishment of a functioning National Protected Area System and the improvement of natural resource management in priority catchment corridors (SNAP)

## 2. Outline of the Components, Outputs, and Activities

### 2.1 Component 1: Establishment of people driven sustainable NRM system

69. This Component aims to enhance the capacity of local stakeholders, particularly village leaders and post-administrative officers in the watersheds, for sustainable forest and natural resource management at village and post-administrative levels through participatory assessment, planning, and management of natural resources in the localities. Component 1 consists of the following Outputs and Activities:

Output 1.1: Improved management and protection of existing forests through introduction of PLUP and community-based NRM monitoring

Activity 1.1.1 Participatory land use planning (PLUP) with climate change vulnerability assessment (CCVA);

Output 1.2: Enhanced governance capacity of local leaders at village and post-administrative levels for sustainable forest and natural resource management

Activity 1.2.1 Enhancement of local governance capacity for sustainable NRM with village level regulations; and

Activity 1.2.2 Formation and operation of watershed management councils as coordination platforms at post-administrative/sub-watershed level.

70. The methodologies and processes proven by several MAF development partners will be fully used for capacity enhancement of the local leaders under this Component. Some national NGOs also have experiences in the implementation of the methodologies in the field. There are also written knowledge products, manuals and standard operating procedures, which can be used as technical references for field facilitators to maintain the stable quality.

71. The proposed project in general, the Activities under this Component in particular, will focus on the village (suco), which is the least local government authority at grass-root level and responsible for protecting local environment including natural resources and building/ maintaining peace and security of community life. To inaugurate necessary actions for NRM and climate change issues, PLUP with CCVA will make the best use of “Tara-bandu,” which is TL's effective customary system of prohibiting acts that cause problems and disturbance against community prosperity. It is not legalized framework for enforcement but could often function more than legal interventions, especially in rural areas, where people make a life, depending on informal institution framework and relationships (e.g. harmonious and mutual-helping behaviours and respects to spiritual tradition). In addition, Activity 1.2.2 aims to strengthen the inter-village coordination and collective actions at post-administrative level to solve any inter-village issues, which the village-level authorities even with the customary rules (Tara-bandu) cannot settle effectively, due to multiple village involvement in such issues (such as forest fires in border areas). The enhancement of the post-administrative level governance capacity is essential to ensure the effectiveness of the village-level NRM regulations.

72. Proposed Sub-activities under the Activities are summarized below

***Activity 1.1.1 Participatory land use planning (PLUP) with climate change vulnerability assessment (CCVA)***

Sub-activities of the Activity (Duration: 3~4 months per village):

The following activities will be carried out for the formulation of village regulations with a future land use plan and a community-based adaptation plan in each village.

The following Sub-activities will be carried out for the formulation of village regulations with a future land use plan and a community-based adaptation plan in each village.

- 1.1.1.1 Consultation with local leaders & communities
- 1.1.1.2 Formation of a PLUP working team
- 1.1.1.3 Study tour to a village where PLUP has been introduced
- 1.1.1.4 Present land use mapping with vulnerability assessment
- 1.1.1.5 Future land use planning with identification of adaptation options
- 1.1.1.6 Review of past and on-going village rules
- 1.1.1.7 Development of draft village regulations
- 1.1.1.8 Review of the draft village regulations
- 1.1.1.9 Consultation with local communities about the draft regulations
- 1.1.1.10 Preparation of the customary (*tara bandu*) ceremony
- 1.1.1.11 Announcement of the village regulations in the customary (*tara bandu*) ceremony

All the Sub-activities listed above except 1.1.1.11\_Tara Bandu ceremony are the meetings, discussions, and consultations with local communities. The process of PLUP is fully in line with the concept of free, prior, and informed concept (FPIP). In the PLUP process, local communities are the ones who design the future land use plan based on the assessment of the current situations in their areas and develop the village-level NRM regulations considering their customary rules and norms. Local communities will also develop their CBAPs as a result of CCVA in the process of PLUP.

***Activity 1.2.1 Enhancement of local governance capacity for sustainable NRM with village level regulations***

Sub-activities of the Activity (Duration: 3 years):

- 1.2.1.1 Holding of meetings with village leaders (including women members) to discuss i) any problems occurring in a village; ii) how such problems could be settled/solved using the village regulations; and iii) any action related to CBPA (including Activity 2.1.1) taken in the village so far.
- 1.2.1.2 Holding of a quarterly sub-village (aldeia) meeting with local communities in the sub-village to share the results of the monthly village meetings with those at sub-village level and discuss any issues of concern in the sub-village.

***Activity 1.2.2 Formation and operation of watershed management councils as coordination platforms at post-administrative/sub-watershed level***

Sub-activities of the Activity (Duration: 2~3 months, and 3 years to follow):

The following Sub-activities will be carried out for the formation of a watershed management council at post-administrative level. (Duration: 2~3 months)

1.2.2.1 Consultations with local leaders concerned with a watershed

1.2.2.2 Study tour to the existing watershed management council

1.2.2.3 Stakeholder analysis and selection of members

1.2.2.4 Situation analysis and determination of vision and missions

1.2.2.5 Development of by-laws of the council

1.2.2.6 Development of a resolution on vision, missions, and by-laws

After the formation of the watershed management council, the Activity will further help the watershed management councils to have council meetings on a quarterly basis so that the members would discuss any issues on natural resource management (e.g., forest fire, illegal logging, and landslide) happening in the sub-watershed/post-administrative and take necessary actions to solve any issues between/ among the member villages.

Facilitators of the hired NGOs with supervision of TET and MAF Monitoring Teams will facilitate constructive discussions in the council meetings and help them come up with concrete actions for any inter-village issues which cannot be solved by a single village. MAF officials participating in the meetings will also provide guidance and advice to members of the council to take a collaborative approach with Municipal MAF offices, when necessary.

**2.2 Component 2: Reinforce food security and livelihood diversification through implementation of micro programs/ FFSs on sustainable and climate resilient livelihoods effective for reducing CO2 emissions**

73. This Component aims to enable communities to transition away from traditional shifting agriculture practices by mainstreaming more productive, sustainable and climate resilient ones, which will reduce food insecurity and allow farmers to forgo forest degradation for cropping. The transition will be enabled by strengthening the capacity of local communities on sustainable land management and climate resilient agriculture, planting and management of horticultural plants (fruits and industrial plants), reforestation/ afforestation, and introduction of alternative livelihood options, through a series of hands-on training on the relevant topics.

74. Simultaneously, the Component aims to strengthen the capacity of MAF field-level officers, such as MAF extension officers, forest guards, and technical officers of the MAF municipal offices concerned through provision of On-the-job-training (On-JT) and Off-JT training opportunities on the relevant topics so that they could continuously provide technical support services to local communities in the target villages in the post-project period.

75. Component 2 is composed of the following Outputs and Activities:

Output 2.1 Enhanced food security and livelihood diversification of vulnerable living in hills and mountains in the target watersheds through implementation of micro programs/ FFSs on sustainable and climate resilient livelihoods

Activity 2.1.1 Implementation of micro programs/ Field Farmers Schools (FFSs) on productive, sustainable and climate resilient livelihoods (e.g., climate resilient agriculture, horticulture/ agroforestry, CB nurseries and reforestation, coffee rehabilitation, alternative income generation);

Output 2.2 Development and demonstration of model cases of incentive mechanism based on the carbon offsetting scheme in selected villages

Activity 2.2.1 Introduction and development of small-scale carbon offset projects and promotion of private investment;

Output 2.3 Rehabilitated degraded forests and lands through reforestation and sustainable forest management with introduction of CF

Activity 2.3.1 Implementation and promotion of community forestry (CF) in the selected areas in the watersheds;

Output 2.4 Enhanced capacity of MAF field officials for provision of hands-on training and coaching on relevant sustainable and climate resilient livelihoods

Activity 2.4.1 Capacity enhancement of MAF field officers (Extension officers, Forest Guards, and Municipal technical officers) concerned with the target watersheds.

76. The micro programs/FFS will be selected from the potential land use options and adaptation measures determined through PLUP / CCVA in a participatory manner. The following sustainable and climate resilient livelihood options are the potential agenda to be demonstrated and promoted in the micro programs/ FFSs based on the experiences of the past and on-going JICA CBNRM Projects for 15 years. They have been proven by several MAF DP-supported projects including JICA CBNRM project in Timor-Leste over decades.

- Climate resilient agriculture with sloping land agriculture techniques
- Agroforestry and planting of horticultural plants (fruits and industrial plants)

- Community nursery and reforestation with mechanisms to generate additional sources of income
- Rehabilitation and improvement of aged coffee plantations
- Vegetable production in backyard farms or home gardens
- Development of alternative sources of income using resources available in localities (e.g., food processing)

Prior to the selection of the potential livelihood options at village level, JICA-TA will prepare a short-list of the potential options based on the results of PLUP and CCVA so that local communities will be properly guided. As any of the potential options would not be associated with infrastructure development with potential environmental and social negative impact, no significant adverse environmental impact is foreseen through the implementation of this Activity. It is also noted that no cash payment or provision of vouchers will be involved in the micro programs, to avoid any unnecessary conflicts among communities in the target villages.

77. In principle, micro programs/FFS is designed not only for participants to learn skills and knowledge at demonstration plots/ training workshop, but to enhance local capacities to replicate what they have learned in their own farms/ plots /daily activities. Hence, almost all the community members are expected to adopt and actually benefit from the adaptation measures/ key techniques introduced in micro programs/ FFSs, which could further motivate the beneficiaries to continue the measures/ techniques even in the post-project period. For instance, community members, who understood the effects of climate resilient agriculture and sloping agriculture techniques at a demo plot in the 1<sup>st</sup> year, will help each other to practice it in their respective farms through facilitation of the built-in traditional mutual support system (so-called “harosan” in Tetun or Gotong Yorong in Indonesian) in the 2<sup>nd</sup> year, particularly for the labor- intensive practices, such as bench terracing and compost making.

78. Hands-on training and skill/ technical transfer to local communities as well as facilitation of field replication will be the major activities undertaken by NGOs hired by JICA in the micro programs. JICA-TA and MAF Monitoring Teams will closely monitor and supervise the process of the micro programs and performance of the hired NGOs in the field. Operation Manual (see Appendix 8-1 of the Annex 2) and Technical Manuals developed by the JICA CBNRM Project will be used for implementation of the micro programs as technical guidelines. Key techniques to be transferred through hands-on training and replicated by local communities in the course of the micro program implementation are listed in the table below.

Adaptation Measures	Key Techniques to be introduced in Hands-on Training
Climate resilient agriculture with sloping land agriculture techniques	<ol style="list-style-type: none"> <li>1. Production of compost using materials locally available (preparation, piling, and maintenance of compost)</li> <li>2. Clearing of farmland</li> <li>3. Delineation of contour lines with A-frame (making an A-frame and delineation of contour lines with A-frame)</li> <li>4. Application of soil conservation measures, such as bench terrace and contour ditch/band</li> <li>5. Land preparation</li> <li>6. Designing of farm and seed selection (procurement of improved seeds)</li> <li>7. Sowing seeds of crops (maize, beans, sweet potato, cassava, and pumpkin)</li> <li>8. Preparation of liquid fertilizer using materials locally available</li> <li>9. Maintenance of farm (weeding, mulching, application of liquid fertilizer, planting of hedgerows along contours, and planting of wind break trees)</li> <li>10. Planting of cover crops</li> <li>11. Post-harvesting of maize and beans (measurement and storing of grains/beans)</li> <li>12. Maintenance of soil conservation measures applied in the farm</li> </ol>
Agroforestry and planting of horticultural plants (fruits and industrial plants)	<ol style="list-style-type: none"> <li>1. Selection of location for a nursery and a source of water to be used for watering</li> <li>2. Development of a simple water supply system from the source to the nursery (if necessary)</li> <li>3. Collection of materials (bamboo and others) for building a nursery</li> <li>4. Building of a community nursery</li> <li>5. Production of compost using materials locally available</li> <li>6. Making of a seedbed</li> <li>7. Collection of soils and sands (procurement of compost or animal manure, if necessary)</li> <li>8. Procurement of seeds of fruits and industrial plants</li> <li>9. Sowing of seeds/planting materials in seedbed</li> <li>10. Mixing of soils, sands, and compost and filling mixed soils into poly bags</li> <li>11. Transplanting of sprouts in seedbed into poly bags</li> <li>12. Maintenance of seedlings transplanted in poly bags</li> <li>13. Hardening of seedlings</li> <li>14. Designing of agroforestry plantation</li> <li>15. Land preparation for planting (staking, hole digging, application of compost, refilling)</li> <li>14. Planting of seedlings and crops</li> <li>15. Tending of seedlings (weeding, cultivation, and mulching)</li> </ol>
Community nursery and reforestation with mechanisms to generate additional sources of income	<ol style="list-style-type: none"> <li>1. Selection of location for a nursery and a source of water to be used for watering</li> <li>2. Development of a simple water supply system from the source to the nursery (if necessary)</li> <li>3. Collection of materials (bamboo and others) for building a nursery</li> <li>4. Building of a community nursery</li> <li>5. Production of compost using materials locally available</li> <li>6. Making of a seedbed</li> <li>7. Collection of soils and sands (procurement of compost or animal manure, if necessary)</li> <li>8. Procurement of seeds of trees (for timber and firewood production)</li> <li>9. Sowing of seeds/planting materials in seedbed</li> <li>10. Mixing of soils, sands, and compost and filling mixed soils into poly bags</li> <li>11. Transplanting of sprouts in seedbed into poly bags</li> <li>12. Maintenance of seedlings transplanted in poly bags</li> <li>13. Hardening of seedlings</li> <li>14. Designing of plantation</li> <li>15. Land preparation for planting (staking, hole digging, application of compost, refilling)</li> <li>14. Planting of seedlings</li> <li>15. Tending of seedlings (weeding, cultivation, and mulching)</li> </ol>

Rehabilitation and improvement of aged coffee plantations	<ol style="list-style-type: none"> <li>1. Selection of aged coffee plantation</li> <li>2. Rejuvenation of aged coffee trees</li> <li>3. Procurement of new seedlings of coffee and other trees used for shade trees</li> <li>4. Designing of plantation</li> <li>5. Land preparation for planting (staking, hole digging, application of compost, refilling)</li> <li>6. Planting of seedlings</li> <li>7. Preparation of liquid fertilizer</li> <li>8. Tending of seedlings (weeding, cultivation, fertilization and mulching)</li> <li>9. Harvesting of coffee</li> <li>10. Pruning of branches of coffee trees</li> </ol>
Vegetable production in backyard farms or home gardens	<ol style="list-style-type: none"> <li>1. Production of compost using materials locally available (preparation, piling, and maintenance of compost)</li> <li>2. Land preparation and use of farming tools</li> <li>3. Application of soil conservation measures including delineation of contour lines (if necessary)</li> <li>4. Preparation of nurseries for vegetable seedlings</li> <li>5. Planting/ Transplanting</li> <li>6. Preparation of liquid fertilizer using materials locally available</li> <li>7. Maintenance of farm (e.g., pest management, weeding, and watering)</li> <li>8. Application of compost basket</li> <li>9. Harvesting and collection of seeds</li> <li>10. Soil conservation techniques (optional)</li> </ol>
Development of alternative sources of income using resources available in localities	<ol style="list-style-type: none"> <li>1. Assessment of resources available in the localities</li> <li>2. Identification of potential livelihood options using resources available</li> <li>3. Assessment of marketing needs and potential value chains</li> <li>4. Designing of hands-on training courses on the potential livelihood options, such as production of food processing products, mushroom production, and other cottage industry activities</li> <li>5. Procurement of tools and materials used for livelihood options</li> <li>6. Conduct of hands-on training on the livelihood options</li> <li>7. Trial production of products and communication with potential buyers</li> <li>8. Improvement of quality of products through trial production</li> <li>9. Marketing of products</li> <li>10. Preparation and management of a book of account (if necessary)</li> <li>11. Cash management (if necessary)</li> </ol>

79. An additional incentive mechanism based on carbon offsetting scheme will be examined and demonstrated in Activity 2.2.1 so that local communities in the target villages, particularly those involved in forest-based micro programs in Activity 2.1.1 and CF activities in Activity 2.3.1 could get sustainable benefits from protection, maintenance, and management of forest areas as an incentive.

80. Implementation of community forestry in Activity 2.3.1 is aimed at the promotion of legalized community-based sustainable management of production forests through guidance on forest management planning, sustainable silviculture practices, benefit sharing among member communities, and participatory patrolling and monitoring. Community forest management agreements with resource use/ harvesting plans will be developed and exchanged by NDFWM and local community groups in the course of the implementation of the Activity, the upcoming FAO-TCP, which is scheduled to be implemented in 2021, may undertake the trial implementation of CF for development of technical references.

81. Proposed Sub-activities under the Activities are summarized below.

***Activity 2.1.1 Implementation of micro programs/ FFSs on productive, sustainable and climate resilient livelihoods (e.g., climate resilient agriculture, horticulture/ agroforestry, CB nurseries and reforestation, coffee rehabilitation, alternative income generation)***

Sub-activities of the Activities(Duration: 2.5 years per micro program/FFSs)::

The standard process of implementation of the Activity is shown below.(Duration: 2 years for 2 batches of hands-on training including individual application of techniques)

2.1.1.1 Selection and prioritization of potential livelihood improvement options as a micro program based on the CBAP in a participatory manner \*1

2.1.1.2 Assistance in the selection of community members/ households who participate in micro programs/ hands-on training on the selected livelihood option as beneficiaries\*2

2.1.1.3 Study tour to a/ village/s where similar activities have been carried out

2.1.1.4 Identification of a demonstration plot at each sub-village as a training venue of hands-on training\*3

2.1.1.5 Conduct of the 1st year of hands-on training on key techniques of the selected adaptation measures in the demonstration plot at each sub-village

2.1.1.6 Evaluation of the results of the 1st year of hands-on training at the end of the course

2.1.1.7 Conduct of the 2nd year of hands-on training on key techniques/skills including development of sub-demonstration plots as part of training

2.1.1.8 Assistance in beneficiaries' application of key skills in their farms/plots using the traditional collective working system

Note:

\*1 In principle, local communities in the target villages, with facilitation of hired NGOs under the supervision of JICA-TA, will select the priority livelihood options from the short-listed ones after explanation of proposed micro programs and their key techniques and expected benefits of the respective options according to the following criteria: i) relevance to the community-based adaptation plan, ii) relevance to natural resource management or the future land use plan, iii) possibility of introduction of the livelihood options, iv) number of potential beneficiaries, and v) extent of the impact on local livelihood. More details of the process of selection of the livelihood options/ micro programs are described in "Operation Manual on Establishment of CB-NRM Mechanism at the Village Level" developed by the JICA CBNRM Project in 2016 (see Appendix 8-1 of the Annex 2).

In selection of the micro program, the Free, Prior and Informed Consent (FPIC) principle is fully applied. Local communities will assess and evaluate the potential micro programs by themselves with assistance of hired NGOs and negotiate with each other for building a consensus among community members in the villages.

\*2 The eligibility criteria for selection of community members who participate in the micro program have been developed and set by the JICA CBNRM Project for the respective potential options. Detailed criteria

are stipulated in “Operation Manual on Establishment of CB-NRM Mechanism at the Village Level” developed by the JICA CBNRM Project in 2016. To select the members in a participatory manner, the willingness and initiatives of the local communities in the target villages will be confirmed by the: i) use of their resources (farms or plots) for the demonstrated activities, ii) participation in the series of training courses, iii) cooperation with the hired NGO/ MAF/ JICA for micro program performance monitoring, and vi) shared degree of their experiences and knowledge with other community members. This selection will be supervised by contracted local NGOs.

\*3 Demonstration plots will be selected among the members' plots, of which the owners accept the use of their areas for training of other members, considering the following criteria: i) accessibility, ii) demonstration effect, iii) type of plot (preferably a fallow land for shifting cultivation), iv) typicality, and v) full consent of land owner. The process of selection with the criteria are explicitly described in “Operation Manual on Establishment of CB-NRM Mechanism at the Village Level” developed by the JICA CBNRM Project in 2016.

### ***Activity 2.2.1 Introduction and development of small-scale carbon offset projects and promotion of private investment***

82. Activity 2.2.1 will target the villages where the forest-based micro programs are implemented. All the households involved in the Sub-activities under Activity 2.1.1 will be the potential beneficiaries of this Activity . In addition to those participating in the Sub-activities of Activity 2.1.1, other villagers who will plant and maintain seedlings in accordance with technical guidelines prepared by the project could also be benefited in the future.

83. This Activity mainly aims to develop and implement the pilot carbon offset projects using plantations developed by the forest-based micro programs. To this end, the Activity will undertake the Sub-activities listed below.

2.2.1.1 Development of the guidelines and manuals, which the community groups as well as the implementers of Activity 2.1.1 should follow

2.2.1.2 Development of MRV methodologies and PDDs (Project Design Documents) for the carbon offset project on a pilot scale in partnership with external organizations, such as NGOs which have experiences in development of PDDs for carbon offset projects

2.2.1.3 Provision of technical assistance to partner organizations and local communities in registration of the PDDs in the existing verified emission reduction (VER) certifying organization \*1

2.2.1.4 Assistance in monitoring and recording of the biomass accumulation in the proposed sites for carbon offset scheme.

2.2.1.5 Development of a benefit sharing mechanism of community groups, which can be adopted by all the groups involved in reforestation/ afforestation activities of Activity 2.1.1. \*2

2.2.1.6 Communication and coordination with private firms which have interest in a carbon offset project in not only Timor-Leste but also EU/Asian countries to promote the registered carbon credits. \*3

Note:

\*1 JICA-TA will provide technical assistance to the partner organization/s and local communities in the pilot villages in the development and registration of the PDDs of a/ carbon offset project/a in the existing VER certifying organization.

\*2 Provision of the monetary incentive to local communities, such as the payment for maintenance cost of US\$ 0.1~0.5 per seedlings in the reforested areas, will be considered as an option of the benefit sharing mechanism among the community members. Such mechanism has been already adopted and functioned well in the existing carbon offset projects supported by the NGOs in Timor-Leste.

\*3 Once the partner NGOs could have financial support (or investment) from the interested private firms for operations and management of the carbon offset projects by facilitating business linkages between those organizations, local communities participating in the carbon offset projects will enjoy benefits from maintenance and protection of their plantations while contributing to the increased carbon dioxide absorption even in the post-project period.

### ***Activity 2.3.1 Implementation and promotion of community forestry (CF) in the selected areas in the watersheds***

Sub-activities of the Activities (Duration: 4 years):

The following Sub-activities will be carried out together with local communities in target sucos<sup>[1]</sup>.

### 2.3.1.1 Planning: Management Plans and Agreements (Duration: 2~3 months)

- 1) Review the future land use map and village regulations developed by local communities through Activity 1.1.1.
- 2) Identify priority forests and their owners and users \*1
- 3) Carry out participatory forest resource assessment as basis for identifying management options and strategies and monitoring of carbon sequestration
- 4) Develop community forest management plan (rules for use, management and protection, benefit sharing arrangements, roles and responsibilities of stakeholders)
- 5) Facilitate negotiation and approval of long-term forest management agreement and medium-term forest management plan

[1] *Suco* is the unit of local government and administration in Timor-Leste.

Note: \*1 In selection of priority forests to be managed as CF, the results of PLUP, particularly the future land use plan, will be fully used as a reference, since it would indicate which forests in the village could be used and managed as community production forests. The criteria used for selection will be finalized in consultation with local communities in the target villages, but forests with the following features may be considered as potential areas for “priority forest.”

- Forest currently used by local communities for firewood and timber collection
- Forest currently managed as a communal area
- Forest categorized as production forests or medium forests in the future land use plan
- Forest in which there is no farm existing within the area
- Forest accessible to many community members

### 2.3.1.2 Implementation: Community Forestry (CF) Extension and Monitoring (Duration: 2.5 years):

- 1) Develop forest management trials and demonstrations
- 2) Facilitate Forest Management Learning Groups (FFS for Forestry)
- 3) Develop and facilitate implementation of forest management monitoring system (including changes in carbon storage)

4) Identify prospects for and support development of sustainable community forest-based enterprises

***Activity 2.4.1 Capacity enhancement of MAF field officers (Extension officers, Forest Guards, and Municipal technical officers) concerned with the target watersheds***

Sub-activities of the Activities (Duration: 6 years)

The following Sub-activities will be carried out with technical assistance from JICA-TA.

2.4.1.1 Training of MAF field officers (Extension officers, Forest Guards, and Municipal technical officers) concerned with the target watersheds on participatory planning and facilitation for strengthening community resilience through the following standard process.

- 1) Review of the existing training curriculum and programs relevant to potential adaptation measures
- 2) Selection of MAF field officials concerned with the target villages \*1
- 3) Assessment of training needs or capacity gaps of the MAF field officials concerned with the target villages
- 4) Collection of the existing training modules and materials relating to potential adaptation measures
- 5) Development of training programs and materials on hands-on training and potential adaptation measures, namely, i) process of hands-on training, ii) facilitation skills, iii) gender issues/ nutrient improvement/ food security, iv) climate resilient agriculture and sloping agricultural land techniques, v) community nursery and reforestation with fruits and industrial plants, vi) rehabilitation and improvement of coffee plantation, and vi) livelihood development.
- 6) Conduct of a 3-day training course at Dili for the respective watersheds including a study tour to a sample village
  - 2-day seminar on the above-mentioned topics
  - 1-day study tour to a village where some adaptation measures have been introduced
- 7) Evaluation of the results of the training activities and review/revise the training programs and develop a refresher program
- 8) Conduct of the refresher course at Dili for the respective watersheds

Note: \*1 MAF technical and field officials for training courses will be selected once the target villages of the proposed project are determined and finalized in the 1<sup>st</sup> year of the project. MAF Extension Officials and Forest Guards assigned to the target villages and post-administratives, are selected as target groups, respectively. Furthermore, technical officers in the MAF Municipal Offices concerned working in the relevant technical fields, namely forestry, crop production, and coffee and industrial plants, will be selected for this Activity.

2.4.1.2 Coaching and mentoring for enhancement of MA field officers' capacity for facilitation and resilient livelihood through the following standard process.

- 1) Organization of MAF field assistant teams composed of MAF field officers concerned to assist NGOs/ contractors in the implementation of Activity 2.1.1 in the field
- 2) Collaboration with NGOs/ contractors responsible for implementation of Activity 2.1.1 in the field and sharing of the tasks and responsibilities in hands-on training or technical assistance to local communities
- 3) Evaluation of the results of the assistant works with technical assistance from JICA-TA
- 4) Conducts of follow-up hands-on training on the techniques that they have learned for local communities who are not supported by the proposed project in the target villages

[1] *Suco* is the unit of local government and administration in Timor-Leste.

### **2.3 Component 3: Institutional and capacity development for scale-up of CBNRM/ CF beyond the target areas**

84. The main aim of the Component is to develop an enabling environment for: i) promotion of the same approaches taken by the proposed project in other watersheds; and ii) enhancement of sustainable effects of the CBNRM approach at village and post-administrative levels. Specifically, the Component aims to: i) develop necessary legislative and technical documents for implementation of the project activities; ii) enhance field-level human capacity for PLUP with CCVA and climate change adaptation measures; iii) ensure the sustainability of the institutional mechanism for natural resource management at post-administrative level and the sustainable implementation of CBAPs in coordination with the on-going government programs; and iv) enhance the awareness of the effects of the project-related activities, particularly CBNRM and CF, among key government officials and decision makers as well as international communities. The Component consists of the following Outputs and Activities:

Output 3.1: Strengthened institutional and regulatory systems for implementation of the CBNRM and CF approaches in other watersheds

Activity 3.1.1 Development of new government legislative and technical documents for effective implementation and promotion of the project activities (i.e., Activities and Sub-activities) in and beyond the target watersheds

Output 3.2: Enhanced MAF technical officials' capacity for implementation of the CBNRM and CF approaches, particularly PLUP, CCVA, enhancement of local governance capacity, CF, and climate change adaptation measures

Activity 3.2.1 Building of capacity of MAF and NGO field officers working in other priority watersheds

Output 3.3: Institutionalization of the watershed management councils and community-based adaptation plans (CBAPs) as part of the formal institutional set-ups at municipal/post-administrative and village levels

Activity 3.3.1 Institutionalization of the project outputs (sub-watershed/ post-administrative level platforms and CBAPs) as the government frameworks

Output 3.4: Facilitation of scale-up of the CBNRM and CF approaches in other watersheds

Activity 3.4.1 Knowledge sharing with relevant stakeholders (e.g., key government officials, decision makers and legislators in the GoTL) through international seminars/ conferences

85. With the development of new government legislations (e.g. ministerial order), CBNRM and CF can be mainstreamed as the government priorities and direct actions. Thus, these documents will function as the main driving force for further scale up beyond the four target watersheds as they would enable MAF/DGFCIP to i) secure sufficient budget allocation from the GoTL and/or ii) show its political will to MAF DPs to mobilize their resources for implementation of the CBNRM Roadmap. TET will play a leading role in development and finalization of the new government legislative documents in close consultation with MAF/ DGFCIP. Specifically, TET will: i) have a series of discussions with senior officials of MAF/ DGFCIP, ii) draft the new legislative documents, iii) have consultations on the new legislative documents with relevant stakeholders at central and municipal levels; and iv) finalize the documents for MAF's approval.

86. In addition to the legislative development, technical training will provide MAF/NGO officers with capacities for undertaking field implementation. This Activity (Activity 3.2.1) is expected to reactivate MAF extension officers and forest guards as effective agents for scale-up of the CBNRM/ CF approaches. Through the continuous training including on-farm practices, they could be aware of their roles and responsibilities for strengthening local climate resilience through extension works. As such, legislative

development and technical training could function like two wheels of one car driving to mainstreaming NRM/ Climate change issues in the regular extension service

87. Proposed Sub-activities under the Activities are summarized below.

***Activity 3.1.1. Development of new government legislative and technical documents for effective implementation and promotion of the project activities in and beyond the target watersheds***

Sub-activities of the Activity (Duration: 2 years)

The main Sub-activity of this Activity is to develop the government documents, such as ministerial order and circular for implementation of CBNRM and CF on a wide scale. The results of Activity 2.3.1 will be fully used for development of the legislative and technical documents for CF implementation as described below. The following are the key documents to be developed under the Activity.

Document	Major Sub-activities	Period
MAF Ministerial Order on Expansion of CB-NRM	<ul style="list-style-type: none"> <li>■ Review the draft MAF Ministerial Order on Expansion of the CB-NRM Mechanism, which was developed by the JICA CB-NRM Project and NDFWM before.</li> <li>■ Update and revise the same order to make it effective and functional under the latest situations in the country.</li> <li>■ Have a series of consultation meetings with relevant stakeholders at the central and municipal levels.</li> <li>■ Finalize the Ministerial Order and submit the same to H.E. Minister for approval.</li> </ul>	2 years
MAF Ministerial Order on Implementation of CF and Ministerial Circular on SOPs for CF	<ul style="list-style-type: none"> <li>■ Review the Forest Basic Law and Revised Forest Sector Policy.</li> <li>■ Review the draft Forest Management Decree developed with assistance from FAO in 2008.</li> <li>■ Review and study the existing CF activities including the pilot cases of FAO-TCP on CF, which will be implemented in 2021, as well as those in other Asian countries.</li> <li>■ In case that the results of FAO-TCP are not available, implement pilot CF projects including introduction of the community forest management agreement in strategic locations in the country as part of Activity 2.3.1 and monitor and evaluate the implementation of the pilot CF projects.</li> <li>■ Draft the MAF Ministerial Order on Implementation of CF and Ministerial Circular on SOPs for CF.</li> <li>■ Have a series of consultation meetings with relevant stakeholders about the documents at the central and municipal levels.</li> <li>■ Finalize the Ministerial Order and Circular and submit the same to H.E. Minister for approval.</li> </ul>	4 years including CF pilot activities

Ministerial order and circular (or instruction) are the type of documents to be approved by Minister of MAF; hence, it is highly likely for those documents to be approved over the course of the project implementation as Minister of MAF is the chairperson of the central steering committee of the proposed project.

***Activity 3.2.1 Building of capacity of MAF and NGO field officers working in other priority watersheds***

Sub-activities of the Activity:

Activity 3.2.1 will conduct lecture, guidance/workshop, and field training for development of field-level capacity of MAF and NGOs working in other priority watersheds. The key Sub-activities to be carried out for Activity 3.2.1 are listed below.

3.2.1.1 Review the existing training curriculum and programs (including those provided by MAF DP projects) relevant to CB-NRM/CF-related practices/techniques.

3.2.1.2 Assess the training needs or the capacity gaps of the existing field facilitators of NGOs and MAF field officers.

3.2.1.3 Collect the existing training modules and materials on CB-NRM/CF-related practices.

3.2.1.4 Identify experts and organizations, which could be the trainer candidate.

3.2.1.5 Develop training programs/plans for the following topics: i) facilitation skills, ii) PLUP with CCVA, iii) gender issues including nutrient and food security, iv) climate resilient agriculture, v) forest management planning and improved silvicultural practices (e.g., FMNR and community nurseries), vi) coffee cultivation and processing, vii) fruit and industrial plant development, and viii) potential livelihood development.

3.2.1.6 Arrange and conduct lecture type and on-farm training courses on the topics listed above in accordance with the training programs/plans.

3.2.1.7 Evaluate the results of the training courses and review/revise the training programs and plans annually.

***Activity 3.3.1 Institutionalization of the project outputs (sub-watershed/ post-administrative level platforms and CBAPs) as the government frameworks***

Sub-activities of the Activity (Duration: 3 years overall)

Main activities of Activity 3.3.1 are consultations and meetings with MAF and Municipal Administrative Offices concerned with the target watersheds about the 1) possibility of institutionalization of the watershed management councils formed at post-administrative level as part of the governmental mechanism of Municipal Administrative Offices and 2) integration of CBAPs developed through PLUP into the village development plans of PNDS. The former is aimed at the formal recognition of the watershed management councils as the government-led organizations, while the latter aims to help the target villages access to additional funding sources to implement the CBAPs. A series of consultation meetings will be held with MAF and Municipal Administrative Offices to this end. In case a new government regulatory document is required to support the institutionalization of the watershed management councils, Activity 3.1.1 will help this Activity develop a new document.

***Activity 3.4.1 Knowledge sharing with relevant stakeholders (e.g., key government officials, decision makers and legislators in the GoTL) through international seminars/ conferences***

Sub-activities of the Activity

Activity 3.4.1 is composed of two types of knowledge sharing activities targeting different stakeholders.

3.4.1.1 Arrangement and organization of national or international conferences or seminars

3.4.1.2 Arrangement and organization of side events at the international conferences

The former Sub-activity (3.4.1.1) aims to arrange and organize national or international conferences or seminars in collaboration with MAF/ DGFCIP and NDA/National Directorate of Climate Change in the 2nd

and 7th years of the project. H.E. Minister of MAF and Secretary of State of Environment will be invited to the conference/ seminars in addition to high-ranking government officials (DGs and NDs) of the relevant government organizations, to deepen key decision makers' understanding of the proposed project.

It is also important to introduce the GoTL's efforts on climate change mitigation to the international communities at the international conferences, such as COP meetings of UNFCCC, when the situation permits. Thus, the latter Sub-activity (3.4.1.2) will help the GoTL make presentations of the project results at a side event or any other opportunities arranged in some of COP meetings

## **2.4 Component 4 Impact Assessment**

88. Impact assessment is the component aiming to enhance the probability of achievement of the project outputs and the sustainability of the project effects through i) evaluating the effectiveness and efficiency in the project implementation, ii) assessing the project impacts, and iii) drawing lessons and best practices which could be used for further scale-up of the proposed project. This Component will help JICA put the proposed project on the right track and implement the respective Components, Outputs, Activities, Sub-activities in a proper, effective, and efficient manner. Among others, the results of this Component can be used for development of the effective regulatory frameworks/ documents for implementation of CBNRM/ CF in Activity 3.1.1 and enhancement of the public awareness of the effect of the CBNRM/ CF approach among MAF DPs as well as policy makers. Moreover, the Component is expected to produce technical references for assessment of project impacts of similar types of project, which could be used by the GoTL/MAF as tools for project management in future.

