AFoCO Project Document

Project code	*AFoCO/018/2020*

Project Profile	
Project title	**Development of Agroforestry Models for Promotion of Reforestation in the Different Zones in Timor-Leste**
Project duration	Estimated start date: 17 January 2021 Estimated end date: 16 January 2024
Implementing Agency	General Directorate of Forest, Coffee, and Industrial Plants (GDFCIP), - Lead Center for International Forestry Research (CIFOR) – Implementing partner
Participating countries	Timor-Leste
Project site	1. Bobonaro Municipality (Central Zone) – 2 sites 2. Liquica Municipality (North Zone) – 1 site 3. Covalima Municipality (South Zone)- 2 Sites 4. Ermera Municipality (Central Zone) – 1 site
Main objective	Country's efforts for reforestation and sustainable forest management are strengthened through development and dissemination of agroforestry-based reforestation models in parallel with i) institutional capacity development, ii) promotion of the CB-NRM mechanism, iii) coordination/collaboration with MAF DPs, and iv) strengthening of linkages with knowledge sharing at the regional level.
Target Area[1]	Primary: PA 1- Initiating customized restoration and reforestation models Secondary: PA 4- Local livelihood improvement and community based small enterprise development
Budget and source of finance	Total: US$ 605,580 - AFoCO: US$516,700 - National: US$ 88,880 (In-kind)
Proponent Profile		
Name/ Position	Mr. Raimundo Mau Position: General Director of Forest, Coffee and Industrial Plants	Signature Date
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[1] Refer to the list of target areas which is in accordance with the objectives and prevailing strategic plan of AFoCO (provided by the Secretariat).

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Abbreviations and Acronym

AEZ	Agro-ecological zone
AFoCO	Asian Forest Cooperation Organization
ASEAN	Association of Southeast Asian Nations
CB-NRM	Community-Based Nature Resources Management
CIFOR	Center for International Forestry Research
DGFCIP	Directorate General of Forestry, Coffee and Industrial Plants
DP	Development partner
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GoTL	Government of Timor Leste
JICA	Japan International Cooperation Agency
M&E	Monitoring and evaluation
MAF	Ministry of Agriculture and Forestry
NDFWM	The National Directorate of Forest and Watershed Management
NGO	Non-Governmental Organization
PLUP	Participatory Land Use Planning
SAPIP	Sustainable Agriculture Productivity Improvement Project
USAID	US Agency for International Development
WB	World Bank

SUMMARY

In Timor-Leste, about 183,800 ha of forests had disappeared between 2003 and 2012. During the same period, nearly 171,000 ha of dense forests had been degraded and converted into sparse forests or other forms of land use. Ministry of Agriculture and Fisheries (MAF), particularly the Office of Director General of Forestry, Coffee and Industrial Plants (DGFCIP), and international agencies/donors (DPs) have made efforts of reducing the deforestation rate through reforestation over past decades. Nevertheless, even at present, deforestation and forest degradation remain as critical issues to be addressed in the country.

One of the technical weaknesses in the promotion of reforestation in the country is a lack of data and knowledge on agroforestry-based reforestation models, which must be suitable in different natural and socio-economic contexts in Timor-Leste. As there are few agroforestry models proven in the field, it is essential to develop and demonstrate agroforestry-based models suitable for introduction in the different agro-ecological and socio-economic conditions in the country to enable MAF/DGFCIP to promote reforestation in collaboration with local communities in the entire country.

Hence, the proposed project will focus on i) establishment of field-tested agroforestry systems/models in the different agro-ecological zones, which are effective in reforestation and livelihood improvement, and ii) building of the institutional capacity to promote reforestation by demonstrating and scaling up the agroforestry systems/models in combination with CB-NRM approaches.

The main objective of the proposed project is to strengthen country's efforts for reforestation and sustainable forest management through development and dissemination of agroforestry-based reforestation models in parallel with i) institutional capacity development, ii) promotion of the CB-NRM mechanism, iii) coordination/collaboration with MAF DPs, and iv) strengthening of linkages with relevant stakeholders and AFoCO member countries for knowledge sharing at both the national and regional levels.

To achieve the project objectives, the project specifically aims to achieve the following three (3) outputs (specific objectives):

Output 1: Promote reforestation throughout the country by developing and disseminating agroforestry-based reforestation models suitable for introduction in different natural conditions in the typical agro-ecological zones in the country and effective in satisfying the needs of local communities.

Output 2: Strengthen institutional capacity of MAF/DGFCIP and the relevant offices to promote reforestation and sustainable forest management in collaboration with MAF DPs, NGOs, and local communities.