89. Component 4 is composed of the following Outputs and Activities:

Output 4.1: Enhanced probability of achievement of the other project outputs through improvement of the project approaches, structures, and systems by i) evaluating the effectiveness and efficiency of the proposed project, ii) assessing the project impacts, and iii) drawing lessons from the project implementation

4.1.1 Establishment of baseline conditions for impact assessment;

4.1.2 Evaluation of the project impacts with established methodologies for impact assessment; and

Output 4.2: Development of tools for assessment of project impacts of similar types of project

4.2.1 Development of technical references for impact assessment in similar projects in future

90. Proposed Sub-activities under the Activities are summarized below.

Activity 4.1.1: Establishment of baseline conditions for impact assessment

4.1.1.1 Baseline data collection (Socio-economic survey)

4.1.1.2 Baseline data collection (Drone survey)

Activity 4.1.2: Evaluation of the project impacts with established methodologies for impact assessment

4.1.2.1 Interim evaluation (Drone survey at sampled areas)

4.1.2.2 Final evaluation (Socio-economic survey)

4.1.2.3 Final evaluation (Drone survey)

Activity 4.2.1: Development of technical references for impact assessment in similar projects in future

4.2.1.1 Development of technical references (such as guidelines and procedures) for impact assessments of CBNRM-related projects

91. The baseline data collection under Activity 4.1.1 will be undertaken prior to the project or in the 1<sup>st</sup> year of the project to set up the baseline for assessment. The impact assessment at the time of interim and final evaluation under Activity 4.1.2 will be undertaken at 3<sup>rd</sup>/4<sup>th</sup> year and 6<sup>th</sup>/7<sup>th</sup> year, respectively to check whether the proposed project can achieve the project targets as indicated in its logical framework. Technical references of Activity 4.2.1 will be developed and finalized in the 7<sup>th</sup> year based on the results of the Sub-activities of Activity 4.1.2.

## 2.5 Project Management

92. Project management is the overarching component for proper and smooth implementation of Components 1 to 3 and their Activities in collaboration and coordination with relevant organizations. Hence, the main aims of the project management is to enable JICA as AE and EE to operate and manage the respective Components using the PDCA cycle in collaboration with MAF/ DGFCIP as an implementing partner. The project management consists of i) preparatory work, ii) planning with budget estimation, iii) procurement, iv) regular monitoring, and v) coordination and communication.



More details of the respective project management activities are described in the table below.

PM Activities	Procedures/ Detailed Descriptions
Preparatory works	<ul style="list-style-type: none"> <li>■ JICA TL will hire national consultants or supporting staff, as procurement officer, accountant, etc. for smooth operations and management of the proposed project.</li> <li>■ JICA HQ will procure TET and deploy it to Timor-Leste to commence the project management sub-activities in collaboration with JICA TL and MAF/DGFCIP.</li> <li>■ TET in consultation with MAF/DGFCIP will develop a set of implementation guidelines that will be used by organizations involved in the proposed project as guiding documents over the course of the project implementation.</li> </ul>
Planning with budget estimation	<ul style="list-style-type: none"> <li>■ TET in collaboration with MAF/DGFCIP and National Directorate of Forestry and Watershed Management (NDFWM) will prepare plan of operations of the proposed project for the entire project period as well as an annual plan for the 1st year.</li> <li>■ Based on the entire and annual plans, MAF/DGFCIP and its subordinate national directorates as well as MAF municipal offices concerned will develop their work and budget plans. MAF/DGFCIP and Directors of MAF municipal offices concerned will endorse the plans for MAF approval, so that the relevant offices could obtain sufficient budget for operations.</li> </ul>
Procurement for project implementation	<ul style="list-style-type: none"> <li>■ JICA with assistance from TET and MAF/DGFCIP will procure project equipment in the beginning of the project for effective monitoring.</li> <li>■ JICA will procure national NGOs or other organizations for implementation of Activities 1.1.1, 1.2.1, 1.2.2, 2.1.1 and 3.2.1. Some of the Activities can be combined as one contract package. Types of Activities/ Sub-activities to be outsourced are described in Section 9.3: Procurement Plan of the report.</li> </ul>
Regular monitoring	<ul style="list-style-type: none"> <li>■ TET and Central Project Monitoring Team formed under MAF/ DGFCIP will monitor the overall progress of the proposed project.</li> <li>■ MAF Municipal Monitoring Teams formed at the respective MAF municipal offices concerned will monitor the progress of the Activities implemented in the respective watersheds periodically in collaboration with Central Project Monitoring Team and with technical assistance from TET.</li> <li>■ Central Project Monitoring Team will prepare and submit the monitoring report to MAF/DGFCIP whenever they conduct field monitoring.</li> <li>■ MAF Municipal Project Monitoring Teams will prepare and submit the monitoring reports on the results of the monitoring activities on a monthly basis.</li> <li>■ Central Project Monitoring Team will prepare and submit quarterly and annual monitoring reports to MAF/DGFCIP. The reports should cover the following, but not limited to: i) results of the field monitoring, ii) progress reports submitted by the hired NGOs, and iii) monthly monitoring reports submitted by the municipal-level monitoring teams.</li> <li>■ TET will give members of the monitoring teams the report formats and guidance on how to prepare the monitoring, monthly, and quarterly reports in the beginning of the project.</li> </ul>
Monitoring of deforestation and forest degradation	<ul style="list-style-type: none"> <li>■ TET in collaboration with MAF Central Monitoring Team will monitor the reduction of deforestation and forest degradation in sample plots of dense and sparse forests in 12 villages selected for the baseline survey as well as impact assessment using drone.</li> <li>■ TET will estimate the reduction rates of forest degradation and deforestation in the project villages based on the results of the monitoring above and use them to estimate the GHG emission reduction in the target watersheds. More details of the methodologies are described in Section D of this document (See Para162).</li> <li>■ JICA will develop and submit the Annual Monitoring Report including the estimated annual GHG emission reduction to GCF Secretariat every year.</li> <li>■ It is expected that MAF will continue the same monitoring and reporting activities adopting the procedures that they will learn in the course of the project implementation in the post-project period (after 7<sup>th</sup> year).</li> </ul>
Coordination and communication with relevant organizations	<ul style="list-style-type: none"> <li>■ MAF/DGFCIP in collaboration with TET will organize project inception seminars for its subordinate national directorates, MAF municipal offices and Municipal Administrative Offices concerned at central and municipal levels in the beginning of the proposed project.</li> <li>■ MAF/DGFCIP with technical assistance from TET will organize the project implementation guidance seminars for the subordinate national directorates, MAF municipal offices, and Municipal Administrative Offices concerned at central and municipal levels within 6 months after the commencement of the project.</li> <li>■ MAF/DGFCIP with technical assistance from TET will organize project review meetings with its subordinate national directorates, MAF municipal offices, and Municipal Administrative Offices concerned at central and municipal levels at the end of the year during the project period. In the meetings, the progress and results of the project will be reviewed and activities to be conducted in the following year will be discussed by the participants.</li> </ul>

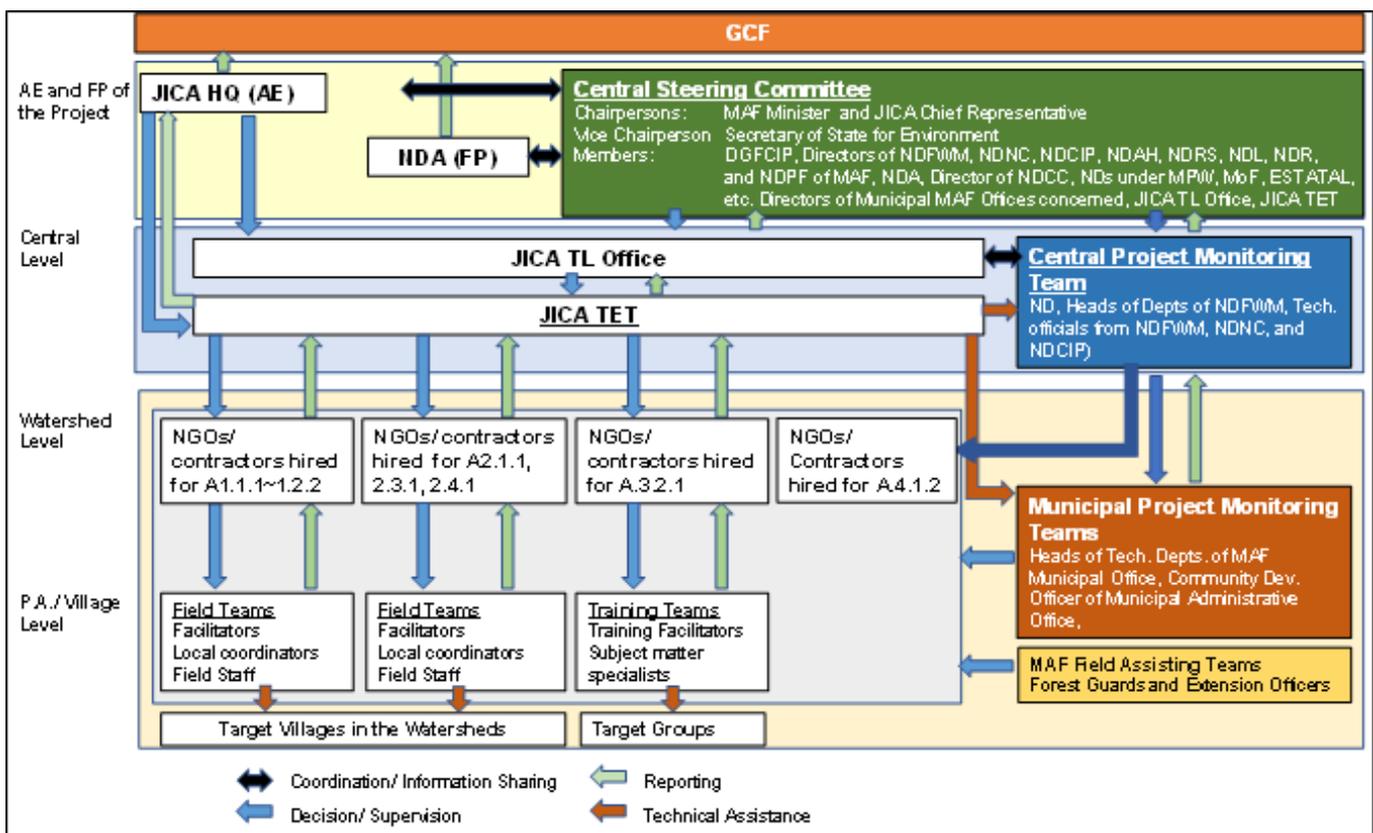
[1] *Suco* is the unit of local government and administration in Timor-Leste.

### B.3. Implementation / institutional arrangements (max. 750 words)

#### 1. Organizational Structure for Implementation

##### 1.1 Overall Framework for Project Implementation

93. The proposed organizational structure for the project implementation is shown below.



94. JICA is the AE and Executing Entity (EE) of the proposed project. As the AE, JICA will have overall responsibility for planning, implementation and supervision of the proposed project, including financial management and procurement of goods and contractual services, while it, as EE, will also be responsible for operations, management, and monitoring of the project components and activities including the use and management of the GCF proceeds. As described in A.13, this funding proposal uses JICA HQ (JICA Headquarters) and JICA TL (JICA Timor-Leste Office) as representatives to clarify the roles and responsibilities of the respective elements (JICA HQ and JICA TL), though they belong to one legal entity.

95. In practice, JICA HQ will act as the AE and JICA TL will act as the de facto EE in coordination with MAF of the GoTL, which will function as the implementing partner. In the project operation, MAF will not receive any GCF proceeds for implementation of the project activities, as the implementing partner, MAF, particularly DGFCIP and its subordinate national directorates\*<sup>1</sup>, will cooperate with JICA TL for monitoring of the project activities in the field and reporting of the project outputs/ accomplishments to the Central Steering Committee as well as the relevant ministries/ departments of the GoTL.

\*1: DGFCIP is one of the administrative divisions of MAF, responsible for the forest and coffee sectors in the country.

96. The contractual arrangements between GCF and JICA as well as JICA and MAF are planned as follows:

- JICA and GCF: FAA arrangements
- JICA and MAF or the GoTL: Memorandum of Cooperation (title to be discussed)

97. In line with such an institutional set-up, both parties, JICA TL and MAF, jointly chair the Central Steering Committee (CSC) of the project in collaboration with Secretary of State for Environment (SSE), which acts as the vice chair of CSC, especially in the institutional coordination of Climate-Change issues. This means that JICA in collaboration with MAF/ SSE will jointly lead the operations and management of the CSC, especially oversight of the performance of the project, approval of the work plans and budget allocation, and collaboration and coordination among the relevant government organizations. JICA TL has decision making authority over implementation of the project activities supported by the GCF proceeds and JICA co-finance, while MAF will have authority over the use of MAF co-finance for the project.

98. All GCF proceeds will be managed by JICA, acting through its Timor-Leste Office, in its capacity of the EE with overall oversight and support from JICA HQ as the AE focal point. All procurement required for the execution of the funded activity will be thus managed by JICA directly, mainly by the JICA Timor-Leste office with some Project management staff procured from the JICA HQ. JICA, acting through its Tokyo HQ Global Environment Department units, will perform the AE functions including procurement, project supervision, financial management and reporting. JICA TL will act as the de facto EE and will be responsible for the day-to-day project execution functions including the role of financial and procurement management ensuring that the objectives and outcomes of the project are delivered effectively.

99. To ensure the efficient and effective implementation as well as quality of the project activities, JICA will hire the Technical Expert Team (TET) using its co-financing budget.

100. Well-experienced and competent Timorese financial management officers will be hired by JICA TL as the project management staff exclusively for the proposed project. JICA TL will also provide guidance and training to the officers hired on the following JICA's guidelines in the initial phase after employment, to ensure that the project budget including the GCF Proceeds will be managed in a proper, transparent, and accountable manner.

- JICA's compliance and anti-corruption policy and anti-corruption guide
- JICA's Anti-Corruption Guidance; rules on measures against fraud and corruption (i.e., measures to suspend eligibility for participation in tenders for contracts, measures against fraudulent practices, measures against persons engaged in fraudulent practices)
- Guidelines on ethical conduct for JICA's implementing partners
- Sexual exploitation, abuse, and harassment prevention policy
- Procurement guidelines
- Financial management guidelines

101. The Components and Activities proposed in the proposed project will be implemented by JICA TL in collaboration with MAF, particularly DGFCIP and its sub-ordinate national directorates, under the supervision of the CSC. JICA TL will disburse necessary budgets based on the budget plan approved by the CSC, and hire the contractors (e.g., NGOs) for implementation of Activities of 1.1.1 (PLUP with CCVA), 1.2.1 (Monitoring with village regulations), 1.2.1 (Formation of watershed management councils), 2.1.1 (Microprograms), 2.2.1 (Carbon offsetting/ Private investment), 2.3.1 (CF) and 3.2.1 (Extended training on CBNRM/CF/CC). For smooth and effective implementation, the Technical Expert Team (TET) will technically support the contractors (NGOs) in the implementation. Activities 3.1.1 and 3.3.1 will be implemented by TET

## 102. Capacity of AE to deliver

Pursuant to Article 13 (3) of the Act of the Incorporated Administrative Agency - Japan International Cooperation Agency (Act No. 136, 2002), JICA has the legal capacity to perform operations under entrustment made by an international organization, such as this proposed project.

JICA, the AE and EE of this project, have implemented many community-based natural resource management projects globally. Especially in Timor-Leste, JICA supported MAF/DGFCIP to develop the CBNRM (Community-Based Natural Resource Management) mechanism through 15 years of technical cooperation in this sector and are aiming to scale-up the proven approach through implementing this proposed project. JICA is capable enough for technology transfer through collaborative work with

counterparts and human resources development in the application of community-based natural resource management methods.

### 103. **Capacity of MAF/DGFCIP as the Implementing Partner**

MAF has substantial experience as an implementing partner for not only JICA's projects but also other MAF DPs' projects working in the agriculture, forestry, and fishery sectors. Among others, MAF/ DGFCIP is responsible for coordination and collaboration with MAF DPs in the implementation of any projects in the forest and land use sector (see Annex 2 Chapter 4 for more details). Hence, MAF/ DGFCIP, will be the direct implementing partner of this proposed project. JICA and MAF/ DGFCIP has worked together over 15 years as implementing partners of technical assistance projects in Forestry and Ecosystem sector. Some of the senior technical officials of MAF/DGFCIP and its subordinate national directorates are fully aware of the CBNRM mechanism and could be resource persons or lecturers involved in human resource development in the application of community-based natural resource management practices at the MAF municipal offices concerned. Therefore, JICA is aware of MAF's capability for collaborative work with development partners in this sector and human resources development in the application of community-based natural resource management methods.

### 104. **Possible Collaboration with MAF DP-supported Project/s**

FAO plans to implement a technical cooperation project on CF in 2020/2021 and is currently proposing the REDD+ readiness project to GCF, which is planned to be commenced in 2021. Both the projects are expected to produce useful outputs for the proposed project. For instance, the former FAO project (FAO-TCP (Technical Cooperation Programme) for CF planned in 2020 to 2021) would develop and provide technical references, such as guidelines and manuals for CF implementation, which could be used for implementation of Activities 2.3.1 and 3.1.1, while the latter future project (FAO REDD+ readiness project) would develop the forest coverage baseline data in the country and methodologies for assessing the forestry biomass, which will also be used for evaluation of the forest conservation impact of the proposed project in Component 4. Thus, JICA as EE will closely communicate with FAO as well as its projects over the course of the project implementation. FAO will not have any role in implementation of any Components or Activities; hence no contractual arrangement or implementation arrangement will be made between JICA and FAO for implementation of the proposed project.

## 1.2 Central Steering Committee

105. The Central Steering Committee (CSC) will be organized at the ministerial level to: i) oversee the overall progress of the implementation of the proposed project; ii) ratify the work plans and implementation guidelines; and iii) facilitate coordination and collaboration between/among national directorates and also between the central and municipal offices for enhancing synergy and convergence effects. The proposed constitution of the central steering committee is shown below. As explained above, CSC is chaired by JICA

and MAF with assistance of SSE as the vice chair, to enhance the GoTL's country ownership of the proposed project. The planning and implementation will be undertaken under the responsibility of JICA, but the GoTL, namely MAF, will also be involved in the process of the project implementation and play an important role in overseeing the plan, process, and results of the project activities and facilitating the necessary coordination and collaboration among the relevant government organizations concerned, such as National Directorates under MAF, Secretary State of Environment, NDA, MAF Municipal Officers, and Municipal- / Post-administrative Offices concerned. In principle, JICA will bear principle responsibility for decision making of the project activities in CSC, but any decision of CSC will be made in close consultation with MAF.

106. DGFCIP of MAF is assigned as Director of CSC, which takes the full responsibility for technical management and supervision of the overall implementation of the proposed project, while functioning as an entry points for further political coordination and consultation with minister-level officials in the government. NDFWM functions as the secretariat of CSC under the directions of DGFCIP. In addition to DGFCIP and NDFWM, the relevant departments from MAF and SSE will have a coordination and implementation role across project outputs.

Position	Organizations/Personnel responsible for position
Chairpersons	JICA Chief Representative and Minister of MAF
Vice-chairperson	Secretary of State for Environment, MICE
Director	General Director of Forest, Coffee, and Industrial Plants (DGFCIP), MAF
Secretariat	National Directorate of Forestry and Watershed Management (NDFWM)
Members	<ul style="list-style-type: none"> <li>- NDFWM, National Directorate of Nature Conservation (NDNC), National Directorate of Coffee and Industrial Plants (NDCIP), National Directorate of Agriculture and Horticulture (NDAH), National Directorate of Research and Statistics (NDRS), National Directorate of Livestock (NDL), and NDPF under the MAF</li> <li>- National Designated Authority (NDA) and National Directorate of Climate Change under the Secretary of State for Environment</li> <li>- National Directorates under the Ministry of Public Works, Ministry of Finance, Ministry of State Administration, and other relevant Ministries</li> <li>- MAF Municipal Offices concerned</li> <li>- JICA TL including itsTET</li> </ul>

### 1.3 Central and Municipal Project Monitoring Team

107. **The central project monitoring team** will be set up under MAF/ DGFCIP with an aim to i) monitor and supervise the project activities, particularly those conducted by the contractors (NGOs) in the target villages in collaboration with the municipal project monitoring teams and ii) provide guidance and technical advice to the contractors (NGOs) as well as local communities when needed in the field. National Director of NDFWM will lead the team as Team Leader, closely supported by Head of Dept. of Watershed and Coastal Management, as Deputy Team Leader, and TET hired by JICA. TET will assist Technical officers from NDFWM, NDNC, and National Directorate of Coffee and Industrial Plantation (NDCIP) will also be involved as members of the team. The members of the CMPT will learn how to 1) supervise the contractor's performance, 2) provide technical guidance and advice for effective implementation of the CBNRM -related activities, and 3) assist the contractors in solving any conflicts between/among local communities due to the introduction of the CBNRM mechanism.

108. **The Municipal project monitoring team** will be organized at municipal level to monitor and supervise the village level project activities conducted by the contractors (NGOs) in the field. Heads of the relevant technical departments of the MAF municipal offices and community development officers of the Municipal Administrative Offices concerned will be the members of the municipal project monitoring teams. Daily to weekly monitoring of the field activities and technical assistance in hands-on training are the major tasks given to the monitoring teams. The teams with technical assistance from TET will monitor and supervise the field project activities, such as, the use of materials and tools/ equipment procured under the project, the ways of community organization, community meetings, and technical training and guidance. The members of the MPMTs will also learn to provide technical support and advice to field implementers (such as contracted NGOs) by working with national staff of TET.

109. **MAF Field Assistant Teams** composed of forest guards and extension officers concerned will work together with the contractors for effective implementation of Activities 1.1.1, 1.2.1, 1.2.2, 2.1.1, and 2.3.1 in the field. Such arrangements will also give opportunities for MAF field officials to practice the project activities in the field as part of On-the-Job training. Likewise, the teams will monitor if the field activities are undertaken in a proper, fair, and equitable manner.

110. **NGOs/Contractors** will be hired by JICA for implementation of Activities 1.1.1, 1.2.1, 1.2.2, 2.1.1, and 2.3.1 as stated above. Capacity development of the potential contractors for the field activities have been done by JICA's technical cooperation projects for past 15 years. Some of them have already experienced in working for similar activities funded by other MAF DPs in the field after a series of on-the-job training done by the JICA project. By contracting out the field activities to such contractors/NGOs, this project cannot only use national human resources in an effective manner but also can contribute to the empowerment of national CBNRM facilitators and enhancement of the post-project sustainability.

## ***2. Roles and Responsibilities of Major Actors***

The proposed roles and responsibilities of the relevant organizations involved in the structure are summarized below.

### **111. MAF/DGFCIP**

- Responsible for the technical management and supervision of the overall implementation of the project with JICA.
- Endorse and submit the annual work plans with budget plans of NDFWM, NDNC and NDCIP for monitoring, supervision, and implementation of the project to MAF for final approval.
- Endorse and submit new regulations/guidelines/standard operating procedures for promotion of the CBNRM mechanism and implementation of CF to MAF or the council of ministers through MAF.

- Facilitate the coordination and collaboration between/among the relevant national directorates and MAF municipal offices.
- Facilitate the cooperation between MAF DPs and the relevant national directorates (NDFWM, NDNC, and NDCIP) for implementation, operations, and management of the Components/Activities of the project.
- Coordinate activities and facilitate knowledge sharing among MAF DPs through the operation of DP coordination platform, whose members and major activities are outlined below.

**Summary of DP coordination Platform organised by MAF/DGFCIP**

<b>Chairperson</b>	DGFCIP
<b>Secretary</b>	Cabinet of DGFCIP
<b>Member</b>	<ul style="list-style-type: none"> <li>- GoTL: NDFWM, NDNC, NDCIP,</li> <li>- DPs: Conservation International, GIZ/ EU (PSAF), FAO, Hivos, JICA, Mercy Corps, Oxfam, UNDP, USAID, World Bank (SAPIP), World Vision</li> </ul>
<b>Major activities conducted/ collaboration made</b>	<ul style="list-style-type: none"> <li>- Semiannual meeting for information/ knowledge sharing</li> <li>- Coordination of DPs' activities with updating of the DPs target-area mapping and DP database (reports, technical manuals, information of local NGOs, etc.)</li> <li>- Upgrading of PLUP by integration with CCVA</li> <li>- Development of standardized guidelines for watershed management and sustainable forest management (e.g., PLUP with CCVA, watershed management planning etc. )</li> </ul>

## 112. NDFWM (National Director)

- Responsible for monitoring, supervision, and implementation of the project with technical assistance from TET.
- Prepare and submit the annual work plan with budget plan for monitoring, supervision, and implementation of the project to MAF/DGFCIP for endorsement.
- Prepare and submit new regulations/guidelines/standard operating procedures necessary for implementation of the Activities, particularly those for implementation of CF, to MAF/DGFCIP for endorsement.
- Monitor and supervise the implementation of the project by organizing the Central Project Monitoring Team and report the results and progress of the project to MAF/DGFCIP.
- Report the results of the project in collaboration with JICA TL as well as its TET in the project steering committee meetings.

- Evaluate the results of the project based on the results of the periodic evaluations together with JICA TL and submit the evaluation reports to MAF/DGFCIP through the project steering committee meetings at the middle and ends of the project.

### **113. NDNC and NDCIP (National Director)**

- Assist NDFWM in the monitoring, supervision, and implementation of the project.
- Prepare and submit the annual work plans with budget plans for monitoring, supervision, and implementation of the project to MAF/DGFCIP for endorsement.
- Assist NDFWM in reporting the results of the project to MAF/DGFCIP.
- Assist NDFWM in evaluating the project based on the results of the periodic evaluations together with JICA TL and submit the evaluation reports to MAF/DGFCIP through the project steering committee meetings at the middle and ends of the project.

### **114. NDA**

- Monitor and supervise the overall progress of the project and expected effects made by the project on climate change adaptation and mitigation together with MAF/DGFCIP.
- Report the results and accomplishments of the project to GCF in coordination with MAF/DGFCIP and JICA.

### **115. Other National Directorates of MAF**

- Provide technical advice to MAF/DGFCIP and NDFWM for effective implementation of the project in the project steering committee meetings.
- Provide technical and administrative support to technical officials of the relevant national directorates who are working in MAF municipal offices concerned.
- Collaborate with NDFWM and MAF municipal offices concerned for effective monitoring, supervision and implementation of the project.

### **116. MAF Municipal Offices**

- Cooperate with the relevant national directorates (NDFWM, NDNC, and NDCIP) for implementation of the project in the respective jurisdictional areas.
- Assist the relevant national directorates (NDFWM, NDNC, and NDCIP) in monitoring and supervising the performance of NGOs/ contractors hired for implementation of the project in the respective jurisdictional areas.

- Send technical and field officers to training courses arranged by the project.
- Report the progress and accomplishments of the project in the respective jurisdictional areas to Municipal Administrative Officer and Central Project Monitoring Team.

#### **117. Municipal Administrative Offices**

- Communicate and collaborate with NDFWM, JICA TL/JICA-TA and NGOs/ contractors hired by JICA TL for management and supervision of the implementation of the project in the respective jurisdictional areas.
- Facilitate the coordination and collaboration between/among the relevant municipal departments, post-administrative offices and villages concerned.
- Share the results and accomplishments of the projects and lessons learned through implementation in the central steering committee meetings.

#### **118. Post-Administrative Offices**

- Cooperate with the relevant national directorates (NDFWM, NDNC, and NDCIP) for implementation of the project in the respective jurisdictional areas.
- Play a leading role in discussions and meetings organized in Activity 1.2.2.
- Facilitate the coordination and collaboration between/among villages concerned.

#### **119. Villages**

- Actively participate in discussions and activities arranged and conducted by the project in the respective jurisdictional areas.
- Develop their own future land use plans, community-based adaptation plans, and NAR regulations by themselves through PLUP and CCVA in Activity 1.1.1 to protect and wisely use forests and natural resources in the respective localities on their own initiatives.
- Be responsible for management and protection of forests and other natural resources using the future land use plans, community-based adaptation plans, and NAR regulations as well as the sustainable and resilient livelihood techniques
- Replicate, continue, and expand techniques introduced in Activity 2.1.1 for further improvement of climate change adaptation and mitigation capacity in the target villages.
- Protect existing forests and restore degraded ones in accordance with the community forest management agreement exchanged with NDFWM in Activity 2.3.1.

- Act as managers at the same time as direct beneficiaries of forests and other natural resources existing in the villages as a result of continuous capacity enhancement undertaken in Activities 1.2.1, 1.2.2, 2.1.1, 2.2.1, and 2.3.1.

#### 120. Contractors/ NGOs

- Engage in the implementation of the Activities (1.1.1, 1.2.1, 1.2.2, 2.1.1, 2.2.1, 2.3.1, 3.2.1, 4.1.1 and 4.1.2) and fulfil tasks specified/given by the TORs for the respective Activities.
- Report to NDFWM and JICA TL through the Central Project Monitoring Team and TET, respectively. Reporting contents include the progress, results, and accomplishments of the Activities contracted out to Contractors/ NGOs on a regular basis.

#### 121. Technical Expert Team (TET)

- Assist JICA TL in the procurement of NGOs/ contractors.
- Assist MAF/DGFCIP and NDFWM, other relevant national directorates and MAF municipal offices concerned in the monitoring and supervision of implementation of the Activities contracted out to NGOs/ contractors.
- Directly engage in the implementation of Activities 3.1.1 and 3.3.1 in collaboration with MAF/DGFCIP and NDFWM.
- Take a leading role in management and operations of the project in collaboration with MAF/DGFCIP and NDFWM.
- Report the overall progress, results, and accomplishments of the project to MAF/DGFCIP, NDA, JICA TL, and JICA HQ periodically.
- Prepare and submit the project reports (e.g., Implementation guidelines, Inception Report, Progress Reports, Technical References, and Completion Report) to MAF/DGFCIP and JICA.

### C. FINANCING INFORMATION

#### C.1. Total financing

<b>(a) Requested GCF funding (i + ii + iii + iv + v + vi)</b>		9,976,222	usd		
<b>GCF Financial Instrument</b>		<b>Amount</b>	<b>Currency</b>	<b>Tenor</b>	<b>Pricing</b>
(i)	Senior loans				
(ii)	Subordinated loans				

(iii)	Equity					
(iv)	Guarantees					
(v)	Reimbursable grants					
(vi)	Grants	9,976,222	usd			
<b>(b) Co-financing information<sup>3</sup></b>		<b>Total amount</b>		<b>Currency</b>		
		5,421,947		usd		
<b>Name of institution</b>	<b>Financial instrument</b>	<b>Amount</b>	<b>Currency</b>	<b>Tenor</b>	<b>Pricing</b>	<b>Seniority</b>
JICA	Grants	3,449,725	usd	years	%	
GoTL	Grants	1,539,586	usd	years	%	
GoTL	in-kind	432,636	usd	years	%	
<b>(c) Total investment (c) = (a)+(b)</b>		<b>Amount</b>		<b>Currency</b>		
		15,398,169		usd		
<b>(d) Co-financing ratio (d) = (b)/(a)</b>		0.54				
<b>(e) Other financing arrangements for the project/programme (max ½ page)</b>		<p><i>Information on legal due diligence (taxes, insurance, etc) shall be reported in Annex 10</i></p> <p>Out of 74 target villages, six villages are expected to have agricultural development support from other MAF development partners' projects, namely SNAP, Sustainable Agriculture Productivity Improvement Project (SAPIP, World Bank project), and TOMAK. The agricultural development support given by such projects is similar in nature to the Sub-activities planned in Activity 2.1.1 (i.e., Climate Resilient Agriculture and Livelihood Improvement) and this proposed project will work closely collaborating with these projects. For this reason, this proposal excludes those 6 villages from the targets of Activity 2.1.1 to avoid duplication of assistance.</p>				

## C.2. Financing by component

Please provide an estimate of the cost per component (as outlined in Section B.2. above) and disaggregate by sources of financing. This table should match the one presented in the term sheet and the names (in the rows) should match those presented in the logic framework in section D below.

Component	Output	Indicative cost (USD)	GCF financing		Co-financing			
			Amount (USD)	Financial Instrument	Type	Amount (USD)	Financial Instrument	Name of Institutions
Component 1: Establishment of People-	Output 1.1 : Improved management and protection of existing	2,366,939	1,363,672	Grants		1,003,267	Grants	

<sup>3</sup> If the co-financing is provided in different currency other than the GCF requested, please provide detailed financing information and a converted figure in the GCF requested currency in the comment box. Please refer to the date when the currency conversion was performed and the reference source.

<p>driven Natural Resource Management (NRM) System at Village and Post-Administrative Levels: Enhance Local Leaders' Capacity for Sustainable NRM</p>	<p>forests through introduction of PLUP and community-based NRM monitoring</p>							
	<p>Output 1.2: Enhanced governance capacity of local leaders at village and post-administrative levels for sustainable forest and natural resource management</p>	<p>1,946,652</p>	<p>941,244</p>	<p>Grants</p>		<p>1,005,408</p>	<p>Grants</p>	
<p>Component 2: Reinforcement of food security and livelihood diversification through implementation of</p>	<p>Output 2.1: Enhanced food security and livelihood diversification of vulnerable living in hills and mountains in the target watersheds through implementation of micro</p>	<p>6,885,182</p>	<p>5,346,076</p>	<p>Grants</p>		<p>1,539,106</p>	<p>Grants</p>	

micro programs/ FFSs on sustainable and climate resilient livelihoods effective for reducing CO2 emissions	programs/ FFSs on sustainable and climate resilient livelihoods							
	Output 2.2: Development and demonstration of model cases of incentive mechanism based on the carbon offsetting scheme in selected villages	229,829				229,829	Grants	
	Output 2.3 : Rehabilitated degraded forests and lands through reforestation and sustainable forest management with introduction of CF	1,331,517	1,187,185	Grants		144,332	Grants	
	Output 2.4 : Enhanced capacity of MAF field	24,773	22,015	Grants		2,758	Grants	

	officials for provision of hands-on training and coaching on relevant sustainable and climate resilient livelihoods (e.g., climate resilient agriculture, agroforestry)							
Component 3: Institutional and capacity development for scale-up of CBNRM/CF beyond the target areas	Output 3.1: Strengthened institutional and regulatory systems for implementation of the CBNRM and CF approaches in other watersheds	216,842				216,842	Grants	
	Output 3.2: Enhanced MAF technical officials' capacity for implementation of the CBNRM and CF approaches, particularly PLUP, CCVA, enhancement of local governance capacity, CF, and climate	261,056				261,056	Grants	

	change adaptation measures							
	Output 3.3: Institutionalization of the watershed management councils and community-based adaptation plans (CBAPs) as part of the formal institutional set-ups at municipal/post-administrative and village levels	199,742				199,742	Grants	
	Output 3.4: Facilitation of scale-up of the CBNRM and CF approaches in other watersheds	342,972	143,230	Grants		199,742	Grants	
Component 4: Impact Assessment	Output 4.1: Enhanced probability of achievement of the other project outputs through improvement of the project approaches, structures, and systems by i)	296,128	267,778			28,350	Grants	

	evaluating the effectiveness and efficiency of the proposed project, ii) assessing the project impacts, and iii) drawing lessons from the project implementation							
	Output 4.2: Development of tools for assessment of project impacts of similar types of project	140,404		Grants		140,404		
Project Management	Preparatory works, planning, procurement, monitoring, and coordination	912,811	461,700	Grants		451,111	Grants	
Contingency		243,322	243,322	Grants				
<b>Indicative total cost (USD)</b>		15,398,169	9,976,222			5,421,947		

**C.2.1 Financing structure (if applicable, mandatory for private sector proposal (max.300 words))**

*\* GoTL' co-financing amount consists of grant (e.g. per diem for staff and fuel) of US\$ 1,539,586 and in-kind (staff time, seedlings, office spaces and function) of US\$ 432,636. More details of GoTL's co-finance are given in the detailed budget note of Annex 3: Budget Plan.*

*\*JICA's co-financing will be made from the 1<sup>st</sup> year to 5<sup>th</sup> year.*

*\*Capacity Building amount 9,045,171 USD*

*\*Technology Development/Transfer amount 9,045,171 USD*

### C.3 Capacity Building and Technology development/transfer

*If the project/programme is envisaged to support capacity building and technology development/transfer, please specify the total requested GCF amount for these activities respectively in this section.*

C.3.1 Capacity building	Amount: 9,045,171 usd
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C.3.2. Technology development	Amount: 9,045,171 usd
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### C.4. Justification for GCF funding request (max. 500 words)

#### 1. TL's climate change needs cannot be addressed through government expenditure alone.

122. The government of TL recognizes the critical importance of sustainable natural resource management led by the people, as one of the most prioritized climate interventions that contributes to both adaptation and mitigation effectively articulated in the NDC, given the high level of national dependency in natural resources and high portion of the emissions from LUCF sector. The CBNRM approach is recognized as a successful and proven approach to enable this sustainable climate-resilient pathway by the GoTL, which demonstrates its high investment potential. Accordingly, the MAF/DGFCIP have drafted the CBNRM roadmap to further expand the CBNRM mechanism into the 14 high priority watersheds in a 10-year period. However, because of the budget constraint GoTL have been facing, GoTL was not able to allocate necessary budget for implementation of the CBNRM roadmap. GCF support will have the catalytic impact to implement the pilot phase of the CBNRM roadmap, and also will crowd-in public financing and mobilize community level investments for climate-resilient and low-carbon land use. Therefore, GCF's involvement in this project is critical for the GoTL to follow the climate resilient and lower emission sustainable development pathway. This is mainly because of a) the current economic context of the country, and b) the particular high demand that is recognized and planned but not being able to address the sources.

#### 2. Policy transformation of the project to mainstream climate change.

123. GCF support in this proposed project will catalyst the political transformation to mainstream climate change in a two-level approach: i) village level regulations and land use plans developed through participatory climate change vulnerability assessment; and ii) national level regulations and institutionalization developed for expanding the CBNRM approach to watersheds beyond the target areas. GCF support will be the catalyzer for developing the enabling environment to a low carbon and climate resilient sustainable development pathway, through establishing climate-resilient land use planning and management in a broader national, sub-national, and local village level policy making and planning. Thus, GCF support will not only support the scaling up, but moreover, to spread out the impact to the whole nation, and other similar climate vulnerable countries/areas. In addition, JICA, as the AE, will also consider introducing this CBNRM approach in other areas/countries where there will be a high demand from the country and are facing similar conditions.

### **3. Catalytic impact of the project policy transformation of the project to crowd-in public financing and mobilize community level investments.**

124. The GCF support will have a catalytic impact to transform the nation to develop a watershed-level climate-resilient and low carbon planning across the region to more than 25,000 ha and a population of over 48,150 and 148,140 people, directly and indirectly respectively (of which 30% beneficiaries will be women). GCF support will enable the scaling up of the CBNRM mechanism and develop a model for a truly people-driven approach to sustainable natural resource management. This model will be a cross-sectoral, holistic approach, reflecting local knowledge and cultures, enhancing local governance capacity, and integrating recent climate science to people-led natural resource planning, which will enable the development of a truly sustainable model sustained on local initiatives. Improved extension services and capabilities will encourage and technically support the villagers to invest in these improved practices. Extension service officers at the local level and national institutionalization will support the villagers to have a more climate-resilient and low carbon investments as a livelihood option, even beyond the post-project period. Moreover, GCF support will enable the solid model development of the CBNRM mechanism, that have already attracted other donor agencies to incorporate CBNRM approach in their projects with some already starting to test the approach in their field. Consequently, GCF support will develop the CBNRM approach into a truly reliable CBNRM model that will crowd-in other donors and public finances to realize the national program and contribute to the NDC.

### **4. Types of Investments**

125. A grant-financing instrument is selected in this project. Without grant resources, the proposed interventions would not be financially durable in the long term and should be supported from a public investment, due to the following reasons:

- 1) Limited financial capacity within the GoTL as one of the Least Developed Country (LDC), and Small island Development States (SIDS) with Low income. The capacity to provide concessional debt financing for adaptation and mitigation measures is limited.
- 2) The project targets the most vulnerable population with 80% of them holding subsistence lifestyle, who are already facing severe climate impacts to their marginal livelihoods. Thus, these most vulnerable population is significantly cash constrained, and therefore not possible to enter a commercial finance such as commercial insurances.
- 3) The proposed project will build social capitals at local and regional levels in the watersheds and human and institutional capacities of MAF at central and municipal levels. The project activities itself is a highly public intervention and should be supported by public investments.
- 4) The incremental co-benefit of the increase of maize productivity will not generate cash earnings but only make up for the food insufficiency of the communities due to climate change, although the CBNRM could increase three to five times of maize productivity even under extreme and unusual climate conditions. In general, the average yield of maize in the target watersheds still ranges from 0.3 ton/ha to 2.0 ton/ha; and therefore, local communities in many areas have still often faced the deficiency of food particularly in mountainous areas.

## 126. Incremental cost

All the Components and Activities of the proposed project are designed for addressing the direct and underlying drivers of forest degradation and deforestation to reduce CO<sub>2</sub> emissions from the LUCF sector as well as reducing local climate vulnerability in consideration of present and future impacts of climate change in the target watersheds as listed below.

Component 1: Addressing the direct drivers of forest degradation and deforestation in consideration of potential climate change impacts

Component 2: Addressing local climate vulnerability which is also the underlying driver of forest degradation and deforestation to enhance the sustainability of the project effects

Component 3: Enhancing the enabling environment for further scale-up of the project effects beyond the target watersheds

Component 4: Assessment of project impacts and obtaining lessons learned which could be used for future interventions similar to the proposed project

Thus, all the incremental costs are covered by the GCF proceeds and co-finance from JICA as well as the same from the GoTL. MAF's regular activities (e.g., nursery operation) and operation expenses (e.g., coordination, collaboration, and reporting), which are incurred by the GoTL on a BAU basis but will complement the GCF interventions and ensure effective implementation of the project, will not be counted as its co-financing amount in the proposal.

## 5. Gender and Environmental and Social Aspects

127. **Mainstreaming Gender:** Proposed project is aware of mainstreaming gender in project activities and have set the targets to enable this in the Gender Action Plan. Due consideration will be given to gender equality in the implementation of the proposed project as specified in Annex 4 Gender Action Plan. Specifically, considering the gendered differences in access to resources and ability to pursue adaptive livelihood with institutional support, proposed project will fundamentally provide equal access and opportunities to women. At least 30% of the total direct beneficiaries will be women. Women-gatherings will be held separately when necessary, so that women can easily express their opinions and actively participate in the project activities. Gender equality in formulation and implementation of village regulations ~~which was before limited to men~~, will fundamentally benefit women further outside of this proposed project scope, and ensure the empowerment of women as long-term benefits. Special consideration will be given to the need/ importance of providing various opportunities for women to take the position of local leaders such as a group leader or model farmer, so as to encourage them to participate in local development, enhancing future female leadership in a village.

128. **Environmental and Social Aspects:** The potential environmental and social risks associated with the project are considered to be minimum. However, environmental and social considerations have been fully incorporated in the planning and implementation of the proposed project to i) avoid any adverse environmental impacts to local people and environment, ii) enhance equitable access to the project benefits among local communities, and iii) give due consideration to vulnerable and marginalized people in the villages.

The proposed project will comply with GCF's environmental, social and IP policies through preparing the environmental and social assessment and action plan. The screening results is provided in Annex 2 and Chapter 10, while Environmental and Social Action Plan (ASAP) is provided as Annex 12.

129. **Grievance Redress Mechanism:** GRM will be established at both project and national levels, regardless of the fact that environmental and social risks and impacts of this proposed project are categorized as minimal to nil (ESS category C). Formulating the GRM at project level is crucial for sound management and operations of the proposed project, as it ensures that all complaints of affected or potentially affected people (AP/PAP) could be addressed, and necessary remedial actions could be taken in a timely and effective manner. The grievance log matrix will be used for monitoring and tracking the situations of the complaints, with periodic updates (see Chapter 10.6 of the Annex 2 Pre-FS for more details of the GRM design).

130. In addition to the project level GR mechanism, the GCF's Independent Redress Mechanism (IRM) and Indigenous Peoples Focal Point (IPFP) will also be available for local communities as well as any relevant parties as part of grievance redress mechanism of the project. The project will post a notice of the GR mechanisms including IRM at post-administrative and village offices concerned with the target watersheds, so that people could be fully aware of the mechanisms.

## 6. Relevance to GCF principles and Timor-Leste NDC

131. As described in B.2, the proposed project aims to enhance the most vulnerable population's local climate resilience and reduce GHG emissions from deforestation and forest degradation in the target watersheds through enhancement of local capacity for sustainable forest and land use management and climate change adaptation interventions. The proposed project is highly in line with the GCF's core principles, and will directly respond to the investment criteria of GCF, such as:

- a) Potential for scaling up and replication by catalyze impact beyond a one-off project;
- b) Potential for contribution to the shift toward low-emission and climate-resilient sustainable development, precisely, by proposing climate intervention models to the most climate vulnerable people relying on subsistent agriculture;
- c) Generation of a wide range of benefits, not only environmental items (soil, water, and biodiversity) but also social (local level peace and order and cultural/ traditional preservation), economic (improvement of local livelihoods and increase of income generating opportunities), and gender-sensitive development

aspects (reduction of gender inequalities, particularly by addressing domestic violence issues in the localities);

- d) Reaching the most vulnerable communities and potential to strengthen institutional and implementation capacity in MAF as well as local government units for sustainable natural resource management;
- e) Country-driven approach or high coherence with the existing GoTL's policies (i.e., NAPA, NDC, national forestry sector policy, and most importantly, the CBNRM Roadmap), as it adopts the people-driven approach, which is profoundly practical and effective in the social context of Timor-Leste, backed up with climate science; and
- f) Economic soundness of the proposed project.

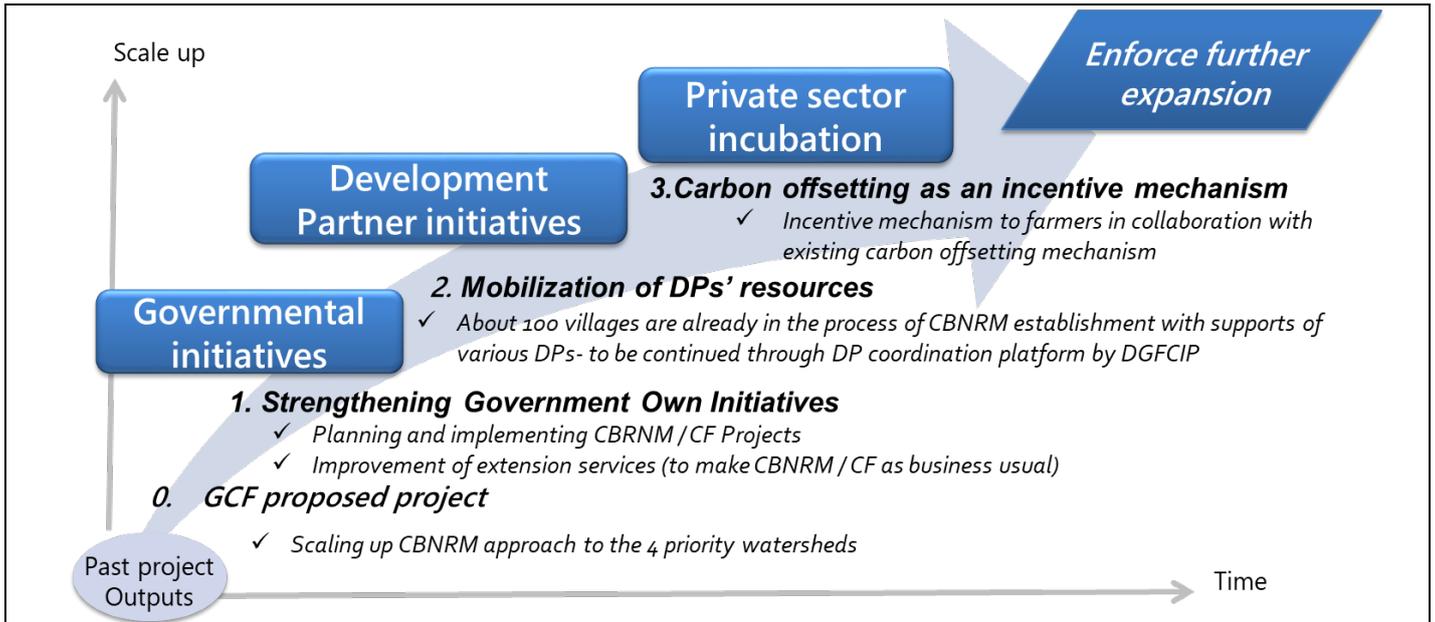
132. The proposed project will directly contribute to the achievement of the targets and implementation of the measures set in the Timor-Leste's NDC, such as: i) introduction of permaculture and climate smart agriculture; ii) rehabilitation of degraded lands; iii) promotion of community-based forest management; iv) development of integrated agroforestry and watershed management; v) promotion of integrated sustainable land management; vi) reforestation; vi) enhancement of awareness; and vii) ecosystem management.

#### C.5. Exit strategy and sustainability (max. 300 words)

##### 1. Exit Strategy

Post-project sustainability will be ensured with 3-step exit strategy to be taken by the proposed project with the supports of JICA's TET co-financing project; i) Strengthen government's own initiatives; ii) Mobilization of Development Partners' resources; and iii) Introducing private investments and incentive mechanisms with Carbon offsetting to continuously support farmers. The first step is to strengthen government's own initiatives by institutional support and policy transition of extension services (to operate CBNRM / Community Forestry (CF) activities as business-as-usual). The second step is the enhancement of Development Partners' (DP) resource mobilization. This process has been embarked on already: the coordination made by MAF/DGFCIP has created widespread recognition and adoption of the CBNRM mechanism by the DPs other than JICA (e.g. World Bank, EU and FAO), which have led the expansion of the CBNRM in more than 30 villages, and around 100 villages are in the process of implementation to be completed by 2022. This demonstrates not only the effectiveness of the CBNRM approach, but also the high potential of replicability. Efforts for the mobilization of DP resource will be continued through DP coordination platform led by MAF/DGFCIP. The final step for the exit strategy is introduction of private investments and incentive mechanisms by enhancing Carbon offsetting schemes, which will contribute to continuously supporting farmers on their reforestation activities. Farmers will receive direct incentives for their continuous maintenance and protection of the planted trees, which would act not only as measures for mitigation, but also as alternative livelihood means to improve their climate resilience.

##### 3-Step Strategic Exit Strategy of the proposed project



133. **Strengthen government's own initiatives:** JICA-TA will provide technical support on policy transition and necessary institutionalization of the CBNRM approach. With the development of new legislations (e.g. ministerial order), the government will be able to plan and implement the CBNRM roadmap as business as usual. Institutionalization does not limit to the formulation of legislative documents at national level, but moreover, it aims to enhance the capacity of the field level extension services so that the extension officers will be able to play a leading role in the CBNRM/CF expansion and technical transfer/training to local villagers. Another important field level operator, namely local NGOs, will have enough experience and be adequately capacitated to implement the CBNRM approach in the field level after completion of this project, so that they would be capable to operate field activities and work for any MAF DPs which would adopt the CBNRM approach as their project activities.

134. **Mobilization of Development Partners' resources:** The second step is the enhancement of Development Partners' (DP) resource mobilization. Widespread recognition and adoption of CBNRM practices by the DPs (e.g. World Bank, EU and FAO) have led the expansion of the CBNRM scaling up to more than 30 villages, and around 100 villages are in the process of implementation to be completed by 2022 already. This demonstrates not only the effectiveness of the CBNRM approach, but also the high potential of replicability. Efforts for DP resource mobilization will be continued through Forest sector donor coordination platform led by the TL government, MAF/DGFCIP. This platform has proven experience of the CBNRM replication to other MAF DPs in the sector, functioning as the place where MAF DPs learn about the CBNRM approach and the approach itself has been evolved and improved in collaboration with DPs. The same mechanism will continue during and after the proposed project. It is, therefore, highly expected that the CBNRM approach will be adopted by future MAF DPs-initiated project and integrated into their project interventions.

135. **Catalyzing private investments and incentive mechanisms through Carbon offsetting to continuously support farmers:** Lastly, the third step involves introduction of private investments and

incentive mechanisms by enhancing Carbon offsetting scheme to continuously support farmers on their reforestation activities. Farmers will receive incentives for their continuous maintenance and protection of the planted trees, which would act as alternative livelihoods to improve their climate resilience. PLUP will identify degraded lands in villages and motivate local communities in restoration of such lands through reforestation/ afforestation activities. Reforestation/ afforestation activities will be developed as carbon offsetting scheme based on the experienced carbon offsetting initiatives, led by national and Australian NGOs in Timor-Leste. Both NGOs are already officially working closely with the government with the long-term objectives of providing the country 'carbon farming' as an alternative livelihood. The existing carbon offsetting projects developed by both NGOs have been already validated and certified by internationally well recognized voluntary carbon offsetting schemes, with rich experience in reaching the voluntary offset market. The proposed project will aim to incorporate the same arrangements in the project design. JICA-TA will provide technical support for the formulation of the carbon offset projects as additional incentives for local farmers, possibly in collaboration with the preceding NGOs, so that their experiences and lessons could be fully utilized for this purpose. JICA-TA will also support the development of linkages with potential buyers or markets not only in Timor-Leste but also outside the country, such as private companies in EU/Asian countries, so that carbon credits generated by the carbon offset projects could be traded to private firms which have interest in carbon offsetting. At this moment, there is no national registry available in Timor-Leste; and the credits will be aimed to be traded in the voluntary market.

## ***2. Sustainable nature of the Project Effects***

136. The main approach of the proposed project, the CBNRM mechanism, has been successfully tested and proven in more than 30 villages in the country by several MAF DPs' projects. The unique and key principle of the approach is its truly people-driven basis, building the local communities' ownership for NRM with built-in incentives for sustaining the mechanism and improved techniques (e.g., sustainable and climate resilient livelihood options) through continuous capacity building of key local stakeholders over years. As a direct result, it is expected that i) a mechanism for sustainable forest and land management with VRs is in place at village level; ii) local communities can be equipped with skills and techniques of sustainable fixed-area agriculture and other mitigation/ adaptation actions; and iii) a coordination mechanism for sustainable landscape management (watershed management council: WMC) is set up at post-administrative level (i.e. improvement of extension services, local institutionalization, and policy enforcement). These interventions will directly contribute to ensure the post-project sustainability at both community and local governance levels.

137. Moreover, this project will support the institutionalization of the CBNRM/ CF approach within the national level policy and legislative frameworks and enhance the government capacities that could scale up the proposed climate interventions beyond the project areas and project closure. The proposed project will contribute to mainstreaming the CBNRM roadmap as a key national program for sustainable land and forest management towards low-carbon and climate resilient society, which could leverage additional resources to sustain and scale up the impact beyond project closure. By directly implementing the national CBNRM roadmap and aligning the project with key national climate policies, priorities and commitments, including the NDC and NAPA, the post-project continuity potential is very high. The success of the proposed project will also further enhance additional external funds needed to bridge the financial gap toward the full implementation of the CBNRM roadmap.

### 3. Historical evidence of the sustainability

138. As discussed in Section B.1.- 5. Past Project Experience and Scalability, the CBNRM mechanism entails built-in incentives for the community to sustain it in a long term. The end-of-project evaluation and the post-project impact assessment conducted by MAF and JICA for the CBNRM Project Phase 1 confirmed that the CBNRM mechanism was effective even in the post-project period and a majority of local communities were continuing the techniques (e.g. of sustainable upland farming techniques) in their farms. Some highlights of the major findings are summarized below.

- The incidence of unsustainable NRM practices (e.g., forest fire, illegal exploitation of forest resources, and free grazing) has been reduced after the CBNRM mechanism was in place. Presence of village-level NRM regulations with continuous governance capacity enhancement helps to reduce conflicts over NRM as indicated in the table below.

	Illegal cutting		Forest fire		Free grazing animals	
	Increased/ No change	Decreased	Increased/ No change	Decreased	Increased/ No change	Decreased
CBNRM Villages	0%	100%	0%	100%	1%	99%
Non-CBNRM Villages	74%	26%	68%	32%	60%	40%

Note: % represents the proportion of the sampled interviewees (20 people/ village) responding "Yes" to a question given.

	Illegal cutting		Forest fire		Free grazing animals	
	Increased/ No change	Decreased	Increased/ No change	Decreased	Increased/ No change	Decreased
CBNRM Villages	0%	100%	0%	100%	1%	99%
Non-CBNRM Villages	74%	26%	68%	32%	60%	40%

Note: % represents the proportion of the sampled interviewees (20 people/ village) responding "Yes" to a question given.

- Approximately 30~100 % of the total households in the villages have applied the techniques introduced by the Microprograms/ Hands-on training (e.g. of sustainable upland farming) to their own farms and continued the practices even in the post project period.

- The number of households who have changed their conventional farming practices (i.e., shifting cultivation and free grazing animals) has been significantly reduced in the CBNRM villages as compared to those in Non-CBNRM villages.

	Slash& Burn Agriculture		Keeping animals with pens/ropes	
	Yes doing	Not doing	Yes doing	Not doing
CBNRM Villages	6%	94%	95%	5%
Non-CBNRM Villages	50%	50%	59%	41%

Note: % represents the proportion of the sampled interviewees (20 people/ village) responding "Yes/ No" to a question given.

- Local livelihoods in the CBNRM villages have been improved after the introduction of the CBNRM mechanism, as local communities could increase crop production, diversify income sources, and restore forest ecosystem services in the localities. This implies that the communities in the CBNRM villages have realized economic benefits to sustain the CBNRM mechanism (See the table below for comparison with Non-CBNRM villages).

	Income levels			Food production			Availability of timbers/ fuel wood		
	Increase	Decrease	No change	Increase	Decrease	No change	Increase	Decrease	No change
CBNRM Villages	100%	0%	0%	87%	13%	0%	93%	7%	0%
Non-CBNRM Villages	0%	85%	15%	0%	76%	14%	16%	15%	69%

Note: % represents the proportion of the sampled interviewees (20 people/ village) responding "Yes" to a question given.

#### 4. Policy Support for enabling environment

139. The CBNRM mechanism has been adopted by MAF/DGFCIP, which has been formulating the CBNRM Roadmap, a 10-year national program targeting 14 priority watersheds of 6,641 km<sup>2</sup>, which encompasses 41.8 % (or 3,627 km<sup>2</sup>) of the total forest area in Timor-Leste. The proposed project is the initial phase of the national program and act as a catalyst for further investments and financial supports from the GoTL as well as other donors/ international institutions.

140. Enabling legal provisions for CBNRM and CF are included in the Law on the General Forest Regime and the revised national forest sector policy (2018). Currently, MAF/DGFCIP is finalizing the ministerial order for expansion of the CBNRM approach through implementation of the national program to enable MAF/DGFCIP and its national directorates to mobilize financial and administrative support for further expansion.

141. Key Sub-activities proposed by the Activities, such as Activities 1.1.1, 2.1.1 and 2.3.1, are highly consistent with those proposed by the climate change-related national targets and plans, such as NDC and NAPA. Hence, the project activities could get support from the climate sector policy in Timor-Leste.

142. Additional regulatory frameworks for CF will also be developed under Activity 3.1.1 of the proposed project to ensure the government support for implementation of CF even after the end of the proposed project. The government supporting documents (e.g. ministerial order and circular) will enable MAF/DGFCIP to adopt CF coupled with CBNRM as a main tool for sustainable forest management.

143. In addition, the impact assessments explained above confirmed that farmer's livelihood have been improved in terms of their crop yields as compared to other villages without CBNRM. Its positive impact on crop production was more distinct under extreme weather conditions. This could lead to the conclusion that the proposed project, particularly those of Hands-on Training (or Activity 2.1.1), will not only address the major drivers of forest degradation and deforestation, but also reduce local vulnerability to climate variability.

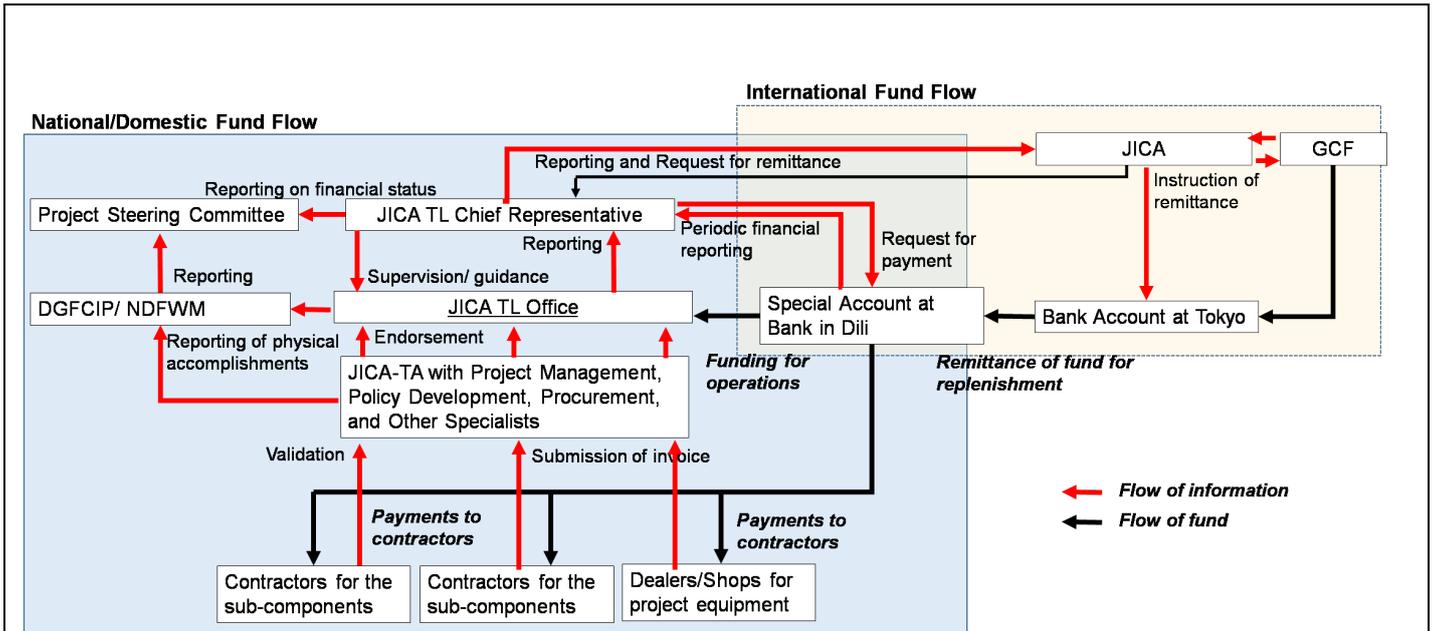
144. Ultimately, the CBNRM and the capacity development practices promoted by the project are economically sustainable. The field level activities are carried out by local communities who voluntarily participate with technical support from locally available human resources. Its built-in incentives will sustain the CBNRM mechanism, especially the village level regulatory mechanism supported by sustainable and climate resilient livelihood options, even in the post-project period. Hence, the mainstreaming of the CBNRM mechanism with its national roadmap to contribute to the achievement of the goals of NDC and National Forestry Sector Policy is highly rational for GoTL, particularly MAF/DGFCIP, from the economic standpoint.

## **C.6. Financial management/procurement (max. 300 words)**

### **1. Overall Picture of Financial Management**

145. JICA as AE will conform with its financial management, procurement and reporting obligations as per the Accreditation Master Agreement (AMA) and Funded Activity Agreement (FAA) for the proposed project.

146. In addition to AMA and FAA, JICA will follow its guidelines on Financial Management and Procurement. Having over 15 years of experience in managing projects in TL, JICA will properly manage the GCF fund in a transparent manner under the supervision of the Central Steering Committee led by JICA and MAF. MAF will also manage and disburse their own co-finance proponent based on MAF/DGFCIP's financial and procurement procedures. The proposed overall financial management structure for the GCF proceeds is illustrated below.



147. As illustrated above the invoice submitted by the contractors hired for implementation of the Activities will be reviewed, validated and approved by JICA TL with assistance of JICA-TA. Chief Representative of JICA TL will make the remittance request for replenishment of project budget in the special account at a bank in Dili. Once the fund is transferred to the special account, the payments to the contractors will be made in accordance with validated amounts. JICA TL will periodically report the financial status and physical accomplishments to MAF/DGFCIP as well as other relevant national directors at the central project steering committee meetings.

## 2. Periodic Financial Reviews and Auditing

148. JICA has its own financial management and auditing systems, which are in align with international recognize standards. JICA has Office of Audit, as an independent office, to ensure the internal control by conducting random missions in JICA operating countries. Board of Audit of Japan also conducts random mission to JICA operating countries. The proposed project could use such systems for periodic financial reviews and auditing. The financial reviews should be conducted every quarter, while the external financial auditing should be carried out on an annual basis.

## 3. Procurement Plan

### 3.1 Procurement Items and Methods

149. **Procurement Guideline:** Fairness, transparency, and accountability shall be ensured for all procurement that uses GCF fund. In the proposed project, the procurement of the external organizations and project equipment will be undertaken by JICA in accordance with AMA, FAA, and its procurement

guideline, which is in align with the internationally recognized practices. JICA will also regulate the procurement process and control measures for anti-corruption as a series of guidelines and manuals.

150. Field level activities of the proposed project will be outsourced to external organizations (e.g., NGOs and contractors) for efficient and effective implementation and local empowerment. JICA represented by its TL office will procure local NGOs / technicians / and other human resources for ground activities with JICA-TA support in procurement. In addition to the project activities, several types of project equipment (e.g., office equipment, project vehicles, motorbikes, and monitoring equipment etc.) will be procured and purchased by AE by using its own fund for smooth and effective implementation of the project prior to the commencement of the proposed project

151. **Mode of procurement:** International consultant will be procured by Quality Cost Based Selection (QCBS), Quality Based Selection (QBS), or Least Cost selection (LCS) depending on the amount. Equipment / material will be procured through 'comparison of quotation' or (Limited or open) Competitive Bidding. For local consultant procurements, Least Cost Selection (Bidding or Competition), or Quality and Cost Based Selection (QCBS), or Quality Based Selection (QBS) will be adopted following JICA's procurement guideline. Methods of procurement will be decided based on the thresholds of the JICA's procurement guideline. A detailed procurement plan is described in Annex 8.

152. JICA will confirm with its financial management, procurement and reporting obligations as per the Accreditation Master Agreement (AMA) and Funded Activity Agreement (FAA) for this project. JICA as the AE will submit the financial statement report on a semi-annual basis to GCF secretariat for both GCF Financing and Co-financing.

### 3.2 Short-listing of Contractors

153. NGOs or contractors will be selected in the local competitive bidding with technical proposals, and selected in applicable mode of procurement, in accordance with the contract amount. They will be prequalified or short-listed prior to the bidding to shorten the time required for selection of NGOs/ contractors. The qualifications required for NGOs/ contractors should be finalized in the 1st year of the project.

154. The processes of pre-qualification (short-listing of NGOs) and selection are summarized below.

a) JICA TL with assistance of JICA-TA will call for Expression of Interest (EOI) from potential bidders/ firms through multiple media (e.g., JICA TL's SNS website, governmental website, and local newspapers).

- b) JICA-TA will evaluate the applications/ EOI documents submitted by the potential bidders/ firms and make recommendations on the short-listing of the bidders/ firms to JICA TL.
- c) After short-listing, JICA TL with assistance of JICA-TA will issue and send the Request for Proposal (RfP) to the short-listed bidders/ firms.
- d) The interested bidders will submit their technical and financial proposals according to the instruction of the RfP by the due date.
- e) JICA-TA will evaluate the proposals submitted by the bidders and select the 1<sup>st</sup> ranking one for contract negotiations.
- f) JICA-TA will endorse the selected bidders with the results of the evaluation as well as the negotiations to JICA TL for its approval.

After its careful review, JICA TL will select the firm to conclude contracts.

#### D. LOGIC FRAMEWORK AND MONITORING, REPORTING AND EVALUATION

*This section refers to the project/programme's logic framework in accordance with the GCF's [Performance Measurement Framework](#) under the [Results Management Framework](#) to which the project/programme contributes as a whole, including in respect of any co-financing. This is different from the project/programme-level log frame(as there may be other impact measures for example that go beyond those defined by the GCF).*

*A project-level logical framework, with specific indicators, baselines and targets, means of verification and assumptions should be provided as part of Annex 2.*

##### D.1. Paradigm shift objectives (max.200 words)

<p>Shift to low-emission sustainable development pathways</p>	<p>155. The project paradigm shift objective is to contribute to reducing deforestation and forest degradation through improvement of forest ecosystem services by establishing the community-based sustainable NRM mechanism, which is proven effective in protection of existing forests, particularly dense forests, from degradation and deforestation caused by human activities, on a watershed scale. Carbon sequestration would also be enhanced by promotion of reforestation led by village and post-administrative leaders with institutional support and adoption of sustainable land use and management practices with improved farming techniques for adapting to climate change. 156. This will be materialized by i) building local governance capacity for sustainable forest and natural resource management with village-level NRM regulations and coordination platforms at sub-watershed level, ii) replacing the conventional farming/ livelihood activities (e.g., shifting cultivation) with sustainable and climate resilient livelihood options for reduction of human pressures on forest resources, iii) developing an incentive mechanism for local communities to restore forest covers, and iv) developing the policy and legislative frameworks as well as human resource capacity for scale-up of the CBNRM/ CF approach not only in the target watershed but also beyond the target watersheds as well as project closure. 157. The built-in incentives incorporated in the proposed project would ensure the sustainability of the village-level regulatory measures</p>
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and self-sustaining transformation of the conventional livelihood practices, which are generally unsustainable, into the sustainable and climate resilient ones in the target 4 watersheds. 158. Through the implementation of the proposed project, at least 1,954 ha of dense forest will be protected from degradation and deforestation, which will reduce as high as 996,040 tCO<sub>2</sub>eq of GHG emissions from forest degradation of dense forest by the end of the project. 159. The proposed project will develop an enabling environment for further scale-up and replication of the project results, especially the CBNRM mechanism and CF, in other priority watersheds through i) development and strengthening of the policy and legislative frameworks for CBNRM/ CF, ii) building of the capacity of MAF and NGO technical officials concerned with not only the target watersheds but also other priority watersheds, and iii) collaboration with MAF/DGFCIP for mobilization of additional financial resources from MAF DPs as well as the GoTL by using the existing MAF/DGFCIP-initiated DP Coordination Meetings and the legislative framework developed by the proposed project. 160. The proposed project in the target 4 watersheds would demonstrate the efficacy of the CBNRM mechanism in reduction of deforestation and forest degradation with substantial adaptation benefits to local vulnerable communities who are often the agents of the drivers of deforestation and forest degradation. Thus, the project could catalyze additional investments and/or financial assistance from the GoTL and MAF DPs by fully using the DP Coordination Meetings as well as the policy and legislative frameworks developed for CBNRM/ CF.

**D.2. Impacts measured by GCF indicators**

Select the appropriate impact for the project/programme. Note that more than one indicator may be selected per expected impact result. Add results as appropriate.

Expected Result	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
M4.0 Reduced emissions from land use, reforestation, reduced deforestation, and through sustainable forest management and conservation and enhancement of forest carbon stocks	M4.1 CO <sub>2</sub> eq reduced or avoided (including increased removals) as a result of GCF-funded projects/programmes	Interim/Final evaluation reports developed by Impact Assessment in Component 4. Data on drivers, incidence and emissions impacts of deforestation	to be developed by the baseline survey as part of Impact Assessment in the 1st year	198,366 t CO <sub>2</sub> eq between 2020-2023	996,040 t CO <sub>2</sub> eq between 2020-2027	The current forestry sector policy is maintained. Climate change mitigation will remain as the main focus area of MAF DPs working in the forestry sector. MAF will continuously

		n and land degradation collected and reported annually as per the guidance provided in Annex 14.				monitor the target villages' performance in target areas and provide necessary technical assistance to the target villages. MAF and NGO technical officials trained by the project will not leave the jobs.
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**D.3. Outcomes measured by GCF indicators**

Expected Outcomes	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term (if applicable)	Final	
M9.0 Improved management of land or forest areas contributing to emissions reductions	M 9.1 Hectares of land or forests under improved and effective management that contributes to CO2 emission reductions	Interim/Final evaluation reports. Data on drivers, incidence and emissions impacts of deforestation and land degradation collected and reported annually as per the guidance provided in Annex 14. Latest baseline	1) 0 ha of dense forest with installed effective management to reduce forest degradation 2) 0 ha of forests including dense forests with installed effective management	1) 7,200 ha of dense forests (by 2024) 2) 34,900 ha of dense and sparse forests (by 2024)	1) 16,200 ha of dense forests (by 2027) 2) 78,400 ha of dense and sparse forests (by 2027)	There is no drastic change in government policy frameworks. There is no prolonged political turbulence. No extreme climate events, such as prolonged heavy rains, drought, and extreme heats, take place. MAF municipal technical officers and NGO staff keep working in the respective organizations. Population in

		data on forest cover in the watersheds	ment to reduce deforestation			the target watersheds does not drastically increase.
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**D.4. Arrangements for Monitoring, Reporting and Evaluation (max. 300 words)**

**1. Regular Monitoring**

161. The Project Monitoring Team formed under MAF/DGFCIP with technical assistance from JICA-TA will carry out regular monitoring of overall progress and performance of the project. The municipal-level monitoring teams will also be formed in each target watershed to carry out day-to-day monitoring of the field works, particularly those carried out by the Contractors (e.g., NGOs), in collaboration with the Central Project Monitoring Team and with technical assistance from JICA-TA.

162. TET together with the Central Project Monitoring Team will monitor the reduction of deforestation and forest degradation and estimate the GHG emission reduction by adopting the following methodologies.

- a) TET and the Central Project Monitoring Team will select one monitoring plot (1 ha) each from dense and sparse forests in the 12 villages selected for baseline data collection in the target 4 watersheds (or the three villages in each target watershed);
- b) TET will take aerial photos of the monitoring plots in using drone during or immediate after PLUP in Activity 1.1.1;
- c) TET and the Central Project Monitoring Team will select four villages (one village each in the watershed) among the 12 villages every year and take aerial photos of the monitoring plots in the four villages to observe changes in forest cover and status in the plots;
- d) TET will estimate the reduction rates in deforestation and forest degradation in the monitoring plots and compare them with the ones used for calculation of the mitigation impact in this proposal;
- e) TET will make the necessary adjustment of those used for calculation of the mitigation impact if the rates are lower than originally expected;
- f) TET will calculate the GHG emissions in the target villages where the sustainable NRM mechanism is put in place using the reduction rates (the ones either adjusted or originally set) and estimate the annual emission reduction in the villages in comparison to the GHG emissions under BSU scenario;

The results of monitoring of deforestation and forest degradation with georeferenced data of the monitoring plots will be integrated into the baseline GIS data which will be developed in the initial stage of the proposed project.

Further clarification on the annual emission reduction monitoring and reporting will be made in the beginning of the project as described in Annex 14.

## **2. Periodic Evaluation (Baseline Data Collection, Interim Evaluation and Final Evaluation)**

163. JICA as the AE is responsible for operating and managing the periodic evaluation, i.e., Baseline data collection, Interim evaluation, and Final evaluation. The data collection and field assessments will be contracted out to national institutions. A joint evaluation team will be formed by JICA and MAF/DGFCIP/NDA for the interim and final evaluation so that both parties could take necessary actions or share lessons learned for the future projects. The results of such monitoring will be incorporated into the Annual Performance Report, Interim Evaluation Report, and Final Evaluation Report. The table below explains project evaluation plan.

Sub-activities	Procedures/Detailed Descriptions	Timeframe
Baseline data collection	<p>Baseline survey for future evaluation. Socio-economic survey and drone survey will be conducted in the selected villages.</p> <p><i>Socio-economic survey</i></p> <ul style="list-style-type: none"> <li>■ JICA with TET will hire external organizations to conduct the socio-economic survey at three villages each in the target watersheds to collect the baselines of socio-economic conditions, agriculture production, current forest and natural resource management practices, and major drivers of forest degradation and deforestation.</li> <li>■ In each village, 50 households will be randomly selected.</li> <li>■ TET will develop the design of the socio-economic survey together with the methodologies and questionnaires and checklists.</li> <li>■ External organizations will conduct the socio-economic survey under the supervision of the Municipal Project Monitoring Teams and TET.</li> <li>■ TET will set the baselines of socio-economic conditions of the sampled villages based on the results of the survey.</li> </ul> <p><i>Drone survey</i></p> <ul style="list-style-type: none"> <li>■ TET or consultant hired by JICA will: i) take aerial photos of the villages selected for the socio-economic survey with drone; ii) analyze the aerial photos taken and conducted ground truth surveys at the villages; and iii) develop forest cover and land use maps of the villages.</li> </ul>	<p>3 months</p> <p>2 months</p>
Interim evaluation	<p>The interim evaluation will be conducted to evaluate the performance of the Components and effectiveness of the project.</p> <p><i>Interview to MAF and leaders at post-administrative and village level</i></p> <ul style="list-style-type: none"> <li>■ External independent evaluator will conduct interviews to the MAF officials and leaders of post-administrative offices and villages to assess the achievement of the outputs and evaluate the progress.</li> <li>■ External evaluator will also assess i) the progress, ii) limiting factors, iii) any changes in external factors, and iv) positive factors.</li> </ul> <p><i>Drone survey</i></p> <ul style="list-style-type: none"> <li>■ TET will: i) take aerial photos of selected areas of existing forests in the villages selected for the socio-economic survey with drone; ii) analyze the aerial photos taken; iii) check if there is any changes in forest cover/ density of canopy cover in the forests, and iv) conduct ground truth surveys at the forests if any change is observed.</li> </ul> <p><i>Evaluation of the project performance</i></p> <ul style="list-style-type: none"> <li>■ MAF/DGFCIP, NDA and JICA with technical assistance from TET will evaluate the performance of the Components by “effectiveness,” “efficiency,” “relevance,” “sustainability,” and “expected impact” according to the evaluation guidelines of JICA.</li> <li>■ MAF/DGFCIP, NDA and JICA with TET will revise the action plan, if necessary.</li> </ul>	<p>3 months</p> <p>2 months</p> <p>1~2 months</p>
Final evaluation	<p>The final evaluation will be conducted in the same manner as the mid-term. The focus will be placed on the evaluation of the effects, sustainability, and impacts of the Components and extract useful lessons.</p> <p><i>Socio-economic survey</i></p> <ul style="list-style-type: none"> <li>■ JICA with assistance from TET will hire external organizations to conduct the interview at the same villages for the baseline survey.</li> <li>■ The same data will be collected in the baseline surveys will be collected through interviews to the selected same households as mid-term.</li> <li>■ TET will assess the impact of the Components through comparing households’ economic data with those at the mid-term and baseline.</li> </ul> <p><i>Drone survey</i></p> <ul style="list-style-type: none"> <li>■ TET or consultant hired by JICA will take aerial photos of the forest cover and land use maps of the villages. Forest cover and land use maps of the villages will be analyzed with a ground truth survey</li> <li>■ TET will assess any changes in forest cover and land use.</li> </ul> <p><i>Evaluation of the project performance</i></p> <ul style="list-style-type: none"> <li>■ MAF/DGFCIP, NDA and JICA with TET will evaluate the performance of the Components in terms of “effectiveness,” “efficiency,” “relevance,” “sustainability,” and “expected impact” according to the evaluation guidelines of JICA.</li> <li>■ MAF/DGFCIP, NDA and JICA with technical assistance from TET will analyze the lessons learned from the proposed project.</li> </ul>	<p>3 months</p> <p>2 months</p> <p>1~2 months</p>

164. The socio-economic survey in the beginning of the project for collection of socio-economic baseline data of selected target villages will be carried out by the on-going JICA CBNRM project in the course of the project implementation. Hence, the cost required for the survey is not counted as the project cost in the cost estimation of this proposal.

### 3. Reporting

165. JICA as the AE will ensure all the reporting requirements for GCF-financed activities, which will include Annual Performance Report (APR) and interim evaluation and final evaluation reports. These reports will also specify the activities' consistency with the ESS/Gender standards and ESS/Gender policy and provide information from the GCF independent accountability units and any other applicable environmental and social provisions in the legal agreement. Detailed reporting steps are described below:

- 1) Bimonthly or quarterly progress report will be prepared and submitted to DGFCIP by the Central Project Monitoring Team with technical assistance from JICA-TA. JICA-TA will separately submit its progress and project monitoring report to JICA HQ/JICA TL on a quarterly basis.
- 2) DGFCIP together with JICA will share the progress and accomplishments of the project with NDA and other relevant national directorates at the steering committee meetings, which will be held at every 6 months. The results of the periodic evaluation will also be shared with relevant national directorates at the steering committee meetings.

NDA and JICA will submit the Annual Performance Report to GCF secretariat including all of the project activities progress. The monitoring results will be incorporated into the Annual Performance Report, Interim Evaluation Report, and Final Evaluation Report.

166. The estimated emission reduction will also be reported to GCF as part of the Annual Performance Report to GCF secretariat. The annual emission reduction will be estimated by adopting the methodologies described in Paragraph 162 in this document.

## E. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

### E.1. Impact potential (max. 300 words)

E.1.1. Expected tons of carbon dioxide equivalent (t CO <sub>2</sub> eq) to be reduced or avoided (Mitigation and cross-cutting)	Annual	322,069 tCO <sub>2</sub> eq
	Lifetime	4,415,082 tCO <sub>2</sub> eq
E.1.2. Expected total number of direct and indirect beneficiaries, disaggregated by gender (Adaptation and Cross-cutting)	Direct	48,110 30% of female
	Indirect	148,143 30% of female
	<i>*For both, Specify the % of female against the total number.</i>	
E.1.3. Percentage of beneficiaries relative to total population	Direct	4.1 (Expressed as %) of the country
	Indirect	12.5 (Expressed as %) of the country

E.1.4. Describe the potential of the project/programme to contribute to the achievement of the Fund's objectives and result areas. Specify the impact for mitigation and/or adaptation, as applicable.

The total volume of the reduced CO<sub>2</sub> emission in the target watersheds is estimated at approximately 4,415,082 t CO<sub>2</sub> eq for the entire project life span (20 years), while around 48,150 people and 148,140 people will directly and indirectly benefit from the proposed project, respectively. Females will comprise more than 30% of both the direct and indirect beneficiaries, ensured by adopting the Gender Action Plan (see Annex 4).

**Methodology for calculating the Mitigation impact:**

167. The methodology for calculating the mitigation impacts follows the general guidance of the Intergovernmental Panel on Climate Change (IPCC) as described in the 2006 Guidelines for national GHG inventories and the 2003 Good Practice Guidance for LULUCF that provides sector-specific recommendations. A methodology for land degradation assessment was taken for calculating the mitigation impact for this project, given the high rate of forest degradation in the target region. The project calculated the reduced CO<sub>2</sub> emissions from forest degradation, which was measured through analyzing the conversion area of dense forests to sparse forests. Detailed methodology was developed in accordance with the international recognized methodologies on measuring reduced emissions from forest degradation and deforestation. More detailed information on the applied methodology is described in the Pre-Feasibility Study Section 12.1.

**Methodology for calculating the beneficiaries:**

**168. Direct beneficiaries:**

The methodology for calculating the adaptation impacts were done as follows: The project will introduce CBNRM mechanism to 120 households per village, and 8,160 households in total are expected to learn climate resilient agriculture techniques through the 2-year training courses. (8,160 households = households/village x 68 villages). The average household size in TL is 5.9 person per household. Consequently, the direct beneficiaries was calculated as 48,110 people. (48,110 people = 8,160 households x 5.9 person/household)

**169. Indirect beneficiaries:**

The methodology of assessing the indirect adaptation impacts was calculated by the total population of the target 74 villages in the target 4 watersheds, who would benefit from the rich ecosystem services generated from forest and other natural resources to be protected by village level land use planning and village regulations on sustainable natural resource management, developed and adopted by the villagers themselves with technical assistance from the proposed project and the JICA-TA. Hence, the number of Indirect beneficiaries, which was equal to the population living in the villages where the NRM village regulations would be put in place by the project, was estimated at 148,140 people of 25,100 households based on the 2015 census.

Moreover, this project will support the enabling environment of the national CBNRM Roadmap. Considering the long-term and post-project objectives of implementing the entire CBNRM roadmap, this proposed project will enhance the pathway to indirectly benefit the population of 841,239 people (about 70% of the population) in the 14 watersheds, which are the target population of the total CBNRM Roadmap.

Gender-equality consideration will be duly taken by adopting the Gender Action Plan (Annex 4), which aims to ensure women's full and effective participation and decision making in village level governance. At least 30% of the direct and indirect beneficiaries will be ensured to be females.

### 170. Socio-economic conditions of the beneficiaries:

In Timor-Leste, approximately, 70% of the households (HHs) live in rural areas and almost all of them (97% of the rural HHs) are engaged in small-scale agriculture (0.3-1.0 ha/households as average in the target watersheds) including livestock husbandry as a major economic activity. In the target watersheds, while there are a few irrigation schemes in lowland areas, the most common farming system is upland, rain-fed, and subsistence agriculture, including slash and burn cultivation. With such a system, they produce maize and other crops (such as cassava and sweet potato) as staple crops. The table below shows the proportion of households that are engaged in agriculture in the municipalities, which implies that the subsistent upland agriculture is the major production system in the municipalities.

### Major features of agriculture in the target watersheds

Municipality	% of HHs engaged in agriculture among the total HHs	% of non-commercial farms* among the total agri. HHs	% of HHs producing maize among the total agri. HHs
Aileu	99%	98%	94%
Ainaro	98%	96%	91%
Covalima	98%	98%	84%
Dili	61%	97%	31%
Ermera	97%	98%	86%
Liquica	98%	96%	88%
Manatuto	95%	95%	65%
Manufahi	99%	97%	90%

Source: Timor-Leste Population and Housing Census 2015 modified by JICA CBNRM Project Team

Note: \* Non-commercial farms = HHs engaged in only minor agriculture (backyard) + HHs producing mainly for home consumption with some sales

## E.2. Paradigm shift potential (max. 300 words)

### 171. Climate mitigation intervention based on the approach proven to be effective for development of low-carbon and climate resilient model in Timor-Leste

As described in Section B, several types of barriers have hindered the GoTL's climate mitigation-related interventions from effectively addressing the key drivers of deforestation and forest degradation. The proposed project is designed with the adequate understanding of such situations to effectively address the

major barriers, both direct and underlying ones, based on the approaches that have been already field tested, proven to be effective, and widely accepted by local stakeholders. The most notable point of the proposed project, as well as the innovative point of the project, is to scale up the truly bottom-up approach tested and proven by MAF development partners in TL over years. Local communities, both women and men, and both leaders and other communities, will be fully involved starting from the assessment, planning, implementation, and monitoring of the project activities (under Components 1 and 2) for at least continuous 2 years, so that they could reform their farming and livelihood activities into a more sustainable way and learn how to realize sustainable NRM using village regulations, which will mitigate the large emissions from the LUCF sector and reduce climate vulnerability of local livelihoods at the same time. This approach will eliminate the barriers existing among the most climate vulnerable people relying on subsistence farming and unsustainable use of forest and natural resources for their livelihoods and propose a community based, low-carbon, climate-resilient, natural resource management model for any areas where the local livelihood activities are the main drivers of deforestation and forest degradation.

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172. As described in Section B, the project activities relating to the CBNRM approach and CF, such as Activities 1.1.1, 1.2.1, 1.2.2, 2.1.1 and 2.3.1, will directly address the local NRM governance issues and vulnerability of local livelihoods which are the main underlying causes of the major drivers of deforestation and forest degradation through technical transfer of climate resilient livelihood improvement techniques (i.e., climate resilient agriculture with sloping agriculture techniques, agroforestry development, horticulture development, reforestation/ afforestation and livelihood diversification and improvement). At the same time, the enhancement of local NRM governance capacity would directly tackle the key drivers (i.e., forest fires and shifting cultivation) to contribute to reduction of GHG emission from deforestation and forest degradation in the localities.

173. Through GCF support, the CBNRM model has the high potential to be replicated to the most climate vulnerable countries, where areas with high paces of deforestation and forest degradation caused by local communities highly relying on subsistence farming and natural resources for their livelihoods. The proposed project with GCF support will not only aim to support the most vulnerable in the 4 watersheds, but also moreover, develop a replicable model applicable in other priority watersheds to tackle deforestation and forest degradation issues along with the climate vulnerability of subsistent population with a higher demand expected.

#### **174. Capacity Development for Sustainability, Scale-up and Replication of the developed low-carbon and climate resilient model**

Moreover, the project will increase the capacity of TL's national partners (e.g., MAF/DGFCIP, MAF field officers, and NGO technical officials) for implementation and further scale up of the project activities through the implementation of the project, particularly Activities 2.4.1 and 3.2.1. They would be trained to be the field implementers equipped with adequate facilitation skills, participatory assessment tools, well-knowledge on CBNRM/CF, climate resilient agriculture with sloping agriculture techniques, horticulture and agroforestry techniques, and other livelihood improvement options, through On-the-Job and Off-the-Job training opportunities given by the project.

This will directly address the capacity-related barriers existing in the GoTL side, which have often led to the lack of sustainability of the project activities or no continuation/ expansion of a model developed by MAF DPs. Hence, the Activities will benefit TL in its long-term development, as the number of competent human resources who could take effective measures for NRM/ climate change issues will increase in the relevant stakeholders concerned with the priority watersheds, which would eventually contribute to capacity building beyond generations in the forest and ecosystem sector in Timor-Leste.

#### **175. Policy transformation to mainstream climate change in both village level and political level.**

Because of its effectiveness, the CBNRM approach and CF are adopted by MAF/DGFCIP as the key instruments for implementation of the emerging national program drafted in 2019 (the CBNRM Roadmap). The CBNRM roadmap aims to introduce both the approaches (CBNRM and CF) in 14 priority watersheds, which cover 6,141 km<sup>2</sup> of the country (44.5% of the nation). The proposed project will act as the first phase of the national program and will catalyze impact beyond the 4 target watersheds of the proposed project. In order to strengthen the policy support of the GoTL, the proposed project will set up the legislative and regulatory frameworks to mainstream CBNRM and CF as a national program for further scale-up through development of MAF Ministerial Orders and Circulars under Activity 3.1.1. The local-level NRM regulatory or governance set-ups, namely watershed management councils, will also be institutionalized as part of the post-administrative or municipal level frameworks through Activity 3.3.1. These interventions will address the institutional barriers that MAF/ DGFCIP and MAF DPs faced in the on-going and past projects.

176. Legal provisions for CBNRM and CF will ensure the political transformation, which are already included in the Law on the General Forest Regime (2017), and political support for both CBNRM and CF is stipulated in the revised forest sector policy (2018) as well. The law recognizes customary tenure of forests, and endorses participatory procedures and instruments for supporting community driven natural resource and forest governance and management. These legal backups will ensure the long-term sustainability and enforce the political transformation into the low carbon climate-resilient sustainable development pathway incorporating the CBNRM model stabilized by the proposed project.

#### **177. Full Use of Existing MAF/DGFCIP Initiatives for MAF DP Coordination and Use of the Developed Model for Catalyst for Future Scale-Up**

The GoTL, particularly MAF/DGFCIP, intends to implement the CBNRM roadmap fully utilizing the outputs/ outcomes generated by the proposed project. The success of the proposed project will further crowd-in additional external funds needed to bridge the gap toward the full implementation of the CBNRM roadmap, in which some donor agencies have already showed their interests demonstrating the high potential of the proposed project to catalyst the national climate-resilient, low-carbon sustainable development pathway. The MAF/DGFCIP-led DP Coordination Meeting will play an important role in involving other MAF DPs, such as donor agencies, international organizations, and international/ national

NGOs in scale-up of the project results in other priority watersheds. The policy and legislative frameworks and field implementers developed by the project will also facilitate their utilization of the developed model.

**178. Incorporating climate change mitigation and adaptation objectives explicitly into the proven community based sustainable natural resource and forest management approaches, will facilitate the mainstreaming of climate change action into institutional settings,** which will lead to a wider paradigm shift towards sustainable and inclusive development of natural resource use, management and governance in Timor-Leste. Notably, climate-resilient agriculture is the more prioritized approach than enhancing only on cash-dependent agriculture due to its greater impacts and sustainability to many households who rely on subsistence farming as their major livelihood. This implies that stabilization of staple food production (e.g. maize and root crops) is the most prioritized community demand amongst the essential needs for further resilient development. Furthermore, this approach could influence other vulnerable small island states globally, as it will propose the possibility of reframing our thinking of conventional development assistance in the forest and agriculture sectors, and promote an integrated balance amongst local cultures and perspectives, climate actions, environment and economic development.

### **E.3. Sustainable development (max. 300 words)**

179. The CBNRM approach has demonstrated its efficacy in protecting and sustainably managing natural resources by rural communities. The proposed project has a strong sustainable development potential and will directly contribute to the achievement of Sustainable Development Goals (SDGs) : SDGs 2 (Zero Hunger), SDGs 12 (Ensure sustainable consumption and production patterns) , SDGs 13 (Take urgent action to combat climate change and its impacts), and SDGs 15 (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss). Based on the results of field trials of the same approach, the following co-benefits have been observed in the field.

#### **Environmental co-benefits:**

180. Degraded lands and forests are rehabilitated in the villages. Some of dried water sources are also restored owing to the recovery of forest cover in the villages.

#### **Social co-benefits:**

181. Village regulations introduced in the CBNRM approach cover social and traditional customary norms in addition to natural resource management. By local leaders as well as communities to raise their awareness to the regulations, the incidence of civil cases, such as domestic violence, thefts, and other violent acts is expected to decline, which the CBNRM approach already have demonstrated from past project impacts. Hence, this project will strengthen the social capital of the local communities.

#### **Economic co-benefits:**

182. The extension support to conservation agriculture, afforestation, and other income generating activities have contributed to diversified livelihoods of local communities. Historical CBNRM impact analysis have demonstrated the economic objective success in past CBNRM introduced villages, in which women households involved in the livelihood development activities were able to earn substantial cash income.

183. The potential household economic impacts generated by the techniques introduced by the proposed project are estimated as part of the project evaluation. The results indicate that local communities who adopt climate resilient agriculture in their own farms (about 0.5 ha) could earn or save about US\$ 400~500 per year from the 3<sup>rd</sup> year after introduction of the techniques while those who develop a plantation of 0.5 ha could earn cash income of US\$ 20~30 per year from trading of carbon credits.

### **Gender-sensitive development impacts**

184. The active involvement nature of all stakeholders in planning and implementation of CBNRM activates have strengthened the voice of minorities and women, and enabled to include rules for combating gender sensitive issues in the village regulations. Mainstreaming gender by involvement of women and representatives of marginalized villagers is actively encouraged and ensured in the project implementation. ESAP and Gender action plan will secure women's participation starting from planning, implementation, monitoring steps, and local governance. Comprehensive gender assessment through desktop review and field survey identified seven (7) main Gender issues dominant in the target watersheds; namely, women's high vulnerability to water scarcity, gender gap in mobility, inequality on disaster housing risks, risks of Gender-based Violence (GBV), women's under-representation in rural governance, unequal division of labor, and gender gap in employment and entrepreneurship. Mitigation measures to these identified issues are addressed in the Gender Action plan. It is noteworthy to highlight the nature of the CB-NRM mechanism that will foster social norms to prevent community violence, enhance local capacities and develop village regulations to address GBV cases, promote women's economic and social empowerment, and increase women's visibility in governance (see Annex 4 Gender Assessment and Action Plan for more details).

185. The project will give due consideration to gender aspects when implementing the Components/Activities so that the women will be empowered socially and economically. The following actions are some examples of gender sensitive actions to be taken in the project implementation.

#### **In Component 1**

- Ensuring women's involvement in the PLUP/ CCVA committee organized by a target community
- Ensuring female/male group discussion in PLUP/CCVA to address different needs by sex
- Monitoring and discuss gender-related issues through continuous meetings at community level

- Monitoring and discuss gender-related issues through continuous meetings at post-administrative level

#### In Component 2

- Ensuring women's participation in hands-on training on agriculture and forestry
- Inclusion of a sensitization session in agri.-related training courses on the importance of diversification in food production and consumption for food security and nutrition improvement
- Providing training course on livelihood development/ income generation techniques, especially for women
- Assigning women to the leader of a beneficiaries' group or to a model farmer for others
- Special guidance (ToT) for MAF/NGO officers on food security, nutrition improvement and techniques on livelihood development

#### In Component 3

- Special guidance (ToT) for MAF/NGO officers on food security, nutrition improvement and techniques on livelihood development
- Collecting and sharing the good practices of natural resource management with integration of gender perspectives
- Sharing good practices of CBNRM/CF with integration of gender perspectives at national and international meetings

#### **E.4. Needs of recipient (max. 300 words)**

**186. Timor-Leste is highly vulnerable requiring the restoration of forest resources to mitigate increasing exposition to climate related hazards.** TL is considered as the top 12 most vulnerable countries at risk of disaster, due to its geographical location, topography and socio-economic conditions and is one of the LDCs (Least Developed Countries) and SIDS (Small island developing states). Based on historical trends and future climate change predictions, TL will likely become increasingly exposed to climate related hazards including flooding, landslides, soil erosion and droughts, forcing the people to be more vulnerable to climate change. The steep topography and widespread deforestation are exposing the population to be extremely vulnerable to these climate risks, given the high percentage of the total population still having subsistence lifestyles. The bottleneck to prevent this future scenario from actually happening is the on-going deforestation/ forest degradation. They reduce the functionality of forestry ecosystem services, which make communities more vulnerable to climate change and its related hazards. Thus, there is a substantial need to address barriers against mitigation measures, which could eventually contribute to eradicating barriers against adaption.

**187. Majority of the population is under the poverty line and highly dependent on natural resources, revealing the need of sustainable NRM.** More than 70 % of the population in Timor-Leste live in rural areas, of which 47 % have an income below the national poverty line, and 36 % of the households (mostly

rural) experience food insecurity. Almost all the rural households are engaged in agriculture at subsistence level. They heavily depend on traditional/ conventional farming practices, including shifting cultivation in hills and mountainous areas. Water access is limited: around 75% of the households depends on public-shared water collection points that source water from natural springs, underground water, and rivers. As for energy source for cooking, more than 80 % of the households rely on fuelwood. As such, the people in Timor-Leste, especially those in rural areas, are highly dependent on natural resources, including land, forestry, and water, which reveal their needs to have a sustainable NRM mechanism (See Chapter 2 in Annex 2 for more details).

**188. Local communities need to know how to enjoy their entitled rights over forest resources.** The Law on the General Forest Regime (2017) states that sustainable community forest management is the state's priority, recognizing the customary rights of local communities over forest resources. It also clarifies the roles of the government, including i) ensuring the active participation of communities and private sector in forest management, ii) developing Community Forest Management, and iii) assisting communities in setting rules on forest and watershed management. Yet, there are some pitfalls in materializing what the Law stipulates: most of the community do not know how to use their entitled rights and the government services are yet to be sufficient to enable communities to do so. It is one of the value propositions of this proposed project to provide contents of “how” parts to these gaps, making the best use of the experience of the CBNRM mechanism with addition of expertise on CF and carbon-offsetting projects.

**189. Food security is the utmost concerns of famers, facing the difficulties in transforming shifting cultivation to sustainable fixed-area farming.** As mentioned above, their faming system is at subsistence level, depending on traditional ways of farming, including shifting cultivation. But its production has been affected by climate variability and its related disasters, and the situations have gotten worse, recently. In many cases, the productivity of crops has declined due to the depletion of soil fertility with short-term rotation of shifting cultivation and frequent burning. Low crop production often leads to further expansion of shifting cultivation farms in existing forests, which causes forest degradation and deforestation and further increases CO2 emission from LUCF. Deforestation and forest degradation cause a decline of forest ecosystem services, which makes local communities more vulnerable to climate change. Hence, there is a structured vicious circle, in which the drivers for deforestation/ forest degradation and the climate vulnerability mutually reinforce their impacts. At this moment, it is difficult for the GoTL to break the cycle as the problems are rooted in several types of barriers as analyzed in Section B.1. The proposed project, aiming to make local livelihoods more sustainable, productive, and resilient to climate change along with introduction of sustainable community-based NRM, is one of the effective and efficient interventions taken to tackle the barriers and eventually toward sustainable low-carbon development pathway, as demonstrated in the existing CBNRM villages.

**190. MAF needs to fulfill the gaps between DP-assisting areas and the priority areas for interventions.** Although there are several on-going projects implemented by MAF DPs, there are still large area of gaps as compared to the number of subsistent and vulnerable villages in the country and these supports must be done through public support. Thus, the proposed project will target the watersheds where less MAF development partners have worked to fill the area gaps.

#### E.5. Country ownership (max. 500 words)

191. The project activities are highly consistent with the 1st NDC and National Adaptation Programmes of Action (NAPAs) of Timor-Leste and will contribute to the achievement of the targets of NDC. The project is also aligned with the GoTL's priorities identified in the National Climate Change Policy, National Forest Sector Policy, MAF Strategic Plan, and the Law on General Forest Regime.

192. At the same time, the proposed project is the part of the national program (i.e. the CBNRM roadmap) being currently developed by MAF/DGFCIP; therefore, MAF/DGFCIP shows its commitment to take a leading role in the preparation and implementation of the proposed project. The following are major actions that have been taken or being taken by MAF/DGFCIP and other government institutions in pursuing the implementation of the CBNRM roadmap.

- MAF/ DGFCIP enacted the Law on the General Forest Regime (2017), which endorses CF and CBNRM as the main instruments for sustainable forest management in Timor-Leste.
- MAF/DGFCIP has embarked on DP coordination in the forestry sector since 2017 including the establishment of the platform and enhancement of key-stakeholder coordination and collaboration in project formulation. They have somehow succeeded in mobilization of various DPs (other than JICA) in the expansion of the CBNRM mechanism, especially PLUP/CCVA, over the country.
- MAF/ DGFCIP established Inter-ministerial Technical Commission for Watershed Management (so-called National Watershed Management council) in 2017, involving the relevant ministries such as Secretary of State for Environment Ministry of Public Works, and Ministry of State Administration. Similar efforts for establishing Watershed Management Councils (WMCs) have been made at field level in collaboration with MAF DPs, such as Loes, Belulik, and Tono WMCs with World Bank- SAPIP, Raumoco WMC with Hivos, and Noru and Bemos WMCs with JICA.
- MAF/DGFCIP has assisted the WMCs established by the JICA CBNRM project and other community-based organizations in rehabilitating degraded lands by planting seedlings. As far as JICA CBNRM Project is concerned, more than 55,000 seedlings have been provided for rehabilitation of degraded areas.
- MAF/DGFCIP has recently established a new national directorate specialized for CBNRM and CF, which may start its services in the end of 2020 for technical guidance for CBNRM/ CF for further expansion.

193. JICA and MAF/DGFCIP with its national directorates have implemented the CBNRM project for more than 15 years, where the CBNRM approach was developed and demonstrated in the field. These organizations, AE and EE of the proposed project, have sufficient knowledge of and experiences in the implementation of the projects similar in nature to the proposed one. Consequently, MAF/DGFCIP and JICA have a strong advantage in the implementation of the proposed project.

194. MAF/DGFCIP with its national directorates has implemented several climate change-related projects supported by GEF/UNDP, EU/GIZ/COMOES, ADB, and JICA. They have direct connections with the MAF Municipal Offices, as they deploy their staff, such as technical officers and forest guards, to the respective offices; hence, they could easily form the field-level monitoring teams in collaboration with the MAF Municipal Offices concerned.

195. The concept note and funding proposal were designed and developed collaboratively with multiple ministries of the GoTL, as an implementation program of the part of the national program (CBNRM Roadmap) with the initiative of MAF/DGFCIP. Key officials from the relevant national directorates under MAF/DGFCIP have been involved in the planning process. JICA Experts working for the on-going CBNRM Project have fully engaged in the preparation of both the documents. Three consultation workshops have been organized by MAF/DGFCIP in collaboration with JICA CBNRM Project in 2019 to introduce the initial ideas on the proposed project and have feedback from the relevant regional stakeholders, such as Municipal Administrative Officers, MAF Municipal officers, and local NGOs concerned. The feedbacks were incorporated in the draft-funding proposal.

#### E.6. Efficiency and effectiveness

E.6.1. Estimated cost per t CO <sub>2</sub> eq, defined as total investment cost / expected lifetime emission reductions (Mitigation and Cross-cutting)	(a) Total project financing	US\$ 15,398,169
	(b) Requested GCF amount	US\$ 9,976,222
	(c) Expected lifetime emission reductions	4,415,082 tCO <sub>2</sub> eq
	<b>(d) Estimated cost per tCO<sub>2</sub>eq (d = a / c)</b>	<b>US\$ 3.49 / tCO<sub>2</sub>eq</b>
	<b>(e) Estimated GCF cost per tCO<sub>2</sub>eq removed (e = b / c)</b>	<b>US\$ 2.26 / tCO<sub>2</sub>eq</b>
E.6.2. Expected volume of finance to be leveraged by the proposed project/programme and as a result of the Fund's financing, disaggregated by public and private sources (Mitigation and Cross-cutting)	(f) Total finance leveraged	US\$ 5,421,947
	(g) Public source finance leveraged	US\$ 5,421,947
	(h) Private source finance leveraged	US\$ 0
	<b>(i) Total Leverage ratio (i = f / b)</b>	<b>0.54</b>
	(j) Public source leverage ratio (j = g / b)	<b>0.54</b>
	(k) Private source leverage ratio (k = h / b)	

E.6.3. (max. 500 words) Describe how the financial structure is adequate and reasonable in order to achieve the proposal's objective(s), including addressing existing bottlenecks and/or barriers; providing the minimum concessionality; and without crowding out private and other public investment.

196. The proposed project will overcome the major barriers to climate change mitigation and adaptation at village level. As a result of the project, about 8,670 ha of dense forests are expected to be protected from degradation by 2040, which will contribute to the reduction of CO<sub>2</sub> emissions of 4.4 million t CO<sub>2</sub> eq over the project life span, and 8,160 households (around 48,110 people) will directly benefits from the adoption of the climate change adaption measure, which strengthen climate resilience of local livelihoods. Moreover, around 148,140 households (72,080 females and 76,080 males) will indirectly benefit from the reduction of

forest fires, crop damage by free overgrazing animals, domestic violence, and other violent cases, by introduction of the village-level NRM regulations and follow-up capacity building of local communities.

197. The beneficiaries will be equipped with the village-level NRM regulations by building consensus among the communities on how to use land for the future. They will also be facilitated in replacing shifting cultivation and over exploitation with sustainable and climate resilient livelihood opportunities.. These institutional and technical inputs could function as initial investments, transforming the community more sustainable. The built-in incentives/ tangible benefits brought by the CBNRM mechanism ensure that they maintain the project effects with less external support in the post project period. It is, therefore, concluded that the proposed project is cost effective as compared to the conventional types of forestry (e.g., reforestation project without consensus on land use) and agricultural (e.g., provision of facilities/ tools/ equipment with technique demonstration) projects in the country.

#### 198. Cost Effectiveness and Efficiency:

Cost and benefit analysis including a sensitivity analysis was conducted to evaluate the proposed project in terms of its economic viability. The following two benefits were estimated and converted into the monetary value for analysis.

- Benefits from reduced CO2 emission through reduction of forest degradation of dense forests in the project villages.
- Benefits from increased maize production in the farms of trained farmers in the project villages.
- Benefits from carbon sequestration by reforestation/ afforestation micro program in the project villages.

The economic rate of return (EIRR), cost-benefit ratio (B/C) and the net present values (NPV) were estimated by using the discount rate of 11.87% to validate the economic feasibility of the project.

The result of cost effectiveness analysis based on the estimated project cost is summarized in the following table (see Annex 9 for details).

Watershed	EIRR	B/C	NPV (US\$)
Overall	18.7%	1.41	4,673,127

As the B/C is above 1.0, validity of the project to be implemented as public project is confirmed.

The results also showed that the project economic viability turned positive from the year 6 of the project, and the project was predicted to generate benefits throughout the lifetime period of the project.

The economic rate of return (EIRR) and net present value (NPV) are estimated at 18.7% and US\$ 4.7 million, respectively. The sensitivity analysis further indicates that the project may be still feasible even under the scenario of 10% reduction of project benefits plus 10% increase of project costs.

Furthermore, the estimated project cost (including co-finance) per tCO<sub>2</sub>eq was US\$3.49 per tCO<sub>2</sub>eq for this project overall. Compared to the estimate that carbon prices are needed to be at least USD 40-80/tCO<sub>2</sub> by 2020 and USD50-100/tCO<sub>2</sub> by 2030 to reach the objectives of the Paris Agreement<sup>[1]</sup>, this proposed project can be said as a cost-effective way to reduce carbon emission. It also can be said to be very cost competitive within the forestry sector as well. Because many of the carbon pricing schemes for forests sets the price of US\$5 per tCO<sub>2</sub>eq (Such as the Forest Carbon Partnership Facility and the GCF Result Based Payment pilot scheme). Given the fact that this project has not only mitigation but also adaptation effects, it can be said that this project is a cost-effective mitigation and adaptation project for climate change impacts.

199. The effectiveness of the proposed project will be ensured by using JICA-TA for technical guidance to the contractors, assistance in the project management, capacity enhancement for MAF officers, and institutional development. The members of JICA-TA will have professional expertise with cutting edge science and abundant knowledge on best practices in the relevant fields. JICA has a long history of implementing the CBNRM projects in Timor-Leste. Such experiences along with lessons learned from the past and on-going projects will definitely enhance the project effectiveness.

200. As the proposed project is the initial phase of the CBNRM national program (or roadmap), which MAF/DGFCIP is committed to implement, the project will catalyze further investments from other MAF development partners and/ or financial resources for implementation of the same activities in other priority watersheds. One of the notable points of the proposed project in terms of efficiency, the main project approach, CBNRM approach, has been tested, adopted, and proven by several MAF development partners in the field. The truly people-driven and community-based concept is the best approach in the current contests of Timor-Leste, where the public services are still limited and private sector has yet to grown. Although the approach is time-consuming and seems rather costly, it has been proven that the approach enables the beneficiaries to continuously adopt the practices and techniques introduced on their own initiatives.

<sup>[1]</sup> CPLC, Report of the High-Level Commission on Carbon Prices, May 29, 2017

## F. ANNEXES

### F.1. Mandatory annexes

- |                                     |          |  |
|-------------------------------------|----------|--|
| <input checked="" type="checkbox"/> | Annex 1  | NDA No-objection Letter(s)                               |
| <input checked="" type="checkbox"/> | Annex 2a | Example project level logframe                           |
| <input checked="" type="checkbox"/> | Annex 2b | Example timetable  |
| <input checked="" type="checkbox"/> | Annex 3  | Budget plan that provides breakdown by type of expense   |
| <input checked="" type="checkbox"/> | Annex 4  | Gender assessment and action plan                        |
| <input checked="" type="checkbox"/> | Annex 5  | Co-financing commitment letter                           |
| <input checked="" type="checkbox"/> | Annex 6  | Term sheet and evidence of internal approval             |
| <input checked="" type="checkbox"/> | Annex 7  | Risk assessment and management                           |
| <input checked="" type="checkbox"/> | Annex 8  | Procurement plan model                                   |
| <input checked="" type="checkbox"/> | Annex 9a | Legal Due Diligence (regulation, taxation and insurance) |
| <input type="checkbox"/>            | Annex 9b | Legal Opinion/Certificate of Internal Approvals          |

### F.2. Other annexes to be submitted when applicable/requested

- |                                     |          |  |
|-------------------------------------|----------|--|
| <input checked="" type="checkbox"/> | Annex 10 | Economic and/or financial analysis<br>(mandatory for private-sector proposals)                                 |
| <input checked="" type="checkbox"/> | Annex 11 | Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project |
| <input checked="" type="checkbox"/> | Annex 12 | Environmental and Social Action Plan (ESAP)  |
| <input checked="" type="checkbox"/> | Annex xx | Other references   |

*\* Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*

**No-objection letter issued by the national designated authority(ies) or focal point(s)**

  
MINISTRO DO COORDENADOR DOS  
ASSUNTOS ECONOMICOS (MCAE)

  
National  
Designated  
Authority  
DEMOCRATIC REPUBLIC OF TIMOR-LESTE

  
SECRETARIA DE ESTADO DO AMBIENTE

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**Dili, 17 June 2020**

**To : The Green Climate Fund ("GCF")**  
**Reference No. : 09 /NDA/SSE/MCAE/VI/2020**  
**Subject : No-Objection Letter for GCF Project Proposal "Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in Critical Watersheds"**

Dear Madam, Sir,

We refer to the GCF Project Proposal "Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in Critical Watersheds" by the Japan International Cooperation Agency (JICA) to the National Designated Authority (NDA) Timor-Leste on 8<sup>th</sup> June, 2020.

The undersigned is the duly authorized representative of Juliao dos Reis, Ph.D, the NDA of Timor-Leste to the GCF.

Pursuant to GCF decisions B.08/10 and B.13/21, the content of which we acknowledge to have reviewed, we hereby communicate our No-Objection to the GCF of the activities included in this GCF Project Proposal.

By communicating our No-Objection, it is implied that:

- (a) The Government of Timor-Leste has No-Objection to the GCF Funding Proposal request as included in the GCF Proposal;
- (b) The Full Funding Proposal is in conformity with the Timor-Leste's national priorities, strategies and plans; and
- (c) In accordance with the GCF's environmental and social safeguards, the project activities as included in the Funding Proposal is in conformity with relevant national laws and regulations.

We also confirm that our national process for ascertaining No-Objection to the GCF Project Proposal has been duly followed.

We acknowledge that this letter will be made publicly available on the GCF website.

Kind Regards,

  
  
Juliao dos Reis (Ph.D)  
Acting Executive Secretary  
National Designated Authority for the Green Climate Fund in Timor-Leste

## Secretariat's assessment of SAP021

Proposal name:	Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in Critical Watersheds
Accredited entity:	Japan International Cooperation Agency (JICA)
Country/(ies):	Timor-Leste
Project/programme size:	Micro

### I. Summary of the Secretariat's assessment

1. The funding proposal is presented to the Board for consideration with the following remarks:

Strengths	Points of caution
Significant results of 4,415,082 tCO <sub>2</sub> eq over 20 years from reduced emissions from forest degradation are considered cost-efficient.	To increase the probability of paradigm shift in the behaviours of farmers who have traditionally used swidden agriculture to encroach on forested areas, JICA and the Government of Timor-Leste will need to further strengthen the incentives for non-remission by conditioning future development aid to these regions on alignment with the Community-Based Natural Resource Management 2021–2030 road map used in this GCF project. It has also been clarified that a subcomponent of the project introducing voluntary carbon market payments to farmers for monitored forest restoration is principally intended to create credibility and trust in the traceability and non-regression of forest restoration.
The Japan International Cooperation Agency (JICA) will build capacity and use farmer field schools to disseminate practices for climate-resilient cropping methods through community-based natural resource management. Under a nationally endorsed plan for conserving ecosystems in watersheds vulnerable to climate change, each community will be guided in developing a feasible land-use plan, in which forests will be restored and agroforests generated. Behaviours in compliance with land-use plans will be incentivized, with technical assistance for resilient cropping practices that past work by JICA has proved reduce land-use emissions.	
Additional resources have been focused on establishing capacity to determine forest cover baseline and future changes in cover through analysis of remotely sensed data at regular intervals.	

2. This project will promote a Community-Based Natural Resource Management (CB-NRM) mechanism in Timor-Leste, a successfully proven approach promoting the low-carbon and climate-resilient development of people who mainly rely on natural resources for both subsistence and income.

3. The CB-NRM mechanism was developed based on 15 years of experience of technical cooperation projects by the Japan International Cooperation Agency (JICA). Its innovative

approach puts local communities at the centre of decision-making for land-use and forestry matters.

4. Its efficacy led the Government of Timor-Leste, especially the General Directorate for Forests, Coffee, and Industrial Plants (DGFCIP) of the Ministry of Agriculture and Fisheries (MAF) to formulate the CB-NRM road map (2021–2030) as a national programme for implementation of the Law on the General Forest Regime (2017).

5. The proposed project will serve as the initial step of the CB-NRM road map by introducing the CB-NRM mechanism into 4 watersheds among the 14 priority watersheds targeted by the road map. With the establishment of a promising model along with the policy and legislative frameworks on CB-NRM, the CB-NRM approach will then be mainstreamed as a key policy instrument for climate change mitigation in the forestry sector. This policy transformation is expected to bring in the Government itself, development partners, and the private sector to disseminate the CB-NRM mechanism in other priority watersheds.

6. The project consists of four components, which will be implemented by JICA in collaboration with the Government of Timor-Leste, as an environmental and social safeguards category C project:

- (a) Component 1: Addressing the direct drivers of forest degradation and deforestation in consideration of potential climate change impacts;
- (b) Component 2: Addressing local climate vulnerability, which is also the underlying driver of forest degradation and deforestation, to enhance the sustainability of the project effects;
- (c) Component 3: Enhancing the enabling environment for further scaling up of the project effects beyond the target watersheds; and
- (d) Component 4: Assessment of project impacts and obtaining lessons learned, which could be used for similar future interventions.

7. Grants represent the project's only financial mechanism for GCF funding, with a mix of co-financing grants and in-kind contribution from JICA and the Government of Timor-Leste, respectively. With a co-financing ratio of about 38 per cent, considering the status of Timor-Leste as a least developed country (LDC) and small island developing State (SIDS), this can be considered satisfactory.

8. The Board may wish to consider approving this funding proposal with the terms and conditions listed in the respective term sheet and addendum XVII, titled "List of proposed conditions and recommendations."

## II. Assessment of performance against investment criteria

### 2.1 Impact potential

*Scale: N/A*

9. The project's climate change mitigation with adaptation co-benefits are aligned with the GCF performance measurement framework. As a mitigation project, the results expected are 4,415,082 tCO<sub>2</sub>e in reduced emissions from forest degradation over 20 years, and with an additional adaptation co-benefit of 8,160 smallholder farmer and forest families (estimated direct beneficiaries: about 48,110 people) who live in rural areas. This project will benefit about 74 villages, which would cover 34 per cent of the 2030 target by area, empowering about 12 per cent (148,100 persons) of the whole population of the country. Selection is based on the methodological prioritization of critical watersheds beginning, with four target watersheds: Caraulun, Comoro, Lacro and Tafara.

10. The project is informed through a greenhouse gas calculation methodology and using a robust climate change vulnerability assessment. It also considers Timor-Leste's development needs, national circumstances, and resource options available. While more critical results are expected to be achieved during project implementation, this project builds on previous successes of the CB-NRM mechanism in Timor-Leste piloted by JICA.

## 2.2 Paradigm shift potential

*Scale: N/A*

11. Long-term change in traditional practices of swidden agriculture depends upon farmer trust in the improvement of their livelihoods, as sedentary farmers need to be sufficiently compensated for giving up the possibility of expanding farmland in forested areas. JICA is employing proven practices of close engagement with each Timor-Leste upland community to understand its particular cropping vulnerabilities and the cropping improvements needed. This gives greater trust and credibility for the case for paradigm shift potential.

12. JICA and the Government of Timor-Leste will also coordinate their efforts so that future bilateral development aid to these regions will follow the CB-NRM 2021–2030 road map for scaling up the approach used in this GCF project. In addition, private sector involvement is part of the exit strategy, notably through the carbon markets, and could have the potential to mobilize additional resources.

## 2.3 Sustainable development potential

*Scale: N/A*

13. Although it is considered a mitigation project, it has great and wide-ranging adaptation benefits: food security; forests and biodiversity resilience; national institutional capacity development for climate change; and ecosystem services, i.e. reduction in soil erosion and increase in crop yields. Finally, through the exit strategy, the project expects to increase linkages among economic actors through the carbon markets.

## 2.4 Needs of the recipient

*Scale: N/A*

14. The Government of Timor-Leste and the local forest and farming communities have limited financial and technical capacities to undertake the proposed activities without external financial support. The support can readily be justified by Timor-Leste's LDC and SIDS status in the face of risks derived from climate change that have compounded innate vulnerabilities already present due to poverty and other socioeconomic barriers. Nevertheless, the Government has contributed co-financing, demonstrating its commitment to this initiative.

15. The level of concessionality is considered appropriate. The barriers to financing these types of activities are clear, although the increased involvement of other development partners can be explored further, especially in terms of concrete financing.

## 2.5 Country ownership

*Scale: N/A*

16. Beyond the alignment with several of Timor-Leste's long-term strategy and objectives, from an economic/financial perspective, the Government is offering an in-kind and grant contribution, which demonstrates country ownership.

17. The project structure will place decision-making responsibility in the country's relevant institutions and in line with the country's climate change and development policies. Efforts have been made to coordinate current and incoming finance for CB-NRM-type initiatives.

18. JICA has a strong record for sector-specific elements to implement this project as both the accredited entity (AE) and executing entity (EE). It has shown that it has adequate resources, experience and structure, as well as an ongoing relationship with the Government. Ownership is evidenced through a memorandum of understanding, stakeholder consultations, and a 15-year working relationship with the MAF, resulting in a shared decision-making responsibility to implement the national programme.

## 2.6 Efficiency and effectiveness

*Scale: N/A*

19. Based on the data provided, cost-effectiveness appears adequate. Of a total budget of USD 15.40 million, USD 5.42 million is to be leveraged from JICA and the Government of Timor-Leste. The project would benefit 16.6 per cent of the country's population directly or indirectly, and it has the potential to trigger at least USD 3.32 for each dollar invested. The cost (from a GCF perspective) would be around USD 50.8 per beneficiary (both direct and indirect), with a potential to trigger USD 260.8 of benefits per beneficiary. The cost of implementation per tonne of carbon dioxide equivalent is USD 3.49 (GCF-only cost: USD 2.26), and possibly less if deforestation and afforestation/reforestation are accounted for.

20. The combined financial commitment of JICA and the Government of Timor-Leste is significant. Overall, it appears that the GCF support would enable JICA to fulfil its mandate as part of the programme.

21. The project is moderately economically viable, although integrating and quantifying additional benefits would improve these metrics. However, this is not required for a project under the simplified approval process (SAP).

## III. Assessment of consistency with GCF safeguards and policies

### 3.1 Environmental and social safeguards

Does the project comply with the GCF Environmental and Social Policy?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Does the project have minimal to no ESS risks compatible with SAP?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

22. This project aims to promote Community-Based Natural Resource Management (CBNRM) as a participatory approach to natural resource management and promotion of climate resilient cropping practices intended to reduce GHG emissions from deforestation and forest degradation. The project is expected to result in rehabilitated degraded lands and forests in the target villages including restoration of dried-up water sources as a result of increased forest cover. It is also expected to strengthen the social capital of the communities by increasing awareness on village-based social and traditional customary norms which is incorporated in the CBNRM approach. The AE has classified the proposal as having environmental and social risks and impacts that are minimal to nil which the Secretariat confirms to be equivalent to GCF category C classification and is within the AE's accreditation level.

23. Among the minimal potential risks and impacts of the project is the existence of current and proposed protected areas that are located in and adjacent to the target watersheds. The activities of the project are however aligned with the protected area management plan in accordance with the national law (Decree Law 05/2016). The project will likewise ensure that development of the future land use plan will consider the conservation of protected areas and that any activity will be guaranteed to contribute to protection and sustainable management of the existing forests and the watersheds.

24. Some communities may have the perception of being excluded by the project as those at the peripheries may not be directly engaged by the project. This will be mitigated by ensuring that similar support would also be provided to these villagers through a benefit sharing scheme such as inclusion in the establishment of seed banks at the target villages from which other communities could also benefit.

25. Stakeholder consultations were conducted with representatives of various ministries of the Government, including key officials from relevant national directorates. Relevant representatives from regional stakeholders, such as the municipal administrative officers and concerned local non-government organizations have been involved. A local stakeholder engagement plan has been developed to ensure meaningful consultation and involvement of local communities in the project activities, including local leaders such as village chiefs, youth group leaders, elders, traditional leaders, representatives from sub-villages, as well as representatives from women and vulnerable groups. Implementation of the plan is the responsibility of all the key players in the various project activities and the AE should ensure adequate budgetary support is provided to enable its implementation. In addition, a local Grievance Redressal Mechanism (GRM) will be established and communities will be made aware of its presence and function. The GRM team will be established within the Director General of Forest, Coffee and Industrial Plants (DGFCIP) which will be formed with technical assistance from the AE. The AE will also be involved in the operations and management of the GRM team during the initial years of implementation to assist in operationalization of the redress mechanism. In line with the GCF Indigenous Peoples Policy, the GCF indigenous peoples focal point will be available for assistance at any stage, including before a claim has been made.

### 3.2 Gender policy

Does the project comply with the GCF Gender Policy?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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26. The AE provided a gender assessment and gender action plan therefore complies with requirements of the GCF Gender Policy.

27. The gender assessment notes that gender equality is an important national-level goal for Timor-Leste. Moreover, Timor-Leste has made considerable progress in addressing gender inequalities through legislation, policy development, institutional mechanisms, and public awareness. Gender equality is stipulated in the Constitution while the Strategic Development Plan, which aims to transform the country from a low-income into an upper-middle-income country by 2030, also envisages building a gender-sensitive society, where human dignity and women's rights are valued, protected and promoted by laws and culture. Timor-Leste ratified the Convention on the Elimination of Discrimination against Women and its Optional Protocol without any reservations; International Convention on Civil and Political Rights; International Covenant on Social and Economic Rights; and Convention on the Rights of the Child. Timor-Leste also developed the National Action Plan against Gender-based Violence, to reduce and ultimately eliminate gender-based violence (GBV). Additionally, Timor-Leste ratified the UN Framework Convention on Climate Change (UNFCCC) and recognized the importance of involving women and men equally in UNFCCC processes and in development and implementation of national climate change policies.

28. The gender assessment benefited from desk research, information provided through various organizations as well as field visits. Focus group discussions (together and separately with women and men) were also undertaken as part of stakeholder consultations to benchmark existing living standards, extent of vulnerabilities, levels of resilience and adaptive capacities of marginalized populations living in targeted watersheds. The gender assessment demonstrated the difference in perceptions, needs and priorities of women and men when it comes to climate change impacts. As per the assessment, scarcity of water as a result of climate change is a

primary concern for women while for men strong winds are perceived to be of primary concern. The gender assessment further highlighted gendered differences in access to resources and uptake of livelihood options. In addition, women face various and additional barriers amongst which limited agency, voice and participation in household, community and livelihoods affairs are key. Further the gender assessment indicated that even though Timor-Leste has one of the highest percentages in the Asia-Pacific region of women represented in the national parliament, at the grassroots level, the percentage of women as village chiefs is very low. Village chiefs oversee convening community meetings to identify priorities for development support, coordinate public and non-public services and play an important role in dispute resolution by ensuring access to justice. They also play a critical part in consensus building. If women are elected as village chiefs, then they are more likely to play a significant role in local governance and decision-making at the grassroots. Overall there is under representation of women in such structures and as a result the interests and needs of women are overlooked.

29. Timor-Leste is a patriarchal society in which social norms and cultural values influence gender roles. Men are expected to be responsible for decision-making in the household and are major income earners in the formal economy. In the majority of rural households, including in the targeted watersheds, women usually provide for their families through their contributions to agriculture, fisheries, raising livestock, fetching water and so on. However, religious and cultural values reinforce male authority and severely restrict choices and entrepreneurship abilities of women and girls. Cultural practices that perpetuate gender inequalities include customary principles related to property rights and inheritance. Consequently, women and girls, in general, do not have equal access to land or other natural resources and assets. The assessment also indicates that 13 per cent of all households in Timor Leste are led by females, the majority of which are marginal farmers who rely on farm products from shifting cultivation and/or farming in sloping lands to sustain their livelihoods.

30. Gender-based violence (GBV) is a critical area of concern which persists as a silent pandemic in Timor-Leste, including in the targeted watersheds, even though exact prevalence rates are not known. In the targeted watersheds, where natural disasters are frequent, GBV occurs with an uneasy frequency. It becomes more pronounced because of strained socioeconomic environments, where employment rates among men are very low; access to resources by women and girls severely restricted; economic dependence of wives on their husbands is more than apparent; and tolerance of violence is widely accepted.

31. In fulfilling the requirements of the GCF Gender Policy, the AE provided a Gender Action Plan (GAP) which includes activities to address challenges identified in the gender assessment. The GAP provides sex-disaggregated impacts as well as related outputs, activities, corresponding indicators and sex-disaggregated targets. The GAP contains separate budgets for each activity/subactivity, with a gender expert ensuring implementation of the GAP. Key activities envisaged in the GAP are: (i) women targeted and benefiting from implementation of farmer field schools/hands-on training in climate-resilient agriculture and sustainable land and forest management practices; (ii) women participating in and benefiting from protection and improvement of forest ecosystem services as well as micro programmes, while at the same time investing in skills development and sensitization sessions for women including on GBV; and (iii) activities that will target institutional capacity development, in order to address capacity and gender mainstreaming gaps in various institutions. The AE is expected to have strong consideration and will be providing women with increased opportunities to become group leaders or model farmers. This, in turn, will encourage women to participate in local decision-making processes and enhance opportunities to increase female leadership in the targeted watersheds. The project is also expected to prioritize and provide women with equal opportunities to diversify their livelihoods through climate-sensitive and community-driven natural resources management approaches.

32. Given the existence of GBV in the localities the AE included key interventions to address it with tangible indicators/targets. The grievance redress mechanism (GRM) that will be established at project levels will ensure complaints, including by women and girls, are addressed and remedial actions taken through a gender-sensitive approach and in a culturally appropriate manner.

### 3.3 Risks

#### 3.3.1. Overall proposal assessment (medium risk):

33. GCF is requested to provide a grant of USD 9.9 million to promote the CB-NRM approach in four watersheds in Timor-Leste. The Government is to provide an in-kind contribution worth USD 2 million, and the AE intends to provide a grant of USD3.4million as co-financing. The status of the AE co-financing will be confirmed in April 2021, based on its internal procedures. In the event that the amount of co-financing is reduced, necessary modifications will be made according to the project procedures and implementation by the AE.

34. Timor-Leste is an LDC and SIDS. The project expects to lead to agriculture yields (e.g. of maize) that are 3–5 times higher under different scenarios of rain patterns. According to the AE, the incremental gains are just enough to cover the food shortages caused by climate impacts in the targeted villages. Consequently, the AE considers that the project does not generate any substantial revenue from the project investment, and that it needs to be fully financed by a 100 per cent grant.

#### 3.3.2. Accredited entity/executing entity capability to execute the current programme (low risk):

35. JICA is the AE, and it also serves as the EE for this project. The AE has been implementing CB-NRM projects globally, and especially in Timor-Leste, for 15 years. JICA has a track record of collaborating with the MAF, the government implementing partner, for over 15 years.

#### 3.3.3. Programme-specific execution risks (medium risk):

36. Climate impact risk: The project has an estimated impact potential of about 4.4 million tCO<sub>2</sub>e<sub>q</sub> to be reduced or avoided. In addition, the project is expected to generate GHG emission reductions from community forest restoration (Output 2.2). The AE has proposed to convert the emission reduction from community forest restoration into carbon offset credits. It is necessary that the AE monitors emission reductions in a manner that clearly delineates between those from the two separate activities - reduced deforestation and forest degradation on the one hand and community forest restoration and sustainable forest management on the other hand so that the impact generated from the former is not diluted.

37. Government approval: the project will support the development of new government legislative and technical documents for mainstreaming the CB-NRM approach to policy frameworks. The role of the AE in close coordination with government will be critical for endorsement by the Government.

38. Co-financing: It is recommended that GCF disbursement be made after the AE has confirmed its co-financing. If the AE changes its co-financing amount, it is to present the effect of the changes in terms of the climate impact of the funding proposal.

39. Economic analysis and project viability: An economic analysis has been carried out, and it indicates an economic internal rate of return of 18.7 per cent. The benefits are estimated by comparing the area of dense forest and the production of maize under the with/without project

scenarios. A sensitivity analysis has also been performed, with a 10–20 per cent increase in the project’s cost and reduction in its benefits. Under all scenarios, except the scenario of a simultaneous 20 per cent decrease in benefits and 20 per cent increase in costs, the sensitivity analysis shows positive net present values, and economic internal rates of return ranging from 12.9 per cent to 16.7 per cent.

**3.3.4. Compliance (low risk):**

- 40. The recipient country, Timor-Leste, is not subject to United Nations Security Council resolutions.
- 41. The AE will be implementing the proposed project through its country office, JICA TL, acting as the executing entity (EE).
- 42. The AE has determined that both the probability and impact for money-laundering, the financing of terrorism, and the risks of prohibited practices are low, given the fact that all GCF funds will be centrally managed by the AE.
- 43. Staff at JICA TL receive annual training, which inter alia covers anti-corruption and sexual exploitation, abuse and harassment. This is to ensure that policies, procedures and internal controls established at headquarters level are strictly followed at the country office.

**3.3.5. GCF portfolio concentration (low risk):**

- 44. In the event of approval, the impact of this proposal on the GCF portfolio risk remains non-material and within the risk appetite in terms of concentration level, results area or single proposal.

Summary Risk Assessment		Rationale
Overall project/programme	Medium	The co-financing from the AE will be confirmed in April 2021, which may affect the climate impact of the project. The project expects to reduce or avoid 4.4 million tCO <sub>2</sub> eq. In addition, it may generate carbon credits from reforestation under Output 2.2, which could be converted into carbon offset credits. The AE needs to monitor emission reductions in a manner that clearly delineates between those from the two separate activities, so that the envisaged impact potential of 4.4 million tCO <sub>2</sub> eq is not diluted.
AE / EE capability to implement the project/programme	Low	
Project-specific execution	Medium	
GCF portfolio concentration	Low	
Compliance	Low	

**3.4 Fiduciary**

Does the project comply with the GCF AE fee policy?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
In case the EE (ies) is different to the AE, has the financial management capacity assessment of the EE (ies) undertaken?	Yes <input type="checkbox"/> No <input type="checkbox"/>

- 45. JICA will perform the dual role of AE and EE. More precisely, “JICA HQ” is the headquarters of JICA, while “JICA TL” is the branch office in Timor-Leste responsible for operations and management of the field. In practice, JICA HQ will act as the AE of the project,

and JICA TL will act as the de facto EE in the organizational set-up for implementation of the project, but both will act as the AE and EE in legal terms as the whole JICA. No other entity will be engaged in the proposed project as the EE. Similarly, there is no other entity that would receive GCF funding for the project activities.

46. As the AE, JICA will have overall responsibility for the planning, implementation and supervision of the proposed project, including the financial management and procurement of goods and contractual services. As the EE, JICA will also be responsible for the operations, management and monitoring of the project components and subcomponents, including the use and management of GCF funding. The MAF will function as the implementing partner in the project operations, and will not receive any GCF funding for implementation of the project activities.

47. The MAF, in particular, the DGFCIP and its subordinate national directorates, will cooperate with JICA TL in monitoring the project activities in the field and reporting of the project outputs/accomplishments to the central steering committee (CSC) of the project as well as the relevant ministries/departments of the Government.

48. As such, JICA TL and MAF will jointly chair the CSC in collaboration with the State Secretariat for the Environment (SSE), which will act as the vice-chair of the CSC, especially in the institutional coordination of climate change issues. Both JICA and the MAF/SSE will jointly lead the operations and management of the CSC, including: oversight of the performance of the project; approval of the workplans and budget allocation; and collaboration and coordination among the relevant government organizations. The CSC will: (i) oversee the overall progress of the implementation of the proposed project; (ii) ratify the workplans and implementation guidelines; and (iii) facilitate coordination and collaboration among national directorates and also between the central and municipal offices for enhancing synergy and convergence effects.

49. JICA TL will have decision-making authority over implementation of the project activities supported by the GCF funding and JICA co-financing. The MAF will have authority over the use of MAF co-financing for the project. All GCF funds will be managed by JICA TL in its capacity of EE, with overall oversight and support from JICA HQ as the AE focal point. All procurement required for the execution of the funded activities will be thus managed by JICA directly, mainly by JICA TL with some project management staff procured from JICA HQ.

50. JICA, acting through its Tokyo headquarters Global Environment Department units, will perform the AE functions, including procurement, project supervision, financial management and reporting. JICA TL will act as the de facto EE and will be responsible for the day-to-day project execution functions, including the role of financial and procurement management, ensuring that the objectives and outcomes of the project are delivered effectively.

51. A central project monitoring team will be set up under the MAF/DGFCIP to: (i) monitor and supervise the project activities, particularly those conducted by the contractors (non-governmental organizations [NGOs]) in the target villages in collaboration with the municipal project monitoring teams (to be organized at municipal level to monitor and supervise the village-level project activities conducted by the contractors [NGOs] in the field); and (ii) provide guidance and technical advice to the contractors (NGOs) as well as local communities when needed in the field.

52. As the AE, JICA will conform with its financial management, procurement and reporting obligations as per the AMA and funded activity agreement for this proposed project. To process project disbursements, the contractors hired for implementation of the subcomponents will need to submit an invoice for review, validation and approval by JICA TL, with the assistance of Technical Expert Team (TET). The chief representative of JICA TL will submit the remittance request for the replenishment of the project's budget in the special account at a bank in Dili. Once the funds are transferred to the special account, the payments to the contractors will be made in accordance with validated amounts. JICA TL will periodically report the financial status

and physical accomplishments to the DGFCIP as well as other relevant national directors at the CSC meetings.

53. JICA will undertake regular monitoring, reporting and evaluation covering baseline data collection, interim evaluation and final evaluation. It will also ensure respect of all reporting requirements for GCF-financed activities, which will include an annual performance report and interim evaluation and final evaluation reports.

### 3.5 Results monitoring and reporting

Is the project in line with the GCF Monitoring and Accountability Framework?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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54. The funding proposal is based on the SAP with a mitigation theme, and aims to reduce emissions from deforestation through community-based sustainable natural resource management approaches in key watersheds of Timor-Leste.

55. Overall, the funding proposal and logical framework are assessed as having adequately applied the results management framework and performance measurement framework elements. The revised logframe meets GCF requirements on monitoring and reporting the anticipated results of the intervention. The project-level results are sufficiently aligned with the fund-level impact and outcome. The tools and methods presented are appropriate. The monitoring arrangements have been aligned with the project objectives, and that will provide sufficient basis for measuring the expected results.

56. The implementation timetable is presented in a format that would help progress assessment during the implementation period. The timelines have been clearly indicated with all the required information to facilitate monitoring in concrete terms.

### 3.6 Legal assessment

Has the AE signed the accreditation master agreement?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Date of AMA execution: 5/17/2018
Has a bilateral agreement on privileges and immunities been signed with the country where the proposed project/programme will be implemented?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Has a certificate of internal approval been submitted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

57. The AMA was signed with the AE on 17 May 2018, and it became effective on 18 April 2019.

58. The AE has not provided a legal opinion/certificate confirming that it has obtained all internal approvals and that it has the capacity and authority to implement the project. It is recommended that, prior to submission of the funding proposal to the Board, confirmation be obtained that: (i) the AE has obtained all its internal approvals; and (ii) GCF has received a certificate or legal opinion from the AE in a form and substance satisfactory to GCF confirming that all final internal approvals by the AE have been obtained and that it has the authority and capacity to implement the project/programme.

59. The proposed project will be implemented in Timor-Leste, a country in which GCF is not provided with privileges and immunities. This means that, among other things, GCF is not

protected against litigation or expropriation in this country, the risks of which need to be further assessed. A draft agreement between GCF and Timor-Leste has been prepared, and negotiations with the Government of Timor-Leste were ongoing as at 20 August 2019.

60. The Heads of the Independent Redress Mechanism and Independent Integrity Unit have both expressed the view that it would not be legally feasible to undertake their redress activities and/or investigations, as appropriate, in countries where GCF is not provided with relevant privileges and immunities. Therefore, it is recommended that disbursements by GCF be made only after GCF has obtained satisfactory protection against litigation and expropriation in Timor-Leste, or has been provided with appropriate privileges and immunities.

61. In order to mitigate risks, it is recommended that any approval by the Board be made subject to the following conditions:

- (a) Submission by the AE to GCF of a certificate or legal opinion in a form and substance satisfactory to the Secretariat within 120 days after Board approval, confirming that the AE has obtained all final internal approvals needed by it and has the capacity and authority to implement the proposed project;
- (b) Signature of the funded activity agreement in a form and substance satisfactory to the Secretariat within 180 days from the date of Board approval; and
- (c) Completion of the legal due diligence to the satisfaction of the Secretariat.

## Independent Technical Advisory Panel's assessment of SAP021

Proposal name:	Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in Critical Watersheds
Accredited entity:	Japan International Cooperation Agency (JICA)
Country/(ies):	Timor-Leste
Project/programme size:	Micro

### I. Assessment of the independent Technical Advisory Panel

#### 1.1 Impact potential

*Scale: N/A*

1. As presented in the funding proposal, a basis for the need for this project intervention is that Timor-Leste has one of the higher rates of deforestation and forest degradation in its region, with an annual deforestation rate of 1.7 per cent and forest degradation rate of 5.8 per cent, compared to an annual average deforestation rate in South and South-East Asia of about 0.31 per cent. The outcome of this deforestation and forest degradation is that land cover that could have served as natural sinks for atmospheric carbon are unable to deliver that carbon emission reduction function. Based on the country's initial national communication (INC), Timor-Leste's national greenhouse gas (GHG) emissions varied from 1,245 to 2,196 Gg CO<sub>2</sub>eq in 2005–2010. The INC explained that the variation in GHG emissions in Timor-Leste during the period 2005–2010 can be attributed to the fluctuation of emission from the land use change and forestry (LUCF) sector. The trend of increasing GHG emissions, such as those recorded in the 2005–2010 period, continues until today. Timor-Leste's nationally determined contribution (NDC) stresses that "emissions from agriculture, forests, and other land uses, commonly referred to as AFOLU, are the main sources of GHG emissions" in Timor-Leste. Therefore, the forestry and agriculture sectors are considered key actors in the Timor-Leste government's mitigation action priorities and are expected to play a significant role in mitigating climate change in Timor-Leste.

2. AFOLU, according to several Timor-Leste national reports, accounts for more than 80 per cent of national GHG emissions, with the LUCF subsector as a major contributor. LUCF GHG emissions are mainly caused by deforestation (forest and grassland conversion) and forest degradation (changes in forest types or woody biomass stocks). The Government of Timor-Leste (GoTL) has therefore prioritized the forest sector in its NDC as a key sector to deliver its nationally determined climate mitigation outcomes. The GoTL, as observed in its policy roll out in recent times, believes that by protecting existing forests (dense forests) and developing production forests in large areas of the country, carbon sinks can be expanded. The main potential mitigation options proposed in the country's LUCF subsector include: protection of forests; customary forestry; rehabilitation of degraded land; and afforestation and reforestation. A main and direct driver of deforestation in Timor-Leste is the conversion of forests into farmlands, mainly through shifting cultivation. Forest degradation has been caused by shifting cultivation, forest fires, as well as free animal overgrazing. Overexploitation of timber and fuel woods is another main driver of forest degradation in suburban areas such as Metenalo and Hera in Dili Municipality, while in rural areas, low productivity, limited knowledge of farmers and poor land management are the underlying causes of expansion of farmlands through

shifting cultivation. These activities, which are described above as main and direct drivers of deforestation and land degradation in Timor-Leste, are unsustainable natural resource management (NRM) practices that, if continued, will accelerate deforestation and forest degradation in the country.

3. The unsustainable management and conversion of forests are also associated with the main livelihood options of vulnerable households in the country. It is important to stress that more intense drought and flood conditions being experienced in some parts of Timor-Leste have been identified in some country study reports as contributing to the reduction of production in traditional subsistence agriculture, further accelerating the need for expansion of farmland into forest locations, thus causing further deforestation. The proposed project is expected to reduce country GHG emissions from deforestation by enhancing carbon sequestration through reforestation activities. The project activities are also expected to positively promote the livelihood of farmers who are practicing traditional subsistence agriculture so that they will move away from practices that cause deforestation.

4. The proposed community-based natural resources management (CBNRM) approach of the project is expected to deliver sustainable NRM, which will replace unsustainable forest management that would have continued to exist in Timor-Leste in the absence of this project. The CBNRM approach is expected to deliver the expected mitigation benefits by:

- (a) Reducing and/or eliminating unsustainable NRM practices such as shifting cultivation, illegal exploitation of forest products and animal free grazing;
- (b) Promoting sustainable and climate adaptive livelihood practices, which will allow farmers to use their own farms in a more productive and sustainable manner; and
- (c) Providing these farmers, especially those who depend on and practice subsistence agriculture, alternative approaches to farming that are sustainable as well as other sustainable forest-based activities that will generate additional income without causing damage to the forest ecosystem.

5. The following are some important information on the CBNRM approach:

- (a) The CBNRM approach is the outcome of the accredited entity's (AE) (JICA) 15 years of experience in Timor-Leste. JICA developed and pioneered the utilization of this NRM approach over those years. Many international development agencies working in Timor-Leste during that period adopted the principles enshrined in CBNRM for NRM interventions in Timor-Leste;
- (b) The approach focuses on participatory development of NRM and climate-resilient cropping practices. The approach differs from others in that it has the local communities at the center of the development of norms, rules and regulations on agriculture and forest land use. This is then integrated into a policy roadmap for national application;
- (c) The CBNRM approach's efficiency and efficacy was tested over 15 years in JICA's CBNRM projects and projects implemented by other development partners (DPs) in Timor-Leste. The result of the successful piloting of this approach in Timor-Leste convinced the GoTL through its Ministry of Agriculture and Fisheries (MAF) to adopt the approach in 2017 and create the national CBNRM Roadmap (2021–2030), a programme for the implementation of Timor-Leste's General Forest Regime Law. This brings very substantive country ownership into this new roll out of CBNRM, which should enhance capacity-building of local personnel from MAF on the technology and implementation process of CBNRM;
- (d) Timor-Leste's national CBNRM Roadmap (2021–2030) has been planned to cover 14 priority watersheds in the country. The proposed project is expected to initiate the mechanism in four of these prioritized watersheds. Thus, the CBNRM approach will be

mainstreamed as the key policy instrument for transforming practices that have been responsible for landscape deforestation and forest degradation, which have been significant sources of GHG emissions in Timor-Leste;

- (e) The people-driven characteristics of the CBNRM approach is achieved by:
- (i) Incorporating informed community consent and support for norms and sanctions on agricultural and forest land use practices;
  - (ii) Collectively establishing at the village level the norms that are then reflected in watershed-scale government management;
  - (iii) Enabling community support for these norms through the parallel establishment of a more productive and resilient cropping system that makes further forest degradation from shifting cultivation unnecessary;
  - (iv) Enhancing local people's capacity to design a land use and NRM plan towards the implementation of feasible farming practices, monitoring, mutual learning and evaluation, while integrating local perspectives through a CBNRM consultation process that has already taken 2.5 years of engagement; and
  - (v) Allowing local knowledge, cultures, perspectives, and traditional village governance capacity to be integrated with recent climate science and enabling the development of a sustainable model that should persist long after concessional finance ends;
- (f) Apart from delivering sustainable activities that will reverse deforestation and forest degradation in the country, the purpose of the proposed CBNRM project in Timor-Leste will, in addition, enhance the capacity of vulnerable upland communities as well as government and non-government field officials to reduce forest degradation and deforestation through the adoption of the CBNRM mechanisms with sustainable and climate-resilient livelihood options in the four selected priority watersheds: Laclo, Comoro, Tarafa, and Caraulum;
- (g) The CBNRM approach that will be implemented will, in addition to specific project activities, cover the following essential elements:
- (i) Participatory land use and forest management planning (PLUP). This will include:
    - Participatory development of future land use plans; and
    - Participatory development of village level NRM regulations;
  - (ii) Development and enhancement of local institutions (including rules and organizational arrangements);
  - (iii) Local and regional multi-stakeholder platforms for natural resource governance; and
  - (iv) Enhancement of local capacity for sustainable and climate adaptive livelihood options through community-based adaptation planning, technical transfer of climate-resilient agriculture, agroforestry, horticulture development, reforestation/afforestation and livelihood improvements; and
- (h) The approach also recognizes the need for behavioural changes among the key in-country stakeholders of this project. As such, it has the following inbuilt incentives at the village level for the farmers (for example) to adopt to engender change:
- (i) Use of traditional customs has been incorporated in the CBNRM approach as the basis for the establishment of village-level NRM regulations. This will ensure local institutional readiness;

- (ii) Incorporation of traditional mutual support systems in hands-on training courses to facilitate replication of the proposed sustainable and climate-resilient livelihood options by local communities;
- (iii) The CBNRM mechanism at the village level has a regulatory framework in place that relies on local village traditions, which will facilitate its workability in keeping public order and preventing social conflicts in local communities; and
- (iv) At the ground level, as farmers invest in tree crops, their self-interest in preserving their investments, boosted by the benefits offered by the mechanism, provides incentives to avoid letting fires get out of control, thereby preserving forests.

6. In addition to these incentives provided to village-level stakeholders, the CBNRM approach lays the foundation for private sector investment in carbon offset programmes, which can provide additional tangible benefits for the farmers in the covered watersheds. The incentives to these farmers can be generated through the following example:

- (a) PLUP could identify degraded lands in villages and motivate local communities to restore such lands through reforestation/afforestation. In so doing, the village investor will in turn earn monetary returns from the carbon offset process financed by the private investor;
- (b) The local community carrying out the reforestation/afforestation projects that will earn a portion of the carbon credit will be assisted by the experiences of carbon offset programmes certified by internationally recognized schemes. This will be initiated by national and international non-governmental organizations (NGOs) in Timor-Leste to ensure the success of the low carbon sequestration projects; and
- (c) The carbon offsetting programmes would be aimed at providing an adequate incentive mechanism to continually support farmers who will be changing current practices that contribute to forest degradation and deforestation.

7. To achieve the envisaged objectives and deliverable outcomes of the CBNRM approach implementation proposed for Timor-Leste, the intervention has been developed around the following components and subcomponents:

- (a) **Component 1: Establishment of people-driven sustainable NRM system** – This component has been designed to build and enhance the capacities of local stakeholders, particularly village leaders and post-administrative officers in the four watersheds on sustainable forest and natural resources management at village and post-administrative levels through participatory assessment, planning and management of natural resources in the localities. This will be achieved through the following activities:
  - (i) Activity 1.1.1 – PLUP with climate change vulnerability assessment (CCVA);
  - (ii) Activity 1.2.1 – Enhancement of local governance capacity for sustainable NRM with village level regulations; and
  - (iii) Activity 1.2.2 – Formation and operation of watershed management councils (WMCs) as coordination platforms at post-administrative/subwatershed level;
- (b) **Component 2: Reinforcement of food security and livelihood diversification through implementation of micro-programmes/farmer field schools (FFS) on sustainable and climate-resilient livelihoods effective in reducing CO<sub>2</sub> emissions** – This component aims to enable communities to transition away from traditional shifting agriculture practices by mainstreaming more productive, sustainable and climate-resilient ones, which will reduce food insecurity and allow farmers to forgo forest degradation for cropping. This will be achieved through the following activities:

- (i) Activity 2.1.1 – Implementation of micro-programmes/FFS on productive, sustainable and climate-resilient livelihoods (e.g. climate-resilient agriculture, horticulture or agroforestry, CB nurseries and reforestation, coffee rehabilitation, alternative income generation);
  - (ii) Activity 2.2.1 – Introduction and development of small-scale carbon offset projects and promotion of private investment;
  - (iii) Activity 2.3.1 – Implementation and promotion of community forestry (CF) in selected areas in the watersheds; and
  - (iv) Activity 2.4.1 – Capacity enhancement of MAF field officers (extension officers, forest guards and municipal technical officers) concerned with the target watersheds;
- (c) **Component 3: Institutional and capacity development for scale-up of CBNRM/CF beyond the target areas** – The main aim of this component is to develop an enabling environment for the: (i) promotion of the same approaches taken by the proposed project in other watersheds; and (ii) enhancement of sustainable effects of the CBNRM approach at village and post-administrative level. This will be achieved through the following activities:
- (i) Activity 3.1.1 – Development of new government legislative and technical documents for effective implementation and promotion of the project activities in and beyond the target watersheds;
  - (ii) Activity 3.2.1 – Building of capacity of MAF and NGO field officers working in other priority watersheds;
  - (iii) Activity 3.3.1 – Institutionalization of the project outputs (subwatershed/ post-administrative level platforms and CBAPs) as government frameworks; and
  - (iv) Activity 3.4.1 – Knowledge sharing with relevant stakeholders (e.g. key government officials, decision makers and legislators in the GoTL) through international seminars/conferences; and
- (d) **Component 4: Impact assessment** – Work at this component level will be carried out to: (i) evaluate the effectiveness and efficiency of the project implementation, (ii) assess the project impacts, (iii) ensure the sustainability of the project effects, and (iv) draw lessons and best practices that could be used for other projects similar to the proposed one. This will be achieved through the following activities:
- (i) Activity 4.1.1 – Establishment of baseline conditions for impact assessment;
  - (ii) Activity 4.1.2 – Evaluation of the project impacts with established methodologies for impact assessment; and
  - (iii) Activity 4.2.1 – Development of technical references for assessment and evaluation of similar projects in the future.

8. To summarize, this is a mitigation-only intervention and GHG emission reduction is the key expected benefit the project interventions described earlier is expected to deliver in Timor-Leste. These emission reductions are expected to come from increased carbon sequestration as a result of improved and more sustainable agriculture and better forest management through the use of best-practice NRM principles, thereby reducing forest degradation which has been the status quo in Timor-Leste.

9. The NDC of Timor-Leste showed that the leading sources of GHG emissions in Timor-Leste are from agriculture, forests and land use practices. Emissions from the agriculture sector in Timor-Leste come from forest and grassland conversion, enteric fermentation, agriculture soils and rice cultivation. Emissions from land-use change and forestry mostly come from

deforestation through conversion of forests into grassland or non-forest. In addition to deforestation, GHG emissions from forest degradation are considered the second main source of GHG emissions in Timor-Leste. The Forest Conservation Plan (2012) of Timor-Leste indicated that about 170,000 ha of dense forest was converted to sparse forest in 2003–2012. During the same period, 184,000 ha of forests disappeared. With this conversion of dense forests to sparse forests and the conversion of some sparse forests to non-forests during this period, the CO<sub>2</sub> emissions from forests due to deforestation and forest degradation in Timor-Leste in 2003–2012 was estimated to be about:

- (a) Dense forest to sparse forest (deforestation): 37.0 MtCO<sub>2</sub>eq.
- (b) Sparse forest to non-forest (degradation): 64.3 MtCO<sub>2</sub>eq.

10. The proposed project intervention will implement the CBNRM approach, which has been carefully developed and tested by the AE in Timor-Leste over the last 15 years and was adopted for NRM in Timor-Leste by both the GoTL and other DPs active in other NRM interventions in Timor-Leste. This will be the first phase of the effort to replicate the successes of the pilot in four carefully selected watersheds in Timor-Leste, namely, Cavaulun, Tafara, Lacro and Comoro. These watersheds were selected from the 14 watersheds prioritized in the country's draft CBNRM Roadmap (2021–2030) plan that was developed by the Directorate General of Forest, Coffee, and Industrial Plant (DGFCIP) in 2019. The following criteria were utilized to select these four watersheds: (i) high potential risks of climate change to communities, including not only the upper watersheds but also downstream areas; (ii) less overlap with existing or pipelined MAF DPs' interventions; (iii) high GHG emission reduction potential from deforestation and forest degradation; and (iv) consistency with existing GoTL policies.

11. The fund allocations to implement the proposed CBNRM approach in the four selected watersheds in Timor-Leste and the sources of the funds are summarized in tables 1 and 2 below:

**Table 1: Summary investment plan** (in million USD)

Item	Investment programme
Component 1: Establishment of people-driven sustainable NRM system	4.314
Component 2: Reinforcement of food security and livelihood diversification through implementation of micro-programmes/FFS on sustainable and climate-resilient livelihood effective in reducing CO <sub>2</sub> emissions	8.471
Component 3: Institutional and capacity development for scale-up of CBNRM/CF beyond the target areas	1.021
Component 4: Impact assessment	0.437
Project management	0.913
Contingencies	0.243
<b>Total</b>	<b>15.399</b>

**Table 2: Summary of Fund Sources** (in million USD)

(a) Requested GCF funding	Total amount		Currency			
	9.976		Million USD			
GCF financial instrument	Amount	Tenor	Grace period	Pricing		
(i) Senior loan	0.0	NA	NA	NA		
(ii) Grants	9.976					
(b) Co-financing	Total amount		Currency			
	5.421		Million USD			
Name of institution	Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority

<b>(i) JICA</b>	Grant	3.449	Million USD			
<b>(ii) GoTL</b>	Grant	1.539	Million USD			
<b>(iii) GoTL</b>	In-Kind	0.433	Million USD			
<b>(c) Total financing (c) = (a) + (b)</b>	<b>Amount</b>			<b>Currency</b>		
	<b>15.397</b>			<b>Million USD</b>		

12. The project will be funded using grant funding from GCF with co-financing (also grant funding) from JICA and the GoTL plus in-kind funding from the GoTL, covering the entire project duration of 10 years. As presented in tables 1 and 2, total funding required for the entire implementation of the CBNRM approach in the four selected watersheds is USD 15.397 million.

13. The requested fund from GCF is expected to cover the following activities: grant funding for component 1 with co-financing grant funding from JICA and GoTL; grant funding for activities in component 2 with co-financing grant funding from JICA and GoTL; grant funding for activity 3.4.1 of component 3; grant funding for part of component 4, which is the evaluation of project impact; grant funding for the project management activities supported with grant funding from GoTL; and full funding through grant funding of all the contingency costs.

14. The independent Technical Advisory Panel (TAP) concluded after its review of this submission that the SAP, if implemented as designed, will deliver the mitigation benefits expected from reduced deforestation and forest degradation in the four watersheds selected. The independent TAP also observed that the experience gained by the AE in the trial of the CBNRM approach, especially the way village level community-based practices have been built into this approach, will not only lead to robust afforestation and reforestation in these watersheds but the success will also be accentuated by the livelihood-enhancing activities that will be engendered, which will ensure that the increased carbon sequestration will be protected.

15. A key outcome of this intervention will be the fact that the CBNRM approach will incentivize private sector investment in the reforestation and afforestation activities that are important to achieving the objectives of the intervention. Private sector investments, which are non-existent in the baseline, will be engendered through a properly designed climate funding process that is expected to contribute additional revenue streams to farmers who will, through the climate investment of the private sector, receive incentives (in addition to more sustainable incomes from farming) for their continuous maintenance and protection of the planted trees, which would then act as alternative livelihoods to improve their climate resilience. The independent TAP noted that the likely successful development of private sector stakeholders in this ecosystem investment will be a very tangible factor in future sustainability and replication of these investments.

16. The potential outcomes that are expected to be delivered by this project, as estimated and presented in the funding proposal and the annexes submitted for this review, have been evaluated by the independent TAP as conservative estimates. These are summarized below:

- (a) **Climate mitigation impact:** The annual estimate of GHG emissions reduction that will be delivered by this proposed intervention is 322,069 tCO<sub>2</sub>eq. Over a 20-year crediting period, it is estimated that total emissions reduction that will be delivered will be 4,415,082 tCO<sub>2</sub>eq. These emissions reduction will be delivered by targeted afforestation projects that will reduce forest degradation and deforestation in the four selected watersheds of Timor-Leste as a result of the implementation of the CBNRM activities.
- (b) **Beneficiaries:** The CBNRM intervention in the four chosen watersheds will directly deliver benefits to 8,160 families with a total population of 48,110 people, 30 per cent of

which are women. It has been estimated that about 148,143 people in the four watersheds will also indirectly benefit from the intervention with also about 30 per cent of them being women. Many of the direct beneficiaries are subsistence farmers from the villages in the four watersheds who are engaged in small-scale agriculture (0.3–1.0 ha/households as average in the target watersheds) including livestock husbandry as a major economic activity.

- (c) **Ecosystem benefits:** The existing forests in Timor-Leste, especially in the four watersheds selected for the implementation of this CBNRM approach, will be professionally managed and protected from further degradation and deforestation. As a result of the project, it has been estimated that about 8,670 ha of dense forests will be protected from degradation by 2040, with a tangible proportion of these benefits delivered during the project lifetime. The well-programmed capacity-building built into the approach will also ensure that the ecosystem benefits can be replicated in the other 10 watersheds included in the country's CBNRM Plan (2021–2030).
- (d) **Main socioeconomic and livelihood benefits:** The CBNRM approach as designed and planned for implementation and as submitted to request this GCF funding support will promote low-carbon economic diversification and job creation in the rural parts of Timor-Leste, especially to small-scale farmers.

17. The independent TAP concludes that the CBNRM approach presented in this submission as a mitigation intervention should deliver the mitigation benefits as well as the other co-benefits described in paragraph 16 above. As such the intervention should deliver a high impact potential.

## 1.2 Paradigm shift potential

*Scale: N/A*

### 1.2.1. Comprehensiveness

18. In the absence of this project intervention, the forests of Timor-Leste will continue to degrade and be deforested as it has been over the last decades. The GoTL has shown awareness of these problems and the urgent need to turn the situation around to ensure that the economic livelihood of the rural populace—which is greatly impacted by ecosystem degradation—is enhanced through proper government-led interventions. Towards this end, the GoTL through its DGFCIP of MAF put in place national efforts (complemented with interventions through offices at municipal administrative offices) to reduce the pace of deforestation and forest degradation in the country. These efforts recognized the need to change baseline ways of doing things such as shifting cultivation, forest fires and overexploitation of forest resources by unmanaged grazing. Actions that have been taken by the GoTL before this proposed intervention include the provision of agricultural extension services; enforcement of regulations on forest uses that will discourage deforestation; and introduction of regulatory measures to control the trade of forest resources.

19. This set of interventions did not result in the necessary reversal of forest degradation and deforestation in the country due to the following key barriers:

- (a) Lack of local capacity to transform conventional farming practices in Timor-Leste into sustainable farming;
- (b) Lack of local understanding and capacity for effective know-how and effective regulatory framework for sustainable NRM;
- (c) Lack of alternative livelihood and effective mechanisms to incentivize the local communities to be ready to protect forests;
- (d) Limited legislative framework to tackle deforestation and forest degradation issues;

- (e) Perennial budget shortfalls for MAF to carry our successful and well-targeted agricultural extension services; and
- (f) At the local community level, GoTL and its agencies lack capacity to understand village level governance issues and traditions that can lead to understanding sustainable interventions that can be accepted by the locals.

20. The CBNRM approach designed and piloted in Timor-Leste for about 15 years incorporated mechanisms that illuminated these barriers and developed mitigative actions to eliminate their impacts. The key to incorporating barrier mitigation interventions into the CBNRM approach is hinged on developing the approach with cogent inputs at the community level through participatory assessment of the key intervention. For example, through some components of the project, the capability of the community is built through participatory assessment on how to transform their traditional farming methods to ones that will deliver sustainable climate-resilient benefits and how to see the forest as an important resource for which they have the responsibility of ownership, with the possibility of delivering monetary benefits that can enhance their livelihood. The design and structure of the implementation of the CBNRM approach also has various capacity-building opportunities for other important stakeholders, such as government officials, to mitigate the listed barriers to the success of the earlier intervention by the GoTL.

21. It is therefore the opinion of the independent TAP that this project intervention as designed and planned is very comprehensive and should deliver the objectives of CBNRM.

### 1.2.2. Innovation

22. Innovation is partially delivered when changes are made to the way things are done in the status quo. For the change to deliver full innovation, the change must not only deliver value, but also create a better way of doing what is failing. ... The status quo situation in Timor-Leste is continuing forest degradation and deforestation despite well-intentioned interventions by the GoTL. Our review of the funding proposal showed that the various interventions proposed under this CBNRM approach will provide a better way of doing what has failed in the baseline and deliver the needed healing of the country's forest ecosystem and eventually result in full forests that had previously been deforested or degraded in the status quo ante. Some of the project's proposed tangible and innovative interventions towards a robust forest ecosystem will include, among others:

- (a) Participatory assessment of farming and land use practices through PLUP and CCVA (activity 1.1.1);
- (b) Enhancement of local governance capacity through formulation and implementation of village-level NRM and formation and operation of sub-watershed-level coordination platform (activities 1.1.1, 1.2.1 and 1.3.1);
- (c) Formulation of effective village-level regulatory system in a participatory manner with full use of traditional knowledge and customary norms (activity 1.1.1);
- (d) Enhancement of local leaders' capacity for implementation of local level regulation (activity 1.2.1);
- (e) Enhancement of local livelihoods through diversification of livelihood options (activity 2.1.1); and
- (f) Introduction of an incentive mechanism for reforestation and forest protection, and legalization of community-level management of production forests (activities 2.2.1 and 2.3.1).

23. It can also be argued that if the requested GCF grant funding is approved (and the co-financing described earlier is delivered and available for project implementation), then the

barrier of inadequate funding from government budgetary allocation, which has been identified as one of the reasons for the failure of the previous intervention, will be mitigated.

24. The independent TAP believes these interventions, which are part of the CBNRM approach, among others, will mitigate the barriers that have made the status quo ante attempts by the GoTL to reverse deforestation and forest degradation of the country's forests, starting from the forests at the four watersheds. The well-structured implementation process has also been developed with very useful local capacity-building that will enhance successful replication in the remaining 10 watersheds prioritized in the country's CBNRM Plan (2021–2030). This will create a better way of doing things in the forestry sector of Timor-Leste, eventually leading to reduced deforestation and forest degradation in the country. Given this, the independent TAP concluded that this project plan will deliver innovative results.

#### 1.2.3. **Enabling environment /sustainability of outcomes**

25. JICA (Headquarters) will serve as the AE, while JICA (Timor-Leste) will serve as the executing entity (EE) for this project. JICA as a body is a well-known international DP in many developing countries, including Timor-Leste. JICA designed and tested the CBNRM approach over the last 15 years and established the effectiveness of the approach in Timor-Leste. According to the information presented in the funding proposal, the success of the test case was so convincing that many other donor organizations such as the World Bank adopted the approach for key NRM activities in the country. In addition, the GoTL through its DGFCIP of MAF adopted the approach for the development of a national plan for NRM called CBNRM Plan (2021–2030) in which about 14 watersheds in the country were prioritized for national intervention for reducing forest degradation and deforestation. The four watersheds that will be the focus of the proposed project are among the watersheds prioritized in the national plan.

26. All the development discussed above should create a robust platform for engendering an enabling environment for the success of the approach. The AE will also be providing co-financing for some of the key outputs of this project. As such, the independent TAP is convinced that JICA, working *with* GCF and the GoTL, should be able to deliver an enabling environment for the success of these sustainable ecosystem management activities. Given the fact that the cooperation between JICA and the GoTL will deliver the right enabling environment that will allow for the success of the CBNRM interventions, the independent TAP concluded that this project should deliver sound mitigation outcomes. It will be necessary to include the mitigation benefits that will be delivered in the regular monitoring and reporting protocols built into the approach.

#### 1.2.4. **Replicability and scalability/ knowledge and learning**

27. The AE spent the last 15 years in Timor-Leste developing and testing the CBNRM approach in close cooperation with the GoTL. The cooperation commenced with the implementation of study "Community Based Integrated Watershed Management in Laçlo and Comoro River Basins" during the period 2005–2010. The study included an analysis of the natural and socioeconomic conditions of both watersheds and the development of watershed management plans with emphasis of roles of local communities. The output of this study was integrated into what emerged as CBNRM phase 1 (2010–2015), which included the building of the capacities of DGFCIP officials in the implementation of the approach. Experiences and lessons learned from these earlier trial interventions were mainstreamed into the design of the current project. All these will deliver a very successful replication of the approach in the four selected watersheds.

28. The independent TAP therefore concludes that this submission will deliver tangible paradigm shift for the sustainable management of forest resources in Timor-Leste that will facilitate reforestation and afforestation activities in Timor-Leste.

## 1.3 Sustainable development potential

Scale: N/A

### 1.3.1. Alignment with SDGs

29. According to information presented in the funding proposal, the GoTL at the highest echelon believes that this project will directly contribute to the following Sustainable Development Goals (SDGs):

- (a) SDG 2 (zero hunger) – The agricultural sector of Timor-Leste’s economy will be indirectly impacted by this project through the delivery of more productive and sustainable agricultural practices compared to the practice of subsistence farming that is widely practiced by majority of the farmers in the catchment watershed areas. The direct impact will be moving farmers away from the practices of shifting cultivation, slash and burn to open up new farm lots, among others. These are linked to deforestation and land degradation and will be replaced in this project by practices that will not deforest or degrade forests and are characterized by more productive farming outputs. This will eventually contribute to increased availability of agricultural products, which will contribute to affordability of food and reduction of hunger in the country;
- (b) SDG 12 (ensure sustainable consumption and production patterns) – The CBNRM approach will deliver more sustainable production patterns in the country’s agricultural sector. This will be achieved through some of the interventions that will reduce forest degradation and deforestation caused in the baseline by farming practices in Timor-Leste. Furthermore, the community-based organized management of forest ecosystem that will be delivered by this intervention will ensure sustainable consumption of products from the forest ecosystem of Timor-Leste without the baseline negative impacts of deforestation and forest degradation;
- (c) SDG 13 (take urgent action to combat climate change and its impacts) – This will be realized through the climate mitigation benefits estimated to be about 4.415 MtCO<sub>2</sub>eq achieved over the investment lifetime of this project (20 years). In addition to the mitigation benefits stated above, the project is also expected to deliver ecosystem restoration through sustainable forest management of an estimated 8,670 ha of dense forests, which will be protected from degradation by 2040. The project is estimated to deliver benefits to 48,110 direct beneficiaries, including about 8,160 farming households. All these project deliverables are well-aligned to this SDG; and
- (d) SDG 15 (protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss) – The project will deliver sustainable use of the forest ecosystem through its protection and restoration. Reduction of forest degradation and deforestation in Timor-Leste is a key cardinal goal of this intervention and, as such, the CBNRM approach that will be implemented in the country through this requested GCF funding will be aligned to this SDG.

### 1.3.2. Economic co-benefits

30. A key benefit that will be delivered by the proposed intervention is diversified livelihoods. These diversified livelihoods will be delivered by extension support to conservation agriculture, afforestation and other income generating activities, which are key interventions in the approach. As stated in the funding proposal, an analysis of the results of historical CBNRM showed that women-headed households that were involved in such livelihood activities were able to earn substantial cash incomes. The potential household economic impacts generated by such interventions, which were introduced in past trials and case studies, indicated that local communities that adopt climate-resilient agriculture in their own farms (about 0.5 ha) could

earn or save about USD 400–500 per year from the third year after introduction of the techniques while those that develop a plantation of 0.5 ha could earn cash income of USD 20–30 per year from trading carbon credits. Given that this approach has been built into the proposed CBNRM approach, it is reasonable to conclude that such will be delivered when this project is implemented in each of the four targeted watershed areas.

### 1.3.3. Social and environmental co-benefits

31. A key social benefit that the project is expected to deliver is the strengthening of the social capital of the local communities. This will be delivered through the elimination (or marked decline) of status quo ante domestic violence, thefts, and other violent acts that characterized rural activities in the project areas. By incorporating village regulations into the CBNRM Approach, social and traditional customary norms will be embedded in the way natural resource management is practiced thus reducing the status quo tensions thus minimizing socially disruptive incidences. Social and environmental co-benefits are likely to be delivered specifically from the rehabilitation of degraded lands and forests in the villages of the four watersheds with the restoration of forest covers also leading to the restoration of dried water sources in the covered villages, contributing to better livability of the villages.

### 1.3.4. Gender-related co-benefits:

32. Women and other local minorities were involved starting from the design of the CBNRM approach to the implementation as well as monitoring and village governance. In this way, women and minority issues are built into the approach. A comprehensive gender assessment, which was carried out through desktop review and field surveys as part of the programme definition and design of this proposed intervention, identified seven main gender issues dominant in the target watersheds, namely: women's high vulnerability to water scarcity; gender gap in mobility; inequality in housing disaster risks; risks of gender-based violence; women's underrepresentation in rural governance; unequal division of labor; and gender gap in employment and entrepreneurship. Mitigation measures to these identified issues were addressed in the Gender Action Plan and built into the CBNRM approach that will be implemented in the proposed project in the four watersheds. The gender mainstreaming activities that will be carried out in the implementation to reduce or completely eliminate gender issues dominant in the target watersheds are listed in paragraph 182 of the funding proposal, spread over project components 1, 2 and 3.

33. Given the contributions to the various elements of sustainable development, the independent TAP concluded that the CBNRM as proposed will deliver high sustainable development potential in each of the targeted watersheds.

## 1.4 Needs of the recipient

*Scale: N/A*

### 1.4.1. The needs of the country and the rural populace

34. According to the information in the funding proposal, Timor-Leste has been witnessing high levels of deforestation and forest degradation for years. Among the reasons for this forest ecosystem deterioration is the unsustainable farming practice of shifting cultivation, which must be changed to reverse this trend. The forest ecosystem can serve as a very strong source of GHG emissions reduction in Timor-Leste from carbon sequestration, a role that is currently not being adequately rendered. The fact that the forest ecosystem of Timor-Leste can serve as a leading source of mitigation options that can deliver sound NDC to the global Paris Agreement is well recognized by the GoTL. The GoTL also recognizes that reversing the ongoing deforestation and forest degradation in Timor-Leste can enhance the local economy in the rural areas of

Timor-Leste and hence strengthen the national economy. This is why it is a key strategy in the country's NDC submitted to the United Nations Framework Convention for Climate Change (UNFCCC).

35. Apart from the fact that the design and implementation of the CBNRM approach involved grassroot contribution at the village level, a key characteristic that is enabling it to meet the needs of the recipients is embodied in the fact that the recipients are able to have improved livelihood as a benefit from the intervention. This will contribute to the eventual success of afforestation and reforestation interventions as the recipients will have a feeling of ownership, which will encourage them to protect the forests, thereby healing the forest ecosystem. The CBNRM approach will therefore deliver infrastructure, strategies and governance systems needed to ensure that deforestation and forest degradation become a thing of the past. In this way, country needs and the needs of the rural populace are likely to be met.

36. The Law on the General Forest Regime (2017) of Timor-Leste states that sustainable community forest management is the State's priority. This law implicitly recognizes the customary rights of local communities over forest resources. It is however obvious that, in the absence of this project intervention, most communities do not know how to use their entitled rights and the government services are yet to be sufficient to enable communities to do so. The characteristics of the CBNRM approach that will deliver this crucial need of the recipients is embodied in the fact that this proposed project intends to provide ways on "how" this particular gap will be bridged.

37. The project will also contribute strongly to institutional needs at both national and village levels. This will be achieved through defined capacity-building programmes for government agencies, as well as at the village levels in each of the four watersheds. This will be adequate to deliver the necessary institutional capacity support in-country as well as establish a sound project governance system that will also contribute to strengthening the delivery of the needs of the recipients especially in the covered rural areas of Timor-Leste. The outcomes of capacity-building that will strengthen the project delivery of the needs of the recipients must be built into the project monitoring and reporting system. This will be essential to the replicability of the successes of this intervention in the other watersheds. The independent TAP therefore concluded that the project would deliver sound institutional needs.

38. The various needs of the country and especially those of the communities close to the forests, which are crucial to the productivity of their farming activities, will be positively promoted by the success of this project as discussed above. In addition, successful implementation of this project and its replication to other watersheds not covered by the proposed intervention will contribute to fulfilling some of the economic and financial buoyancy of the recipients and that of the country. All these indicate that the needs of the recipient country, its people and institutions will be quite adequately met by the successful implementation of this project. The independent TAP therefore concluded that this proposed project will satisfy the need of the recipients and that of Timor-Leste.

## 1.5 Country ownership

*Scale: N/A*

### 1.5.1. Relevance to national policies and objectives

39. The key objective of the CBNRM approach that will be implemented in the four selected watersheds in Timor-Leste is the reversal of the ongoing degradation and increasing deforestation of the forest ecosystem in the country. Forest degradation and deforestation has been reported in some sector study reports in Timor-Leste over recent years as the key driver of observed fluctuation in the national GHG emissions from the LULUCF sector of the country. According to the information presented in the funding proposal, it has also been established that the key drivers of deforestation and forest degradation in Timor-Leste are unsustainable

NRM practices in the rural areas, such as shifting cultivation, expansion of farmlands, and animal free overgrazing, and hence a key source of GHG emissions in the country. It is therefore not surprising that national strategies and policies have aimed at slowing down deforestation and forest degradation in the country over the years. Key national strategies and policy documents that have focused on the same goals and objectives of the proposed CBNRM approach include:

- (a) The CBNRM Roadmap (2021–2030): In recognition of the efficacy of the CBNRM approach that was established by JICA through the results of over 15 years of trials in Timor-Leste, the GoTL through its DGFCIP of MAF formulated this roadmap in 2017 as a national programme for the implementation of the General Forest Regime Law. Fourteen watersheds in the country were prioritized by this roadmap. The proposed CBNRM approach in this JICA submission for request of funds will cover four of these watersheds;
- (b) National Communications of Timor-Leste: Timor-Leste ratified the UNFCCC in October 2006 and Kyoto Protocol to UNFCCC in October 2008. As a party to the UNFCCC, Timor-Leste has an obligation to report its National Communication to the Conference of the Parties and has submitted its INC to the Conference of the Parties. In Timor-Leste's INC, the GoTL recognized the role that reforestation can play in reversing the health of the forest ecosystem of Timor-Leste;
- (c) NDC: The intended NDC (INDC) of Timor-Leste was submitted to the UNFCCC in November 2016. This document consists of actions that are intended to deliver carbon mitigations within the Timor-Leste economy that will be pursued to deliver contributions to global GHG emissions reductions from the country. The GoTL prioritized key sectors where such intended contributions will come from, such as agriculture, forestry and land use. It is important to note here that these are also the critical sectors where the activities of the proposed project will take place;
- (d) National Adaptation Programmes of Action (NAPAs) of Timor-Leste: The overarching vision set out in NAPA is to make the Timorese people more resilient to climate change, recognizing their high vulnerability in an economy that is dominated by subsistence agriculture. Adaptation measures will be focused on reducing the adverse effects of climate change and promoting sustainable development. Although the CBNRM approach that was reviewed by the independent TAP focused on the delivery of mitigation benefits, it is important to note that it will also focus attention on how to enable Timorese subsistence farmers to include sustainable practices in their farming techniques, which is expected to deliver mitigation outcomes. In this way, the CBNRM approach is consistent with the goals and ambition of NAPA; and
- (e) Other relevant national reports of the GoTL: Other reports where GoTL priorities similar to the ones described above and others that are aligned with the goals and objectives of the proposed CBNRM approach include the National Climate Change Policy Report, the National Forest Sector Policy and the MAF Strategic Plan.

40. A strong country ownership of the proposed project lies in the actions taken by MAF/DGFCIP to formulate a national roadmap structured along the template of the well-trying CBNRM approach, which became Timor-Leste's national programme for the implementation of the General Forest Regime Law. This and other actions summarized below are strong pointers to the fact that MAF/DGFCIP is committed to taking a lead role in the preparation and implementation of the proposed project. The actions include:

- (a) MAF/DGFCIP commenced in 2017 the establishment of a platform to coordinate all DP activities in Timor-Leste especially in the forestry sector. The coordination efforts include the establishment of the platform; enhancement of key stakeholder participation and coordination; and collaboration in project formulation. It is expected that this

- central coordination of all DPs in Timor-Leste (including JICA) will eventually succeed in the expansion of the CBNRM mechanism, especially PLUP/CCVA, across the country;
- (b) MAF/DGFCIP established the Inter-ministerial Technical Commission for Watershed Management (so-called National WMC) in 2017, involving the relevant ministries such as the Secretary of State for Environment, Ministry of Public Works, and Ministry of State Administration. This will prepare a strong basis for country ownership and participation in the proposed project; and
- (c) A key component of the test run of the CBNRM approach, which is the basis for the design and structure of the proposed project, is the formation of WMCs at post-administrative levels. Over the years of the programme test run, MAF/DGFCIP assisted these WMCs and other community-based organizations in rehabilitating degraded lands by planting seedlings. More than 55,000 seedlings have been provided for the rehabilitation of degraded areas.
41. The concept note and the funding proposal (which was evaluated by the independent TAP during this round) were designed and developed collaboratively with multiple ministries of the GoTL, led by MAF/DGFCIP as an implementation programme under the national programme (CBNRM Roadmap). Key officials from the relevant national directorates under MAF/DGFCIP were involved in the planning process of these project documents, working with JICA experts to prepare the documents submitted to GCF.
42. As described above, it can be concluded that the proposed project has been designed and tested over a long period of time through a consultative process involving extensive communication and interaction with MAF/DGFCIP and relevant administrative entities at the village level of the watersheds targeted by the proposed project. It can also be concluded that the extensive consultative engagements with relevant country stakeholders must have assisted in integrating stakeholders' expectations, objectives and constraints into the project plans. Three consultation workshops were organized by MAF/DGFCIP in collaboration with the JICA CBNRM project in 2019 to introduce the initial ideas in the proposed project and to obtain feedback from relevant regional stakeholders such as municipal administrative officers, MAF municipal officers and local NGOs concerned. The feedback was incorporated in the draft funding proposal. All these are strong indications of country ownership.
43. The GCF national designated authority of Timor-Leste is the Secretary of State for the Environment in the Office of the Coordinating Minister for Economic Affairs. The national designated authority sent a letter of no objection to the GCF Secretariat on 17 June 2020 to convey the highest level of support of the GoTL to the GCF Secretariat on the proposed project. This is another strong evidence of country ownership.
44. Based on the above analysis, the independent TAP considers the country ownership of the project to be high.

## 1.6 Efficiency and effectiveness

*Scale: N/A*

### 1.6.1. Financial structure

45. The project seeks grant financing from GCF to implement the CBNRM approach that is expected to deliver sustainable reversal of ongoing deforestation and forest degradation in the four selected watersheds of Timor-Leste. The approach is also expected to build the capacity of country stakeholders through capacity-building as well as participation in the implementation of certain activities. The GCF grant funding will be complemented by co-financing from JICA and the GoTL in the form of grant funding and some in-kind funding from the GoTL. The breakdown of funding contribution from these sources, the types of fund and the total that will be provided for the project are presented in table 2 paragraph 11 of section 1.1 of this report.

46. About 65 per cent of the total cost of this SAP project is requested from GCF as a grant (USD 9.976 million). Additional grant funding will be provided by JICA (USD 3.499 million) and by the GoTL (USD 1.540 million), both constituting another 32 per cent of the total project cost. The remaining 3 per cent (USD 0.433 million) will come from in-kind contribution from the GoTL. The entire funding will be utilized to fund the various interventions designed into the CBNRM approach that will be implemented in the four watersheds of Timor-Leste to reverse the baseline forest degradation and deforestation in the project areas. The capacity built by this proposed project should establish the enabling environment in-country to plan and implement more sustainable forest management efforts in the country.

#### 1.6.2. Co-financing/leveraging

47. The effectiveness of the GCF grant can be measured by the following metrics:
- (a) Leveraging in public finance, also as a grant, to the tune of about USD 5.422 Million, representing a total leverage ratio of about 54.3 per cent;
  - (b) The proposed project will overcome the major barriers to reforestation and afforestation at village level of the four watersheds of Timor-Leste that will be covered by this proposed project;
  - (c) As a result of the project, about 8,670 ha of dense forests are expected to be protected from degradation by 2040, which will contribute to the reduction of CO<sub>2</sub> emissions by 4.4 MtCO<sub>2</sub>eq over the project lifespan;
  - (d) About 8,160 households (around 48,110 people) will directly benefit from improved livelihood that will be delivered to participating farmers as a result of the project intervention; and
  - (e) Moreover, 148,140 households (72,080 females and 76,080 males) will indirectly benefit from the reduction of forest fires, crop damage by free overgrazing animals, domestic violence and other violent cases through the introduction of village-level NRM regulations and follow-up capacity-building of local communities that will be mandated by the proposed project.

#### 1.6.3. Financial viability and best practices

48. The financial viability of the project is evaluated using, as inputs of a cost-benefit analysis, the monetary valuation of the following benefits that will be delivered by the intervention:
- (a) Benefits from reduced CO<sub>2</sub> emissions through reduction of forest degradation of dense forests in the project villages;
  - (b) Benefits from increased farm product production (e.g. maize) in the farms of farmers that were trained under the capacity-building components of this project in the project villages; and
  - (c) Benefits from carbon sequestration by the reforestation/afforestation micro-programme in the project villages.
49. A cost-benefit analysis of the project was carried out and reported in annex 9 of the funding proposal. The analysis provided the following results regarding the cost-effectiveness of the project based on the estimated project cost:
- (a) The results showed that the project economic viability will turn positive from year 6 of the project, and the project was predicted to generate benefits throughout its lifetime;
  - (b) The overall project economic rate of return will be about 18.7 per cent;

- (c) The proposed project performance should deliver a benefit to cost ratio of about 1.41;
  - (d) The expected net present value of the total intervention in the four watersheds has been estimated to be about USD 4.7 million;
  - (e) A sensitivity analysis further indicates that the project may still be feasible even under the scenario of a 10 per cent reduction of project benefits plus 20 per cent increase of project costs or 20 per cent reduction of project benefits plus 10 per cent increase of project costs;
  - (f) Since the benefit/cost (B/C ) ratio estimated for the proposed project is greater than 1, it was concluded in the funding proposal that this is a justification of the use of public funding;
  - (g) The fact that the proposed project can be considered a cost-effective way to reduce carbon emissions when comparing the estimated overall project cost (including co-finance) of USD 3.49 per tCO<sub>2</sub>eq with the estimated carbon price of at least USD 40–80/tCO<sub>2</sub> by 2020 and USD 50–100/tCO<sub>2</sub> by 2030 to reach the objectives of the Paris Agreement<sup>1</sup>; and
  - (h) The estimated cost of USD 3.49 per tCO<sub>2</sub>eq is also cost-effective when compared to similar costs within the forestry sector.
50. The independent TAP therefore concluded that the proposed project potential effectiveness and efficiency can be ranked as high.

## **II. Overall remarks from the independent Technical Advisory Panel**

51. The independent TAP recommends this funding proposal for approval of the Board.

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<sup>1</sup> CPLC, Report of the High-Level Commission on Carbon Prices, 29 May 2017

## Response from the accredited entity to the independent Technical Advisory Panel's assessment (SAP021)

Proposal name: Community-based Landscape Management for Enhanced Climate Resilience and Reduction of Deforestation in Critical Watersheds

Accredited entity: Japan International Cooperation Agency (JICA)

Country/(ies): Timor-Leste

Project/programme size: Micro

### Impact potential

Thank you for the positive review. No further particular comments.

### Paradigm shift potential

Thank you for the positive review. No further particular comments.

### Sustainable development potential

Thank you for the positive review. No further particular comments.

### Needs of the recipient

Thank you for the positive review. No further particular comments.

### Country ownership

Thank you for the positive review. No further particular comments.

### Efficiency and effectiveness

Thank you for the positive review. No further particular comments.

### Overall remarks from the independent Technical Advisory Panel:

The AE thanks the independent TAP for its review of the proposal and acknowledges with appreciation the high scoring from the independent TAP on impact potential, sustainable development potential, needs of the recipients, country ownership and efficiency and effectiveness.

**Annex 4**

**Gender Assessment and Action Plan**

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## 1 Introduction

### (1) Background

The proposed project aims to protect natural forests and strengthen livelihood resilience to climate change through i) enhancement of local stakeholders' capacity for sustainable management of natural resources and ii) introduction of climate resilient agriculture in the four target watersheds.

The project will provide direct benefits to 48,110 people (estimated to be 24,440 males, 23,670 females<sup>1</sup>) with tangible benefits from climate-resilient agriculture, forestry, and income-generation/ livelihood development. It will offer indirect benefits to 148,143 people (76,060 males, 72,083 females)<sup>2</sup> of 25,101 households in 74 villages, which accounts for 12.2% of the total households in the country<sup>3</sup>, including the reduction of degradation of natural resources caused by illegal cutting, forest fires, and free-grazing animals; and better governance for natural resource management (NRM). Out of the 25,101 households, around 3,300 households (13%) are female-headed<sup>4</sup>.

### (2) Objectives of the gender analysis

This gender analysis aims to provide an overview of the gender situations in Timor-Leste and identifies key gender issues that are relevant to the proposed project. It also examines potential gender mainstreaming opportunities to adapt to the changing situation caused by climate change. Based on the result of the assessment, the Gender Action Plan was developed. It includes gender-responsive actions to enhance gender equality during project implementation.

### (3) Methodologies of the gender analysis

The gender assessment was undertaken jointly by the JICA CB-NRM (Community Based Natural Resource Management) Project Team and the technical officials of Director General of Forestry, Coffee, and Industrial Plants (DGFCIP) of the Ministry of Agriculture and Fisheries (MAF), in cooperation with Municipality Offices of MAF and national NGOs for local participation and facilitation of field discussion. The analysis made by the team consists of a desktop review at the office and field works at sampled villages in the target watersheds.

#### Desktop review at office

As for desktop review, the team undertook i) the desktop review of the existing literatures, including government policies and statistics, gender-related documents, and any other available data and information in studies conducted by donor agencies and NGOs; and ii) data collection from key stakeholders through consultations and telephone interviews. The informants were: central government institution (e.g., Polícia Nacional de Timor-Leste (PNTL), and Ministry of State Administration), as well as municipality administration office concerned with the target watersheds (i.e., Aileu, Ainaro, Covalima, Dili, Ermera, Liquica, Manatuto and Manufahi Municipalities).

#### Field works at sampled villages

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<sup>1</sup> The numbers of the male and female are estimated with application of 49.2%, which is the percentage of women in the total population of the country, to the total beneficiary number of 48,110.

<sup>2</sup> Timor-Leste Population and Housing Census 2015

<sup>3</sup> Ditto

<sup>4</sup> Ditto

The field works were conducted either i) as part of Participatory Land Use Planning (PLUP) with major elements of Climate Change Vulnerability Assessment (CCVA), where the CB-NRM mechanism was established; or ii) as complementary sample field surveys, where the CB-NRM mechanism is yet to be introduced. In both modalities, the team organized focus group discussions to identify community perceptions on climate change and natural disasters, including identifying main gender issues from the local perspective. In addition to this, the complementary sample surveys facilitated discussion on i) labour difference between females and males, ii) difference in access to and control of resources by gender, and iii) historical trends of major kinds of climate-related phenomenon. Villages with female leader was specially selected as target villages, even though its number is limited in Timor-Leste. Female-led villages were selected to learn their experiences on how to involve women in local governance. The following table shows the outline of the field works, including the names of the villages visited, the dates of visit, the number of participants from the communities, and the modality of work.

#### Focus Group Discussion held by JICA CB-NRM Project

Area	Watershed	Village	Date	Participants	Modality of Work
Northern	Comoro	Cotolau	17 Aug. 2017	23 (F:6 M:17)	As part of PLUP/CCVA
		Fatisi	04 Dec. 2019	8 (F:4 M:4)	Sample field survey
	Laclo	Maumeta	06 July 2017	34 (F:10 M:24)	As part of PLUP/CCVA
		Fahisoï*	16 Oct. 2019	12 (F:4 M:8)	Sample field survey
Southern	Caraulun	Babulo*	16 Jan. 2020	11 (F:6 M:5)	Sample field survey
		Manumera*	28 Jan. 2020	8 (F:4 M:4)	Sample field survey
	Tafara	Lactos	21 Jan. 2020	10 (F:5 M:5)	Sample field survey
		Maudemo*	23 Jan. 2020	10 (F:5 M:5)	Sample field survey

Note: \* Village having a female village chief Source: JICA CB-NRM Project

National facilitators specialized in gender or participatory planning facilitated all the discussions, including PLUP/CCVA, collaborating with MAF officials (DGFCIP officials and Municipality staff) and JICA experts. In many cases, five (5) facilitators with 3 females and 2 males facilitated the discussion. In the villages where PLUP/CCVA was conducted, the PLUP committee members, who had been selected from the community, participated in discussion. In other villages, 5 females and 5 males were selected by village chiefs to participate as the village representative for the sample field survey, who could discuss on behalf of the community. Number of the participants varied from 8 to 12 as indicated in the table above.

Gender-sensitive approach was taken throughout the discussion. The first step was group discussion separated by men and women, which enabled women (as well as men) to express their concerns and perspectives freely. This was followed by plenary session to hear voices from each side. As such, the team not only obtained data on their different recognitions and experience but also facilitated mutual understanding from both sides. It was observed that community participants enjoyed this discussion method, as they found out how their partners felt about the issue, knowing common or different comments in the results of group discussion.



Group discussion at Babulo Village, 16 Jan. 2020



Plenary discussion at Lactos Village, 21 Jan. 2020

## 2 Current Status of Women in Timor-Leste

### 2.1 Timor-Leste in the world based on the key indicators

Many of indicators on gender disparity show that there is still a room for effort to close the gap in the country. As shown in Table 1, Human Development Index (HDI) of Timor-Leste is 0.626 in 2018 and ranked 132<sup>nd</sup> among 189 countries (HDI, 2018). As for Gender Development Index (GDI)<sup>5</sup>, which addresses gender gaps in health, knowledge and living standards, Timor's index value is 0.899 and ranked 125<sup>th</sup>, while the world average is 0.941 and that of East Asia and Pacific region is 0.962<sup>6</sup> in 2018 (GDI, 2018).

Likewise, the Global Gender Gap Index (GGGI) of the World Economic Forum valued its gender disparity at 0.662<sup>7</sup>, and ranked 17 out of the 20 East Asia and Pacific countries analyzed in 2020 (GGGI, 2020). GGGI demonstrates Timor-Leste's national gender gaps on economic, education, health and political criteria.

**Table 1 Gender of Timor-Leste in the world**

Indicator	Value	Remark
HDI	0.626	132 <sup>nd</sup> / 189 countries
GDI	0.899	World average :0.941 East Asia and Pacific average:0.962
GGGI	0.662	Ranked 17 <sup>th</sup> out of 20 countries in East Asia and Pacific Region

### 2.2 Population and households

Timor-Leste has a population of 1.18 million, and women account for about half of the total population (49.2%). There is no large difference of the ratio between urban and rural areas. There are 204,597 households in the country, and men predominantly head them while 15.8% of households are with female heads (See the table below).

**Table2 Population and Households**

Population		Urban population		Rural population		Household s number by head of households (HH)	
Total	% of female	Total	% of female	Total	% of female	Total	% of female-headed
1,183,643	49.2	349,208	48.6	834,435	49.5	204,597	15.8

Source: Timor-Lest Population and Housing Census 2015

The country, while demonstrating fertility reduction (e.g. 5.45 persons in 2007 to 4.09 in 2017)<sup>8</sup>, still indicates a steady increase in its population with the growth ratio per year between 1.79% and 1.96% in the last decade<sup>9</sup>. Hence, substantial increase of working-age population can also be expected<sup>10</sup>. This will impose an enormous challenge with Timor-Leste economy to absorb the growing number of young people entering the labor market<sup>11</sup>. As shown later in this chapter, labor force participation rate is significantly higher for men: this trend is more of a threat to women in terms of economic opportunities.

<sup>5</sup> GDI measures disparities on the HDI by gender. The closer the ratio is 1, the smaller the gap between women and men.

<sup>6</sup> UNDP Human Development Report 2019 <http://hdr.undp.org/en/composite/GDI>

<sup>7</sup> World Economic Forum, The Global Gender Gap Report 2020

<sup>8</sup> [https://ecodb.net/exec/trans\\_country.php?type=WB&d=TFRTIN&c1=TL&s=&e=](https://ecodb.net/exec/trans_country.php?type=WB&d=TFRTIN&c1=TL&s=&e=)

<sup>9</sup> <https://www.worldometers.info/world-population/timor-leste-population/>

<sup>10</sup> General Directorate of Statistics (GDS) and United Nations Population Fund (UNFPA), 2018, Timor-Leste population and housing census 2015: Analytical Report on Population Prediction volume 9

<sup>11</sup> GDS and UNFPA, 2018, Timor-Leste population and housing census 2015: Analytical Report on Population Prediction volume 9

## 2.3 Education

The education system in Timor-Leste consists of: a) pre-school education, b) basic education (primary and pre-secondary education), c) secondary education, and d) higher education (polytechnic/diploma and university). Amongst them, basic education receives the highest policy priority: the government aims at achieving 100% enrollment with free tuition.

Overall, about a quarter (26.0%) of the population aged 6 years and above have never attended formal schooling. Older group (age 60 or above) are the one which records least attendance rate and shows worst gender disparity. School attendance between women and men is improving for younger groups; yet the disparity still exists in the age groups of 15-24 and above.

**Table3 Attendance at school by age group (never attended)**

	Male (%)	Female (%)
Age 6-14	11.8	11.1
Age 15-24	11.1	12.4
Age 25-39	18.5	25.0
Age 40-59	34.2	55.1
Age 60 and above	74.1	88.2
Total	22.7	29.4

Source: Gender summary of the thematic report: Timor-Leste Population and Housing census 2015

Gender Parity Index (GPI)<sup>12</sup> looks at the extent of equal access to education by sex. Table 4 shows GPI for Gross Attendance Rate (GAR)<sup>13</sup> and Net Attendance Rate (NAR)<sup>14</sup>. GPI for GAR and NAR are close to parity for primary (0.95), pre-secondary (1.03) and secondary education (0.98). For tertiary education, however, GPI of GAR is rather low (0.80), which reveals that women have less opportunity for receiving tertiary education in their life. As higher education is a major factor of entering the labor market especially in the urban areas, the result demonstrated the disadvantage of women in obtaining a stable paid work.

**Table4 GPI of GAR and NAR**

	Primary	Pre-secondary	Secondary	Tertiary
GPI of GAR	0.95	1.03	0.98	0.80
GPI of NAR	1.00	1.21	1.20	1.01

Source: UNICEF Timor-Leste, 2017, Education Monograph 2015 Fact Sheet

As for literacy rate, there is no significant difference between women and men (84.0% and 84.6%, respectively). Yet a large gap exists between women in urban and rural areas, for literacy rate is 94.5% in urban areas and 77.8% in rural areas. In rural settings, women are less likely to attend school regularly<sup>15</sup> engaging in domestic work and farming: consequently, their school performance drops.

**Table5 Literacy rate of women (15-24 years)**

Total (%)			Urban (%)			Rural (%)		
Total	Male	Female	Total	male	female	Total	Male	Female
84.3	84.6	84.0	94.3	94.1	94.5	78.4	79.0	77.8

Source: Timor-Lest Population and Housing Census 2015

<sup>12</sup> “GPI=1” indicates gender parity. “GPI<1” shows a disparity in favor of boys and “GPI>1” shows a favor for girls.

<sup>13</sup> According to the UNESCO Institute for Statistics it is defined that: divide the number of students attending a given level of education regardless of age by the population of the age group, which officially corresponds to the given level of education. A high GAR generally indicates a high degree of attendance, whether the students belong to the official age group or not.

<sup>14</sup> It is defined that: total number of students in the theoretical age group for a given level of education attending that level at any time during the reference academic year, expressed as a percentage of the total population in that age group.

<sup>15</sup> GDS, UNICEF and UNFPA, 2017, Analytical Report on Education: Timor-Leste Population and Housing Census 2015, P5

Another cause of women's lower school attendance is influenced by women's early pregnancy. While education plays a crucial role in positively influencing behavior and life decisions of girls, early pregnancy often keeps them from successfully completing formal education. In addition, young mothers are more vulnerable to poverty, and likely to be isolated and exclusive in the society<sup>16</sup>.

**Table6 Adolescent fertility, 2015**

Age 15	Age 16	Age 17	Age 18	Age 19
1.6%	2.4%	4.1%	8.5%	12.7%

Source: Gender summary of the thematic report: Timor-Leste Population and Housing census 2015

## 2.4 Work and employment

The labor trend analysis of the gender gaps demonstrates the labor force participation rate is significantly higher for men (65.0%) compared to women (43.7%). The same is true for employment rate (61.4% and 43.7%, respectively), where men have higher opportunities for employment. Although the gap between those of men and women are declining in recent years among all age groups, there is a significant difference between urban and rural women. Almost half of women in rural areas are counted as labor force, while the rate is 32.4% for urban women. One account of this difference is the type of work available in each setting; rural women are mostly engaged in farming and/or animal husbandry while urban women are employees/self-employed in the service sector.

**Table7 Situation of Labor Force**

	Labor Force Participation Rate (%) <sup>17</sup>			Employment Rate (%) <sup>18</sup>		
	Total	Male	Female	Total	Male	Female
Total	55.5	65.0	45.7	52.6	61.4	43.7
Urban	46.0	55.7	35.6	41.6	50.4	32.4
Rural	60.2	69.9	50.6	54.2	67.1	49.2

Source: 2015 Timor-Lest Population and Housing Census Data Sheet

Around 60% of the employed population is working in the agriculture sector while 40% is in the service sector. Few are employed in the industrial sector. If urban and rural areas are compared, the difference is significant; more than 70% of labor force is in the service sector in urban areas while the similar figure appears in the agriculture sector in rural areas.

**Table8 Employed Population by Industrial Sectors**

	Total (%)			Urban (%)			Rural (%)		
	Total	male	female	Total	male	Female	Total	Male	female
Agriculture	59.7	62.2	56.3	15.6	16.5	14.2	73.8	77.9	68.3
Industry	4.0	4.9	2.6	6.9	9.5	2.7	3.0	3.3	2.6
Service	36.3	32.9	41.1	77.5	74.0	83.2	23.2	18.8	29.1

Source: Timor-Lest Population and Housing Census 2015

The most notable difference is observed between women and men in the types of employment. The number of women in managerial positions (2,910) is a quarter of that of men (8,387)<sup>19</sup>,

<sup>16</sup> Gender summary of the thematic report: Timor-Leste Population and Housing census 2015

<sup>17</sup> The proportion of Timor-Leste's working-age population (15–64 years of age) that engages actively in the labor market, either by working or looking for work, expressed as a percentage.

<sup>18</sup> The proportion of Timor-Leste's working-age population (15–64 years of age) that is employed, expressed as a percentage

<sup>19</sup> GDS, ILO, UNFPA, 2018, Timor-Leste Population and Housing Census: Analytical Report on Labor Force Thematic

which demonstrates the economic gap by gender. There are five major female-dominated occupations: a) textile, handicraft, leather and related works (97%), b) weaver, knitter and related workers (97%), c) housekeepers and related service workers (91%), d) home-based social workers (85%), and e) cooks and chefs (85%)<sup>20</sup>. Men-dominated occupations are a) car, taxi and light trucks or van drivers, b) defense forces and other security guards, c) house builders, d) carpenters and furniture makers, e) bricklayers and related workers<sup>21</sup>. The index of occupational segregation is 0.23, which indicates 23% of the employed population of each sex needs to change their occupations to reach gender parity in each occupation<sup>22</sup>.

In summary, women are mainly engaged in the agriculture sector with some involved in the service sector or handicraft. This trend is rather high in rural areas. Men predominantly occupy managerial positions while fewer numbers of women are in the position of decision-making.

In terms of wages/earnings by industrial sector, there are significant differences between men and women, where men earn more than double that of women in agriculture and industry sectors, and 1.2 times as much in the service sector. One of the reasons for this may be due to the differences in the occupational positions of men and women.

**Table9 Wages/Earnings by Industrial Sectors (USD per month)**

Sectors	Total Average	Male Average	Female Average
Agriculture	167.7	198.9	87.4
Industry	192.9	203.8	101.2
Service	243.9	254.9	211.1
Unspecified	150.0	150.0	-
Total	224.6	235.9	184.0

Source: Timor-Lest Labour Force Surveys 2010-2013-2016 Main Trends Based on Harmonized Data

## 2.5 Health

In 2015, life expectancy for women and men are 66.2 and 63.6 years, respectively<sup>23</sup>. Significant increase of 5-6 years from 2010 census data were observed in the 5-year period.

Maternal mortality rate is 218 per 100,000 births in 2016, almost a half of the previous data, 557 in 2010. The ratio of women giving birth at medical facilities increased from 22% to 49% in the same period. If rural and urban areas are compared, however, labor and delivery at medical facilities are still limited in rural areas (34%) as compared to urban areas (84%). This is largely due to lack of medical facilities and prevalence of traditional treatment in rural communities<sup>24</sup>. Meanwhile, education for expecting mothers can contribute to a significant increase of institutional deliveries<sup>25</sup>.

## 2.6 Gender based violence (GBV): Current national situation

According to Timor-Leste Demographic and Health Survey 2016, 33% of women age 15-49

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<sup>20</sup> Ditto.

<sup>21</sup> GDS, ILO, UNFPA, 2018, Timor-Leste Population and Housing Census: Analytical Report on Labour Force Thematic Report volume 10

<sup>22</sup> GDS, ILO, UNFPA, 2018, Timor-Leste Population and Housing Census: Analytical Report on Labour Force Thematic Report volume 10

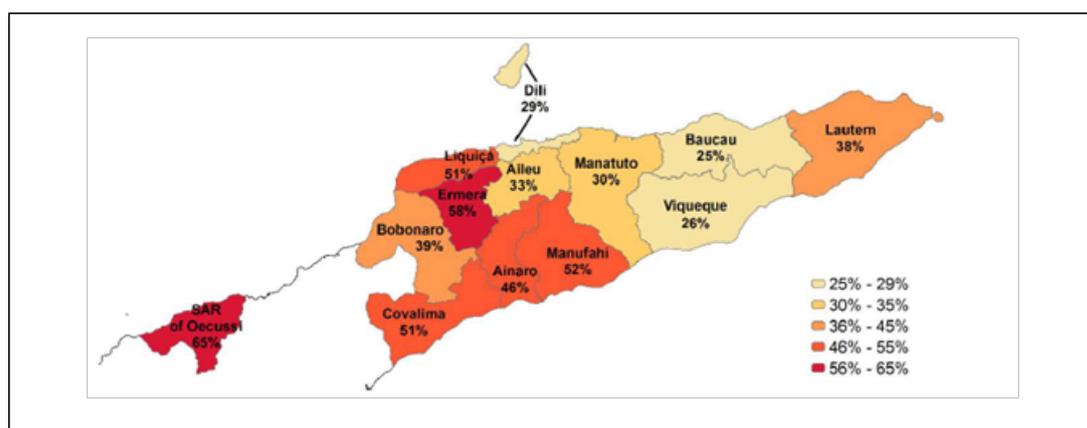
<sup>23</sup> Timor-Lest Population and Housing Census 2015: Mortality Summary of the Thematic Report

<sup>24</sup> JICA, 2011, Country Gender Profile: Timor-Leste Final Report

<sup>25</sup> Timor-Leste Demographic and Health Survey 2016

have experienced physical violence since the age of 15; 29% of the same category of women experienced physical violence within the 12 months preceding the survey period; 4% of them experienced sexual violence within the 12 months. Furthermore, 14% of women with more than secondary education experienced physical violence in the 12 months preceding the survey and the percent steadily increases to 40% among those with no education.

Figure 1 below shows the percentage of ever-married women age 15-49 who have ever experienced emotional, physical, or sexual violence. The prevalence spreads across the country and exceeds 50% in Ermera and Oecussi.



Source: Timor-Leste Demographic and Health Survey 2016

**Figure1 Spousal violence by municipality**

GBV is a major issue intensified by the traditional views on marriage and gender roles, and by the limited capacity of the formal criminal justice system<sup>26</sup>. Particularly, elders in communities as the administrators traditionally mediate domestic violence in rural areas. It is rare for such cases to be brought to the courts or discussed in the public. In fact, according to the study undertaken by the Asia Foundation in 2015<sup>27</sup>, two out of three women (66.0%) who experienced intimate partner violence did not tell anyone at all about the violence. When women did seek help, most told their family or friends (34%), while only 3% went to the police, 2% told a local leader, and less than 1% told to women's organization or civil society organization. This is indicating the silence of women and highly limited opportunity to share their concerns to others.

Means of addressing women's rights and security are also limited in most of the communities. There is a community police system in the country. One officer (OPS: suco/village police officer) is assigned to each village for this. OPS is expected to resolve local disputes, including domestic violence, in coordination with customary authorities. However, the proportion of female OPS within the total OPS is still limited, and women are less likely to reach OPS to secure their rights and security.

**Table10 Female OPS by Municipality**

Municipality	Aileu	Ainaro	Baucau	Bobonaro	Covalima	Dili	Ermera	Lautem	Liquica	Manatuto	Manufahi	Oecusse	Viqueque	Total
Number of OPS	29	21	59	50	30	31	52	34	23	31	29	18	35	442
Number of Female OPS	1	0	6	7	1	0	4	1	1	2	2	1	1	27

Source: Polícia Nacional de Timor-Leste (PNTL) (obtained on December 16, 2019).

<sup>26</sup> ADB, 2014, Timor-Leste Country Gender Assessment

<sup>27</sup> Secretariat of State for the Support and Socio-Economic Promotion of Women, National Action Plan on Gender-Based Violence 2017-2021, P14

Following the enactment of the Law Against Domestic Violence (LADV) in July 2010, antidomestic violence campaigns have been held nationwide, and the issue of violence against women has been gradually recognized not as a domestic issue but as a crime<sup>28</sup>. However, more efforts are needed to effectively implement the law through the National Action Plan on Gender Based Violence (NAP-GBV)<sup>29</sup>.

## 2.7 Governance and decision making

Timor-Leste holds one of the highest percentages of female members represented in the national parliament in the Asia Pacific region with a quota system. In 2018, the proportion of seats held by women was 34%<sup>30</sup>. At sub-national levels, however, female leadership is still limited: only 4.4% of village chiefs were women in 2019 (20 out of 452).

**Table 11 Female Village Chiefs (VC) by Municipality**

Municipality	Aileu	Ainaro	Baucau	Bobonaro	Covalima	Dili	Ermera	Lautem	Liquica	Manatuto	Manufahi	Oecusse	Viqueque	Total
Number of Villages	33	21	59	50	30	36	52	34	23	31	29	18	36	452
Number of Female VC	4	1	4	0	1	3	0	0	1	3	2	0	1	20

Source: DNAAS, Ministry of State Administration (obtained on 12 December 2019).

Village chiefs are in charge of convening community meetings to identify priorities for development support, coordinate public and non-public services, and have an important role in dispute resolution and ensuring access to justice, including for domestic violence cases<sup>31</sup>. They play a critical part in concluding community consensus. Therefore, if women are placed in such village chief position of power, they could significantly influence the local structure and institution's decision making that affect their lives<sup>32</sup>.

Traditionally, men are head of the broadly defined family, and women may otherwise have limited opportunities to connect with issues and people outside the home. Women have the primary role in fulfilling household functions but often have little influence on household and community decision-making process<sup>33</sup>.

<sup>28</sup> Country Gender Profile: Timor-Leste Final Report, 2011, JICA

<sup>29</sup> The National Action Plan on Gender Based Violence (NAP-GBV) for 2017-2021 is the first revision of the Plan, which was adapted in 2012 within the framework of the LADV. The NAP-GBV 2017-2021 extends the government commitment to end GBV in Timor-Leste, based on the implementation of a multi-sectoral approach.

<sup>30</sup> World Bank Open Data <https://data.worldbank.org/>

<sup>31</sup> <https://iwda.org.au/timor-doubles-the-number-of-women-village-chiefs-in-recent-elections/>

<sup>32</sup> <https://iwda.org.au/timor-doubles-the-number-of-women-village-chiefs-in-recent-elections/>

<sup>33</sup> Government of Australia, 2013, Timor-Leste National Program for Village Development Support program (PNDSSP) Investment Design Summary, P50

### 3 Government Policy and DP-supported Activities

#### 3.1 Government policies and strategies

##### Overall policies and strategies

Gender equality is stipulated in Article 17 of the Constitution, which underlines all implementations of policies and programs for realizing gender equality in Timor-Leste.

The government has developed Strategic Development Plan (SDP) (2011-2030), which is a comprehensive policy framework to transform the country from a low-income into an upper-middle-income country by 2030. With SDP, Timor-Leste also envisages building a gender-fair society, where human dignity and women's rights are valued, protected and promoted by laws and culture. To achieve this vision, the following strategies are adopted.

##### **The SDP Strategy for Gender Equality**

- Gender mainstreaming will be promoted across government in policies, programs, processes and budgets.
- There will be gender responsive policies and laws at national and local levels.
- Gender awareness raising strategies will be developed for schools, vocational education, and training institutes, as well as for the public.
- Basic level services to protect women from risk will be improved.
- Mechanisms to provide financial support to women leading households will be strengthened.
- Policies and frameworks will be developed to empower women socially and economically through various livelihood support measures.
- Education programs will be introduced to promote the retention of girls at higher levels, particularly at the secondary and tertiary levels.
- More women will be employed across the civil service and in senior civil service positions.
- Policies, training and leadership programs will be developed to support women in taking on decision-making roles in the public and private sectors.
- Reproductive health programs will be scaled-up throughout the country.
- A national zero-tolerance policy for violence in schools and homes will be introduced.

Source: Timor-Lest Strategic Development Plan (2011-2030)

In line with SDP, the government has also developed Roadmap for Implementation of the 2030 Agenda and the SDGs. The roadmap recognizes gender equality as a crosscutting priority for the county and emphasizes the importance of empowering women in rural areas.

In addition to SDP, the government of Timor-Leste possesses the Law against Domestic Violence (LAVD), while making various international commitments on gender, e.g. at Convention on the Elimination of Discrimination against Women (CEDAW), International Convention on Civil and Political Rights (ICCPR), International Covenant on Social and Economic Rights (ICESR) and Convention on the Rights of the Child (CRC). Based on these institutional settings, it has developed the National Action Plan against Gender-based Violence (NAP-GBV) (2017-2021) in order to reduce and ultimately eliminate GBV that affects women, men and children in communities. The NAP-GBV has four pillars for interventions, including (1) the prevention of gender-based violence, (2) the provision of services to victim, (3) access to justice, and (4) coordination, monitoring and evaluation. It also emphasizes the government's responsibility over multi-sectoral coordination to achieve the objectives both at

national and municipality levels.

#### MAF policies and strategies

In line with the overall national direction, Ministry of Agriculture and Fisheries (MAF) also acknowledges the importance of women in the agriculture sector and has prepared the Gender Equality Policy (DRAFT) to improve women's access to resources and opportunities towards the same level as men. This policy sets up three objectives<sup>34</sup>: (1) to identify specific needs of women and men in all policies, programs and budgets and ensure that they are equally and adequately addressed; (2) to analyze and adopt the delivery of MAF programs and services to contribute to the specific situations of women and men in order to promote equal participation and equal sharing of benefits; and (3) to develop human resource management and systems based on the principal of equal opportunities for employment, particularly for the positions of extension officers and decision-makers. To attain these objectives, gender mainstreaming is required in all MAF programs, projects and delivery services. In addition, gender mainstreaming needs to be part of "everyday practice (business usual)" of all staff in MAF.

#### Climate-change-related policies

As far as climate change is concerned, Timor-Leste ratified the UN Framework Convention on Climate Change (UNFCCC) in 2006 and Kyoto Protocol in 2008 as well as the Paris Agreement in 2017. UNFCCC is addressing issues of gender and climate change. As a party of UNFCCC, the government recognizes the importance of involving women and men equally in UNFCCC processes and in the development and implementation of national climate change policies.

In 2010, Timor-Leste prepared the National Adaptation Programme of Action (NAPA) on climate change. In NAPA, water availability and quality issues caused by climate change are prioritized. It also analyzed that one of the potential adaptation measures is to integrate gender perspective into water management, particularly addressing women's rights in water-related legislation.

### **3.2 Institutional arrangement**

In 2002, the government embarked on making institutional arrangement specifically on gender issues with the establishment of Office of the Advisor on the Promotion of Gender Equality (OPE)<sup>35</sup>. Since then, institutional efforts have been enhanced: in 2007, for first instance, the Secretary of State for the Promotion of Equality (SEPI) was developed as part of the cabinet. It contributed to strengthening the regulatory and policy framework, including design of laws and formulation of policies and programs, to promote gender equality, women's right as well as gender mainstreaming. The process and achievements of SEPI were then handed over to Secretary of State for the Support and Socio-Economic Promotion of Women (SEM) and now to Secretary of State for Equality and Inclusion (SEII), which functions as the overall national entity to promote gender equality.

Whilst having SEII at the center of gender institutions, it was 2008 when gender focal points (GFPs) were assigned to all ministries to promote gender policies in undertakings of each

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<sup>34</sup> MAF and UN Women, Gender Equality Policy Ministry of Agriculture and Fisheries

<sup>35</sup> JICA, 2011, Country Gender Profile: Timor-Leste final report

ministry<sup>36</sup>. Currently, they are referred to as Gender Working Groups (GWGs) engaged not only in gender mainstreaming in each organization but also in inter-ministerial coordination relating to gender issues.

### 3.3 DP-supported activities

In Timor-Leste, there are several projects and programs supported by development partners (DPs), integrating gender perspectives in their activities for livelihood improvement. Amongst them are those listed in the table below, which also reveals implication for our proposed project.

Outline of Project/Program by DPs	Implication for the Proposed Project
TOMAK (Farming for Prosperity) (2016-2021) supported by Australian Aid	
<ul style="list-style-type: none"> <li>- The program supports farmers to improve their farming techniques in targeted agricultural value chains. During 2018, 51 Farmer Field Days (1,071 participants, 436 women) helped farmers understand improved agriculture techniques and the benefits associated with using them. Also, it brought yield increase, enhancing resilience of communities to shocks including extended droughts associated with climate change.</li> <li>- The program also undertakes advocacy on agricultural policy and its implementation, especially to enhance women's representation, leadership and decision-making, <sup>37</sup>providing financial support for women's transport – a key barrier to women's employment and more equitable working conditions.</li> </ul>	<ul style="list-style-type: none"> <li>- As well as men, women could be an appropriate target of training on farming techniques, as they have vital roles in agriculture.</li> <li>- Secure transportation for women could be one of the crucial factors for realizing gender equality.</li> </ul>
Avansa Agrikultura Project (2015-2020) supported by USAID	
<ul style="list-style-type: none"> <li>- The project aims at sustainable economic growth in the agriculture sector. At the end of the project, it is anticipated that more than 5,500 households will gain higher incomes, increasing household savings and eating foods that are more nutritious. Hitherto, nearly 50 percent of beneficiaries trained by the project were women, who were equipped with access to productive economic resources. The project is creating opportunities of recruiting women to be part of farmer groups and developing micro-business focused on their interests.</li> <li>- The Project is also introducing nutrition programs: among women of childbearing age, 92 percent are meeting minimum diet diversity standards by consuming five or more of the 10 required food groups<sup>38</sup>.</li> </ul>	<ul style="list-style-type: none"> <li>- Creating jobs and leadership position for women could be one of the options for realizing gender equality in economic and governance circles.</li> <li>- Nutrition program could be integrated into the agricultural support for rural households: it may enhance their resilience against risks and impacts of food insecurity.</li> </ul>
Increasing Community Resilience in Oecusse (2015-2020) supported by USAID	
<ul style="list-style-type: none"> <li>- The project aims to protect community water sources through the adoption of micro-watershed management technologies and a CBNRM approach. It is helping communities improve their access to clean water, manage water sources and improve their diets and financial security by introducing conservation agriculture, fostering community savings groups and establishing water management committees. Women are encouraged to attend water management committee so that their needs could be reflected<sup>39</sup>.</li> </ul>	<ul style="list-style-type: none"> <li>- Protection and management of water sources in rural setting is crucial for women to maintain their daily life.</li> </ul>

<sup>36</sup> JICA, 2011, Country Gender Profile: Timor-Leste final report

<sup>37</sup> Australian government, 2019, Aid Program Performance Report 2018-19

<sup>38</sup> USAID HP (<https://www.usaid.gov/timor-leste/project-descriptions/usaid-avansa-agrikultura-project>)

<sup>39</sup> USAID HP (<https://www.usaid.gov/timor-leste/project-descriptions/increasing-community-resilience-oecusse>)

## 4 Current Status of Women in the Target Watersheds

### 4.1 Population and households

There are eight municipalities in the target watersheds, which have a population of 0.75 million, accounting for two-thirds of the total population in the country. There are 122,294 households, and female heads 14.4% of households. The ratio is slightly lower than the average of the country (15.8%).

**Table12 Population of the Municipalities in the Target Watershed**

Municipality	Watershed related*	Total	Male	Female	Male (%)	Female (%)	House hold	Female-headed (%)
Aileu	Cr, L, Cm	48,837	25,183	23,654	51.6	48.4	7,598	13.3
Ainaro	Cr, L	63,136	32,181	30,955	51.0	49.0	10,601	15.6
Covalima	T	65,301	32,968	32,333	50.5	49.5	12,564	14.7
Dili	L, Cm	277,279	143,677	133,602	51.8	48.2	42,485	14.5
Ermera	L, Cm	125,702	63,557	62,145	50.6	49.4	20,671	15.7
Liquica	Cm	71,927	36,436	35,491	50.7	49.3	11,885	13.2
Manatuto	L	46,619	23,752	22,867	50.9	49.1	7,467	15.1
Manufahi	Cr	53,691	27,750	25,941	51.7	48.3	9,023	10.1
Total		752,492	385,504	366,988	51.2	48.8	122,294	14.4

Source: Timor-Lest Population and Housing Census 2015

Note: \* Cr=Caraulun T=Tafara, L= Lacro, Cm= Comoro

### 4.2 Division of labor

In rural setting of Timor-Lest, including the target watershed areas, men are concentrated on undertaking productive tasks (e.g. agriculture, livestock, and construction works), while women are involved in both productive and reproductive spheres, including fetching water cooking, washing, cleaning house, and taking care of children. The following table proves this general finding of the division of labor based on the existing literature and complementary sample surveys in the target watersheds. As can be seen in the table, women are linked to many activities, taking a broader range of roles and often having a heavier time-burden than men. The major driver of women's time-poverty was identified through women-focused consultation as women's limited mobility, which are enforcing them to sacrifice a lot time for marketing, fetching water, and buying goods. There is a substantial need to address this issue in the proposed project (See Section 5 and 6.)

**Table13 Division of Labour between Women and Men**

Roles	Mainly by Female	By both	Mainly by Male
Agriculture (Upland farming, coffee and vegetable)			
Land preparation			✓
Seed selection and preparation	✓		
Sowing/ Planting		✓	
Watering/ Irrigation			✓
Weeding		✓	
Harvesting		✓	
Storing/ processing / Post-harvest activities	✓		
Marketing	✓		
Livestock			
Grazing			✓
Feeding		✓	
Watering		✓	

Roles	Mainly by Female	By both	Mainly by Male
Marketing			✓
<b>Forestry (Firewood &amp; timber)</b>			
Firewood collection		✓	
Cutting firewood	✓		
Timber collection			✓
<b>Other productive works</b>			
Aquaculture (at upland)	✓		
Construction works on paid-basis			✓
<b>Domestic undertakings</b>			
Fetching water	✓		
Cooking	✓		
Washing	✓		
Cleaning	✓		
Taking care of children and elderly	✓		
Hose repair			✓
Buying goods	✓		

Source: Sample Survey and field discussion conducted by JICA CB-NRM Project Team (2016/ 2019/2020) with reference to Secretary of State for the Promotion of Equality, Ministry of Agriculture and Fisheries and National University of Timor-Leste, 2011 for data on agriculture.

### 4.3 Assets and access

The sample filed survey identified the different degrees of having assets and access to resources/opportunities between the female and male (See the table below).

**Table14 Assets and Access of Women and Men**

Assets and Access	Mainly by Female	By both	Mainly by Male
<b>Property</b>			
Land			✓
House			✓
<b>Income/Household Finance</b>			
Income earned by		✓	
Income owned by		✓	
Bank account			✓
Money used by	✓		
How to use money decided by	✓		
<b>Facilities</b>			
Radio used by			✓
Motorbike used by			✓
Bicycles used by			✓
Mobile phones used by		✓	
<b>Decision Making on farming</b>			
How to use land (e.g. farmland, planting trees)		✓	
When and what to grow for farming decided by		✓	
Decision of cutting trees made by			✓
Decision of setting fire on farmland made by			✓
Where to graze animals decided by			✓
<b>Meeting Attendance</b>			
Suco, aldeia, other meetings attended by		✓	
Training / Services from Gov. and agencies attended by		✓	

Source: Sample Survey and field discussion conducted by JICA CB-NRM Project Team (2016/ 2019/2020)

As seen in the table above, property, such as land and house, tends to be owned by men, unless the village is a matrilineal society<sup>40</sup>. In field discussions, there was sometimes a controversy over who should earn income more. It was found that men have more opportunities to earn income than women do because they could work in agriculture as well as in business or public works. Yet, women are also engaged in agriculture and often in other small-scale income generating activities, such as sewing, handicraft, making bread and cakes. In addition, women undertake household chores (unpaid work). Despite their various tasks, women's contribution tends to be overlooked and less recognized by men. It may well cause a gender issue, making women have less voice than men in their decision-making and household management.

If men earn income from business or public work, they tend to have a bank account with their own name. On the other hand, there was no women, at least in the sample villages, having their own account, except for the account to receive children education fund from the government.

As regards household finance, women mainly control the expenses for daily use and education for children. Women can make decision on how to use money for small expenditures; however, when spending a significant amount, they need to discuss with their husbands for joint decision.

With respect to mobility, there is a substantial gap between women and men on the usage of motorbikes and bicycles, which are concentrated on men. This fact results in the less mobility of women beyond walking distance. Although women need to go to markets for selling things, their transportation is limited, and typically, women use a microbus. Discussions in the complementary sample surveys sometimes identified that there were cases that men could help women to go to markets with motorbike, or to sell things instead of women so that women can reduce their workload.

Land use and farm management are discussed and determined by both women and men. According to the community members, this is particularly true for backyard garden, where both women and men work every day. However, there are some partialities favorable for men regarding decisions on cutting trees, place to graze animals and timing to set fire on farmland.

Women and men equally represent village/community meetings. Participation in any training is also awarded to women and men. Therefore, it can be said that there is no significant gap between women and men to access information. However, sometimes women cannot attend such meetings due to household chores, taking care of children, and even cooking for other participants in the meeting.

#### **4.4 Women's participation in governance**

Based on government regulation, Village Council consists of a village chief, chiefs of sub-village (aldeia), two representatives, delegation (one woman and one man) from each aldeia, and youth representatives (one woman and one man). The participation of both women and men are assured in the council. However, men dominate the position of the village chief; only 15 village chiefs are women out of all 225 villages in the target watershed. There is no female village chief in Ermera municipality.

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<sup>40</sup> According to the interview with Village Chief of Casabauc, the villages in Tafara watershed are generally matrilineal society except for Fatumean PA.

In the sampled villages, there are three female village chiefs. Two of them had working experiences as a leader e.g. sub-village chief, before being elected as a village chief. Through such processes, the community people had recognized her performance and leadership, finding out her potential to be a village chief. Their histories suggest that more women could play more significant roles in the governance and management in Timor-Leste, if at least once “entry points” of becoming leaders are given.

#### 4.5 Gender based violence (GBV) : Current situation in the project area

As previously mentioned in Chapter 2, GBV is prevalent in the county, including communities in the target watersheds. In the sampled villages of Tafara and Caraulun Watersheds, however, interviews with village leaders did not find any evidence and clue that they recognized and dealt with GBV cases. Seemingly, there is no incident of GBV, nor has been the issue discussed in village council meetings. On the other hand, in the target villages of the CB-NRM Project in Laelo and Comoro Watersheds, the cases of domestic violence are often reported and discussed in the monthly monitoring meeting. GBV is a sensitive issue, sometimes difficult to discuss in open areas, but the project’s experience shows that the formalization of village regulations and regular monitoring on their implementation could help the issue to be identified and handled by communities themselves, at least to some extent. This attitude changes could be brought by the process of participatory or community-driven formulation of the village regulations, which involves village leaders (including traditional ones), youth and women representatives, raising their awareness of gender. In the proposed project, efforts will be continued and even more enhanced, including the provision of gender training addressing GBV issue for community leaders during PLUP/CCVA, articulation of focal persons in the community to hear voice of women on GBV by village regulations (e.g. assigning female members of the community police and *aldeia* delegates as focal persons), joint monitoring and evaluation of GBV cases with relevant authorities e.g. municipality officials and police, gender-specific consultation meeting/ awareness raising on GBV in collaboration with national entities such as SEII.

#### 4.6 Perception on threats of climate change and natural disasters

The complementary sample survey conducted by JICA CB-NRM Project Team with the local facilitators has identified different perceptions regarding the threats of climate change and natural disasters. Their perceptions were identified separately by a female/ male group through two exercises, namely, i) ranking of major kinds of climate and disastrous phenomenon to identify the most serious ones and ii) the discussion on historical trends of such incidences.

##### Most serious threats identified by the female and males through ranking

For this session, prior to group discussion, the facilitators presented major types of climate changes and natural disasters in Timor-Leste, which included Strong Winds, Heavy Rain, Little Rain/ Drought, Landslide, Wildfire, High Temperature, and Low Temperature. This presentation enabled the community participants to recognize about what they were supposed to discuss concretely. Provided these options, the female/ male groups ranked them according



A public water point used for collecting water for home and washing clothes

to the degree of negative impacts on their livelihood. The results of the group discussions could be summarised in the table below.

**Table15 Threats prioritized by Women and Men Groups in the Sampled Villages**

Affected group	Southern/Northern	WS	Village	Threat 1 (Most serious)	Threat 2 (Second serious)	Threats 3 (Third serious)
Women	Southern	Caraulun	Manumera	Heavy Rain	Little Rain/Drought	Strong Winds
			Babulo	Little Rain/Drought	Strong Winds	Heavy Rain
		Tafara	Lactos	Little Rain/Drought	Heavy Rain	High Temperature
			Maudemo	Little Rain/Drought	High Temperature	Strong Winds
	Northern	Comoro	Fatisi	Wildfire	Little Rain/Drought	Heavy rain
			Cotolau	Little Rain/Drought		Strong Winds
				Wildfire		Strong Winds
		Laclo	Fahiso	Little Rain/Drought	Strong Winds	Wildfire
			Maumeta	Heavy Rain	Strong Winds	Land Slide
Men	Southern	Caraulun	Manumera	Little Rain/Drought	Strong Winds	Heavy Rain
			Babulo	Strong Winds	Little Rain/Drought	Heavy Rain
		Tafara	Lactos	Strong Winds	Heavy Rain	Little Rain/Drought
			Maudemo	Strong Winds	Little Rain/Drought	Heavy Rain
	Northern	Comoro	Fatisi	Heavy Rain	High Temperature	Wildfire
			Cotolau	Little Rain/Drought		Strong Winds
				Wildfire		Strong Winds
		Laclo	Fahiso	Wildfire	Strong Winds	Heavy Rain
			Maumeta	Heavy Rain	Strong Winds	Land Slide

Source: Group discussions in the sample survey conducted by JICA CB-NRM Project Team (2016, 2019 and 2020)

As illustrated in the table above, almost all women groups (7/8 sampled groups) pointed out “Little Rain/Drought” as the most or second most serious threat. By contrast, men groups showed various perceptions of the kinds of climate changes and disasters. Behind this is the deep anxiety of the female on a shortage of water, which affects their daily works, including fetching water, cooking and washing cloth and dishes. Another careful observation must be made on “Strong Winds”, which was commonly raised by both groups as a hazard affecting houses and farms. Interestingly, no group, be it of women or men, prioritized “Wildfire” in Caraulun and Tafara Watersheds, which are located in the southern part of the county, although it was ranked by some groups in Laclo and Comoro Watersheds, the northern part of the country.

#### Historical trends of climate changes and natural disasters

In addition to ranking of the serious threats, the sample survey revealed communities’ recognition on the historical trends of climate change and natural disasters. The results of the survey were tabulated below.

**Table16 Historical Trend of Climate Issues and Natural Disasters**

Respondents	Area (Watersheds)	Trend	Little Rain /Drought	High Temperature	Strong Wind	Heavy Rain	Land-slide	Wild-fire
Women	Southern (Caraulun and Tafara)	Increased	75%	100%	50%	30%	45%	30%
		No Change	25%	0%	25%	45%	0%	20%
		Decreased	0%	0%	25%	25%	25%	25%
		No experience	0%	0%	0%	0%	25%	25%

Respondents	Area (Watersheds)	Trend	Little Rain /Drought	High Temperature	Strong Wind	Heavy Rain	Land-slide	Wild-fire
	Northern (Laclo and Comoro)	Increased	50%	100%	50%	0%	0%	50%
		No Change	50%	0%	0%	50%	50%	0%
		Decreased	0%	0%	50%	50%	50%	50%
		No experience	0%	0%	0%	0%	0%	0%
Men	Southern (Caraulun and Tafara)	Increased	100%	74%	21%	0%	26%	0%
		No Change	0%	26%	79%	26%	26%	26%
		Decreased	0%	0%	0%	74%	22%	53%
		No experience	0%	0%	0%	0%	26%	21%
	Northern (Laclo and Comoro)	Increased	100%	100%	100%	100%	67%	0%
		No Change	0%	0%	0%	0%	33%	0%
		Decreased	0%	0%	0%	0%	0%	100%
		No experience	0%	0%	0%	0%	0%	0%

Source: Group discussions in the sample survey conducted by JICA CB-NRM Project Team (2019 and 2020)

As can be seen in the table above, more than 50% of both women and men in all the sampled villages perceived that the incidences of Little Rain/Drought and High Temperature have increased during the last decade. In addition, over 50% of the respondents, except for men sampled in the southern watersheds, also perceived that Strong Winds has occurred more frequently than before. On the other hand, around 20% of both women and men sampled in the southern watersheds state that they had never experienced Landslide and Wildfire. This is arguably consistent with their perceptions on the most serious threats, as they did not prioritize these incidents during the ranking session.

#### Conclusion about communities' perceptions on their climate vulnerabilities

It can be concluded from the ranking session that the communities in the selected villages in the target watersheds tend to consider Little Rain/Drought and Strong Wind as the most serious threats to their daily life. From a gender point of view, it should be highlighted that the former phenomenon (Little Rain/Drought) is the major concern of the female respondents, while the latter (Strong Wind) is the common threat by both the male and female respondents. Their historical view on climate change and natural disasters also suggests the recent increase of these threats along with High Temperature as compared to the past trend. The following are comments provided by the respondents on their vulnerabilities to Strong Wind, Little Rain/Drought and High Temperature.

**Table 17 Some Comments by the Sampled Villagers on Major Climate Changes and Disasters**

Climate Issues	Gender remark	Comment provided by the villagers (Village)
Little Rain/ Drought	Identified mainly by women as the most serious threat with increased incidences	<ul style="list-style-type: none"> <li>◆ The availability of water become less during the drought period and a shortage of water often causes social conflict in the community. (Fahisoi village)</li> <li>◆ Due to the water shortage, villagers dig wells to take water from the ground. In the past, the well was 3-5 meters deep. However, it is necessary to dig more than 10 meters deep to get water these days. (Maudemo village)</li> <li>◆ Water becomes less at the sources, and therefore, villagers always use one particular water source which have more water than others during the dry season. Villagers are worried that the water source will eventually run out. (Manumera Village)</li> </ul>
High Temperature	Identified by both women and men as the threat with increased incidences	<ul style="list-style-type: none"> <li>◆ Many fruit trees e.g., rambutan, durian and mangos, are damaged by high heats. (Fatasi village)</li> <li>◆ It creates much dust in the village, which often affects the health conditions of communities. People suffer from throat infection and a cough. It also kills pigs and chicken and changes the taste of watermelon (It becomes not sweet). (Maudemo village)</li> </ul>

Climate Issues	Gender remark	Comment provided by the villagers (Village)
		◆ It is difficult to work outside; therefore, the time for farming decreases when it happens. (Lactos village)
Strong Wind	Identified by both women and men as one of the most serious threats with increased incidences	<ul style="list-style-type: none"> <li>◆ It usually happens in January and February and causes serious damage to many farms and houses in the village. Sometimes, the electric lines are cut off. (Babulo village)</li> <li>◆ Strong winds often fell trees, which sometimes kill animals. (Lactos village)</li> <li>◆ It often damages houses and crops (e.g., maize, coffee, banana and other crops) in farms, and eventually, causes a food shortage, which forces farmers buy food at shops/markets. (Fahisoi village)</li> </ul>

Source: Group discussions in the sample survey conducted by JICA CB-NRM Project Team (2019 and 2020)

## 5 Identified Gender Issues and Mitigation Measures to be taken by the Project

### 5.1 Identified Gender issues

Based on the analysis in the previous chapters, the following Gender issues (a) to (g) are identified as key agenda to be addressed by the proposed project.

(a) Women's high vulnerability to water scarcity

Shortage of water caused by climate change mainly negatively impacts women, since they are more involved in water-related house works, including fetching water, cooking and washing. Water shortage will force women to take on more of the burdens, by spending more time and energy to carry out their daily tasks. It can be therefore said that women are more vulnerable to such water-related climate changes effects from droughts, and change in rainfall patterns.

(b) Gender gap in mobility

Women have less mobility than men do. Mothers have the responsibility of taking daily care of children, and moreover, holds equal/greater roles compared to men on selling and buying goods at a market. Nevertheless, the availability of their transportation means is limited. Hence, when women needs to move sufficient distance, especially being affected by climate changes or disasters, they are placed in critical positions. In fact, during the sample survey, many women expressed their daily anxiety on the risk of strong wind: they are largely concerned about their ability to take children to hospitals when they are injured by a gale/strong wind.

(c) Inequality on disaster housing risks

Women face greater risks of being affected by house destruction. They spend more time at home than men in order to carry out their household chores, backyard gardening and children-care. A typical rural house in the target watersheds is constructed from natural materials with clay-soil foundation, bamboo or palm-trunk walls, and corrugated iron/zinc roof. Compared to a concreted/brick-made house, this type of housing is vulnerable to natural disasters such as strong wing, flood and fire, dominant in the target watersheds. There may be a higher possibility for women (and children) to receive physical damages, when such disasters happen.



A typical rural house in Timor-Leste  
(Source: <https://cwsglobal.org/lucia/>)

(d) Risks of Gender-based Violence (GBV)

It is widely recognized in the gender studies that the incidence of GBV is highly associated with the occurrence of natural disasters. Climate changes and disasters forces the community to result in unusual consequences, that often increases the occurrence of conflicts among people or make their life more stressful. Climate disasters have been shown to increase sexual assaults or domestic violence than usual. It is crucially important

to make communities aware of this tendency and empower them to deal with GBV cases anytime, even in the time of climate changes and disasters, e.g. by means of awareness raising among local leaders and fostering gender focal persons among them.

(e) Women's under-representation in rural governance

Women's representation in rural governance is low. As observed in the previous chapter, the proportion of female leaders at village and sub-village level is substantially less than that of the male. This may lead to the situation in which the needs and threats perceived by women are not fully addressed. On this issue, the results of the sample survey conducted in the female-headed village revealed that the female chiefs had been given a chance to work as a leader for groups before being elected as a village chief. Such positions could prove the capacity and potential of a person assigned for being a leader for the community. More women could play greater roles in governance and social/natural resource management, once "entry points" of taking a leader position are given.

(f) Unequal division of labor

It is highly likely that women and men have different views of their division of labor. Women may insist that they take equal load of productive works (farming, livestock and other income generations), while men tend to consider that, they play vital roles in production, including income earning. During the sample survey, female/ male group had separate/gender-focused discussions to confirm their different recognitions on division of labor, which was followed by plenary session to hear voices from each side. Through such exercise, they had a mutual understanding that both the groups engaged in productive works and improve their livelihood. This kind of exercise may be useful to enhance their knowledge of gender perspective and to promote gender equality in a rural community.

(g) Gender gap in employment and entrepreneurship

Relating to the above, due to household responsibilities and social norms, women have fewer opportunities for both of employment and being entrepreneurs. However, if productive economic activities carried out by women will be enforced, it will not only strengthen their social positions by emphasizing their contributions more visible and obviously valuable, but also improve the welfare of their families and communities. Given their limited experience or access on technology, finance and networking, there is a strong demand to consider how to enhance business and economic opportunities for women, including development of their capacities for effective utilization of local resources for small-scale enterprise development.

**5.2 Measures to be taken by the project**

Based on the key issues delineated above and the findings in the previous chapters, the following measures are considered in the CB-NRM mechanism of the proposed project.

Component	Suggestions to be considered
PLUP	<p>[Guidance to the MAF/NGO officers on facilitation] 【To address Gender issue (a), (b), (d)】</p> <ul style="list-style-type: none"> <li>• Special guidance (ToT) for MAF/NGO officers should be provided prior to the field implementation of PLUP to enable them to understand key gender issues in PLUP/CCVA</li> </ul>

Component	Suggestions to be considered
	<p>facilitation (e.g. careful consideration to water conservation and management, women's mobility, and GBV in disasters).</p> <p>[Present/ Future Land Use Mapping] 【To address Gender issue (a), (b), (c)】</p> <ul style="list-style-type: none"> <li>• The present land use mapping should prioritize the existing resources with their geographical locations according to impact on women's vulnerability, importance, and the urgency of interventions (e.g. to secure water availability during dry season).</li> <li>• Areas free from any negative impacts caused by natural disasters such as flood and strong winds, even without addressing the land property, should be identified in present land use mapping, if possible. Those areas could be remarked for evacuation or future development as farm or residential areas.</li> </ul> <p>[Development of Community-based Adaptation Plan (CBAP) and village regulations]</p> <p>【To address Gender issue (a), (b), (d)】</p> <ul style="list-style-type: none"> <li>• One of the topics to be discussed in the CBAP planning should be how to collect and use water during water scarcity season to maintain fair distribution among community members. Discussion should examine whether there is need to form a special team which check possible water leakage during distribution and/or apply Village Development Fund for establishment of new water supply stations.</li> <li>• The issue of limited mobility of women, namely limited access to transportation means to the market, hospitals and so on, and possible solutions, such as cooperation systems among community members for joint riding or rotation of sending the representative should be discussed in the CBAP planning.</li> <li>• The issue of GBV should be discussed in the formulation of village regulations to increase local leaders' awareness about GBV and establish a mechanism in which community members can support victims e.g. by making village regulations gender-sensitive and appointing gender focal persons among community members.</li> </ul>
Microprograms	<ul style="list-style-type: none"> <li>• There should be a sensitization session on the importance of diversification in food production and consumption, including the value of root crops in food security and nutrition, which are more resistant against strong winds. 【To address Gender issue (a), (c), (f)】</li> <li>• Area-specific and community-joint tree planting should be introduced to protect critical water sources, prevent the risk of landslide, and establish windbreak forest to protect farms and houses. 【To address Gender issue (d)】</li> <li>• Livelihood development/ income generation activities for local women's groups should be carried out as one of the climate change adaptation measures to increase their economic opportunities and build up their technical and financial skills for improvement of livelihoods, which directly benefits the gender vulnerable. 【To address Gender issue (e), (f), (g)】</li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">Mushroom cultivation training for women provided by JICA CB-NRM Project</p>

Component	Suggestions to be considered
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Nursery production by female members</p> </div> <div style="text-align: center;">  <p>Cassava chips production for income generation</p> </div> </div>
General	<ul style="list-style-type: none"> <li>• To eradicate GBV, the nature of the CB-NRM mechanism will foster social norms to prevent community violence, enhance local capacities and develop village regulations to address GBV cases, promote women’s economic and social empowerment, and increase women’s visibility in governance. 【To address Gender issue (e), (f), (g)】</li> <li>• The CB-NRM mechanism could contribute to, in addition to the reduction of women’s vulnerability and improvement of livelihoods, empowering women to be a leader by assigning them to various responsible positions (e.g. assigning them as MP group leaders, demo farmers, PLUP committees, trainers to others) in addition to the reduction of women’s vulnerability and improvement of livelihoods, 【To address Gender issue (e), (f), (g)】</li> </ul>

## 6 Action Plan

**Project Name:** Community-based Landscape Management for Reduction of Deforestation and Strengthening of Climate Resilience of Local Livelihoods in Important Watersheds

<b>Impact:</b>					
<ul style="list-style-type: none"> <li>The introduction of the CBNRM mechanism could reduce about 322,069 tCO<sub>2</sub> eq per year by the interventions, reaching 4,415,082 tCO<sub>2</sub> eq over 20 years.</li> <li>About 8,160 households in 68 villages will directly benefit from the project, particularly by micro programs on training in climate resilient agriculture and sustainable land and forest management practices under Component 2. The majority of them are marginal farmers who rely on farm products from shifting cultivation and/or farming in sloping lands to sustain their livelihoods. It is estimated that approximately 1,000 households will be headed by the female if one applies the national ratio of the female-headed households (13%) to the total direct-benefiting households of 8,160 households.</li> <li>About 25,000 households (148,140 people) in 74 villages will also benefit from protection and improvement of forest ecosystem services through the activities under Component 1, including 72,083 females according to Timor-Leste Population and Housing Census 2015.</li> </ul>					
<b>Component 1 Establishment of people driven NRM system</b>					
<b>Outputs</b>	<b>Gender mainstreaming activities</b>	<b>Indicators and target</b>	<b>Time-line</b>	<b>Responsibility</b>	<b>Costs</b>
1.1 Improved management and protection of existing forests through introduction of PLUP and community-based NRM monitoring  (Note: PLUP (with CCVA) is to be conducted one time per village for total 68 villages.)	i-a) Provide special guidance (Training of Trainers: ToT) on gender mainstreaming for NGO and MAF officers to understand key gender issues in PLUP/CCVA facilitation (e.g., the importance of water conservation and management, women's mobility, and GBV in disasters). i-b) Ensure female members' participation in the PLUP/CCVA committee. i-c) Provide gender training to the PLUP/CCVA committee. i-d) Adopt female/male group discussion in PLUP/CCVA to address different needs by sex. i-e) Add a clause on gender issues with assignment of focal persons for the same issues in village regulations. i-f) Conduct a gender-specific quality screening of the draft village regulations prior to consultations with local communities in order to check if the regulations could adequately address key gender issues, e.g. cooperative mechanism for water collection/ distribution and women's mobility to reduce time poverty, and gender-sensitive monitoring particularly GBV by focal persons and relevant institutions.	i-a)-1 At least, two (2) times of ToT is conducted with 1 time in PLUP/CCVA and 1 time at the beginning of monthly monitoring based on the village regulations i-a)-2 Two (2) guidance materials are developed with one for gender consideration in PLUP/CCVA and the other for gender monitoring with the village regulations i-b) More than 30% of the committee members are female. i-c)-1 At least one (1) time of training per village, is conducted as part of the village level PLUP/CCVA committee formation workshop that develops the roles and responsibilities of the committee per respective village. i-c)-2 More than 50% of members of the PLUP/CCVA committee have basic knowledge about gender considerations. i-d) List of female and male needs are developed. (to be confirmed by field report) i-e) A clause or an article on gender issues with appointment of focal persons,	1 <sup>st</sup> – 4 <sup>th</sup> year	NGOs under supervision of MAF/DGF CIP with JICA Technical Expert Team (TET)*	i-a) US\$ 1500 for materials (JICA)  US\$ 800 for TOT (\$100 x 2 times x 4 watersheds as part of PLUP cost (GoTL))  i-b) and i-c) US\$ 10,880 (US\$160 x 68 villages as part of PLUP cost (GCF))  i-d), i-e) and i-f) US\$ 21,760 (US\$ 320 x 68 villages as part of PLUP cost (GCF))

		which are women (at least 2) and men (at least 2), are stipulated in the village regulations. i-f) The gender-specific quality screening is conducted based on a checklist especially for the screening.			
1.2 Enhanced governance capacity of local leaders at village and post-administrative levels for sustainable forest and natural resource management	<u>At community/ village level</u> ii-a) Collect the information on the occurrence of GBV, and assist the community in resolving the issue in collaboration with relevant authorities ii-b) Collect women's voices and suggestions on water distribution and collection and take them into practice where possible with community initiatives. ii-c) Monitor the incidence of gender-related issues (other than GBV and water issues) and assist the community in resolving the issues.	ii-a) The case of the GBV is monitored and the number of GBV cases has declined. ii-b) Time, labor power, and/or conflicts on water distribution or collection are reduced. ii-c) The case of gender-related issues is monitored, and the number of the cases resolved.	2 <sup>nd</sup> -7 <sup>th</sup> year	NGOs under supervision of MAF/DGF CIP with JICA TET*	ii-a), b), and c) US\$ 29,600 (US\$ 200 x 74 village x 2 years as part of cost for monitoring with the village regulations)
	<u>At post-administrative level</u> ii-d) Monitor gender-related issues at post-administrative level (i.e., inter-village or common-all-village issues) e.g., on GBV and water distribution, through continuous meetings at post administrative level, in collaboration with relevant authorities' e.g., post-administrative officials and police. ii-e) Organize gender-specific consultation meeting/ awareness raising campaign on gender in collaboration with national entities such as SEII (e.g., for GBV and Water Issues).	ii-d)-1 The incidence of gender related issues at post-administrative level is monitored with a gender-responsive monitoring checklist. ii-d)-2 The case of the GBV is reported by the village to the post-administrative and the number of GBV cases has declined. ii-d)-3 The case of water-related conflicts is reported by the village to the post-administrative and the number of water conflicts cases has declined. ii-e) Gender specific consultation/ awareness raising campaign is held at least 1 time/ year at the respective post administrative/ WMC (2 times in 2023, 6 times in 2024, 10 times in 2025, 14 times in 2026 and 2027 respectively in all target watersheds.).	2 <sup>nd</sup> -7 <sup>th</sup> year	NGOs under supervision of MAF/DGF CIP with JICA TET*  Municipality Office in the target watersheds	ii-d) US\$ 8,400 (US\$ 300 x 2 years x 14 WMCs as part of WMC cost (GCF)) ii-e) US\$ 8,400 (US\$ 300/ time x 2 years x 14 WMCs as WMC cost (GoTL)) US\$ 8,400 for technical advice and materials (JICA)
<b>Component 2 Reinforcement of food security and livelihood diversification through implementation of micro programs/ FFSs on sustainable and climate resilient livelihoods effective for reducing CO2 emissions</b>					
<b>Outputs</b>	<b>Gender mainstreaming activities</b>	<b>Indicators and target</b>	<b>Time line</b>	<b>Responsibility</b>	<b>Costs</b>
2.1 Enhanced food security and livelihood diversification of vulnerable living in	i-a) Ensure women's participation in micro programs on agriculture, forestry and income generation/	i-a) More than 40% of the micro program participants are female.	2 <sup>nd</sup> -7 <sup>th</sup> year	NGOs under supervision	i-a) and i-d) US\$ 32,640

<p>hills and mountains in the target watersheds through implementation of micro programs/ FFSs on sustainable and climate resilient livelihoods</p>	<p>livelihood development. i-b) Include a sensitization session in agriculture and forestry micro programs on the importance of diversification of crop production, income sources, and/or fuelwood sources, especially near the house, all of which help women take care of family members or reduce their burdens even in climate-related crisis . i-c) Provide training on income generation /livelihood development technique especially for women. i-d) Assign women to the leader of a beneficiaries' group or to a model farmer for others.</p>	<p>i-b) and i-c) Food for consumption / production, income sources, and/or fuelwood sources are diversified as compared to before project by female participants (to be identified by the Impact Assessment Survey). i-c) At least 5 training courses are introduced for livelihood development/ income generation (e.g., chips making and mushroom cultivation) where Income Generation (IG) micro program is selected by the community (Tentatively 690 women from 23 villages are targeted to participate in the training). i-d) More than 30% of group leaders/ model farmers are female.</p>		<p>of MAF/DGF CIP with JICA TET*  Municipality Office in the target watersheds</p>	<p>(US\$ 480 x 68 villages as part of Micro-program Cost (GCF)) i-b) US\$21,600 (US\$ 480 x 45 villages as part of Micro-program Cost (GCF)) i-c) US\$ 1,278,898 (US\$74,139 x3/4 x 23 villages as part of IG Micro-program Cost (GCF))</p>
<p>2.4 Enhanced capacity of MAF field officials for provision of hands-on training and coaching on relevant sustainable and climate resilient livelihoods (e.g., climate resilient agriculture, agroforestry)</p>	<p>ii-a) Ensure women's participation in the training courses. ii-b) Provide special guidance (ToT) on gender mainstreaming to MAF/NGO officers about food security, nutrition improvement and techniques on livelihood development.</p>	<p>ii-a) More than 30% of the participants are female officials. ii-b) At least 3 MAF/NGO field officers, including at least 1 female officer, per municipality are equipped with technical knowledge relating to gender issues and engaged in field training for rural women (to be confirmed by the training assessment report).</p>	<p>2<sup>nd</sup> -5<sup>th</sup> year</p>	<p>MAF/DGF CIP with JICA TET*</p>	<p>ii-a) and b) US\$ 7,200 (US\$ 1800 x 4 watersheds as part of Training costs (GCF)) US\$ 7,000 (US\$ 1,000 x 7 times as part of Training costs (GoTL)) US\$ 3,600 (US\$ 900 x 4 watersheds for technical advice and materials (JICA)</p>
<p><b>Component 3 Institutional and capacity development for scale-up of CBNRM/ CF beyond the target areas</b></p>					
<p><b>Outputs</b></p>	<p><b>Gender mainstreaming activities</b></p>	<p><b>Indicators and target</b></p>	<p><b>Time line</b></p>	<p><b>Responsibility</b></p>	<p><b>Costs</b></p>
<p>3.1 Strengthened institutional and regulatory systems for implementation of the CBNRM and CF approaches in</p>	<p>i-a) Review the existing government legislative and technical documents from a gender point of view.</p>	<p>i-a) Gender considerations are stated in the legislative and regulatory documents developed, addressing the importance</p>	<p>1<sup>st</sup> – 7<sup>th</sup> year</p>	<p>MAF/DGF CIP with JICA TET*</p>	<p>US\$3,207 (US\$1069 x 3</p>

other watersheds		of different interests and benefits of men and women, the importance of involvement of women in planning and implementing CBNRM/ CF, the methodologies of involvement and major gender issues found so far and possible measures for them .			meetings (JICA) US\$6,500 (US\$ 500 x 13 municipalities)
3.2 Enhanced MAF technical officials' capacity for implementation of the CBNRM and CF approaches, particularly PLUP, CCVA, enhancement of local governance capacity, CF, and climate change adaptation measures	ii-a) Ensure women's participation in the training courses. ii-b) Provide special guidance on gender mainstreaming to MAF/NGO officers about food security, nutrition improvement and techniques on livelihood development.	ii-a) More than 30% of the participants are female officials. ii-a) At least 3 MAF/NGO field officers, including at least 1 female officer, per municipality are equipped with technical knowledge relating to gender issues.	1 <sup>st</sup> – 7 <sup>th</sup> year	MAF/DGF CIP with JICA TET*	US\$10,176 (US\$800 x 7 times + US\$1144x 4 times) (JICA) US\$ 7,000 (US\$1000 x 7 times) (GoTL)
3.4 Facilitation of scale-up of the CBNRM and CF approaches in other watersheds	iv-a) Introduce good gender mainstreaming practices taken in the project in the seminars. iv-b) Ensure female participation in national/ international seminars. iv-c) Share good gender mainstreaming practices of the project as well as other similar ones at the side events of the international conference meetings.	iv-a) At least 3 good gender mainstreamed practices are presented in the seminars to encourage other projects to adopt and replicate such practices. iv-b) At least more than 30% of participants in the seminars are women playing the vital roles of sharing experiences and lessons learnt. iv-c) At least 3 good gender mainstreamed practices are presented in the side events of the international conference meetings.	2 <sup>nd</sup> – 7 <sup>th</sup> year	MAF/DGF CIP with JICA TET*	US\$ 6,000 (US\$3000 x 2 times as part of seminar cost (GCF) US\$ 39,000 (US\$ 13,000 x 3 times as part of travel cost (GCF)) US\$ 6,000 (USD2000 x 3 times as part of material cost (GCF)) US\$ 6,000 (US\$1000 x 6 times) for follow-up, etc. (GoTL) US\$3,000 for technical advice

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Note: \* TET procures the expert of Training with Gender Mainstreaming, who is primarily responsible for undertaking this GAAP.

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