Output 3: Build and strengthen linkageswith relevant stakeholders in the country as well as the region (especially with AFoCO member countries) for knowledge sharing and scale-up of the agroforestry-based reforestation models.

DGFCIP of MAF will be the Project Director of the Project who will bear the overall responsibility for the administration and implementation of the Project, while National Director of the National Directorate of Forest and Watershed Management will act as the Project Management who shall be responsible for the managerial and operational matters of the Project. A steering committee composed of the relevant national directorate and municipal offices of

MAF and other institutions/organizations is to be formed for the effective and efficient implementation of the project.

Two types of monitoring: i) regular monitoring and ii) periodic monitoring, will be done to monitor the project activities, to keep the project on the right track and to evaluate the project performance. Regular monitoring is to be undertaken by the officials of NDFWM and MAF municipal offices to monitor the progress, find out any problems and validate the results reported from the field, while the periodic monitoring is to be carried out by NDFWM and other national directorates in the end of the 2nd year and before 6 months of the ends of the project (as mid-term and terminal monitoring and evaluation (M&E) to assess the project in terms of efficiency, effectiveness, relevance, impact, and sustainability.

The total project cost is estimated at US\$ 605,580, of which US\$ 516,700 is expected to be funded by AFoCO and US\$ 88,880 will be borne by the GoTL. The project period is 3 years.

SECTION A. PROJECT CONTEXT

1. Background

In Timor-Leste, about 183,800 ha of forests had disappeared between 2003 and 2012. During the same period, nearly 171,000 ha of dense forests had been degraded and converted into sparse forests or other forms of land use. Deforestation and forest degradation have been caused by shifting cultivation, free-animal grazing, forest fires and illegal logging, which are mainly done by the marginalized upland communities. Behind such drivers of deforestation/forest degradation are the major underlying factors weak law enforcement, insufficient legislative systems, limited human resources, insufficient agriculture and forestry extension services, and limited knowledge on agroforestry techniques.

Ministry of Agriculture and Fisheries (MAF), particularly the Office of Director General of Forestry, Coffee and Industrial Plants (DGFCIP), and international agencies/donors (DPs) have made efforts of reducing the deforestation rate through reforestation over past decades. Nevertheless, even at present, deforestation and forest degradation remain as critical issues to be addressed in the country.

One of the technical weaknesses in the promotion of reforestation in the country is a lack of data and knowledge on agroforestry-based reforestation models, which must be suitable in different natural and socio-economic contexts in Timor-Leste. The introduction and promotion of such agroforestry-based models are requisite for promotion of reforestation, especially under the current circumstances where commercial timber exploitation is prohibited in principle in the country. As there are few agroforestry models proven in the field, it is essential to develop and demonstrate agroforestry-based models suitable for introduction in the different agro-ecological and socio-economic conditions in the country to enable MAF/DGFCIP to promote reforestation in collaboration with local communities in the entire country.

Reference:

National Forest Conservation Plan (2013)
The Study on Community Based Integrated Watershed Management in Laclo and Comoro
River Basins (JICA Development Study: 2010)

2. Conformity with AfoCO's objectives and strategic priorities

The Project has primary consistency with Priority Area 1- Initiating customized reforestation models, as well as secondary consistency with Priority Area 4- Local livelihood improvement and community-based small enterprise development, as follows.

    i.   The Project is to develop several agroforestry models as triggers to reforestation in different locations by customizing experiences (best/successful practices and models) gained in other Asian countries similar in nature to Timor-Leste (such as Indonesia and Vietnam) to the context of Timor Leste.

        For example, the experiences in Indonesia and Vietnam could provide various insights into development of several types of agroforestry models (e.g., Taungya system, coffee-based model, and other models mixed with fruits trees and/or industrial plants) in Timor Leste, as the natural conditions in both the countries are similar to those in Timor-Leste, and therefore, the adaptability of agroforestry models in both the countries to circumstances in Timor-Leste are expected to be high. In fact, coffee, some fruit trees (e.g., rambutan, durian, mango, jackfruits and dragon fruits) and industrial plants (e.g.,

vanilla, pepper, clove, and candle nut) have existed in Timor-Leste; it would, therefore, not necessarily be difficult to be adopted by local communities. If anything, the models could be widely accepted by local communities if they would be effective in improving local livelihoods through production of marketable products.

ii. The Project also contributes to capacity development of various actors, as it has components of study tours to other AFoCO member countries as well as a series of on-farm training.

For example, study tours to Indonesia and VietnamVietnam are planned not only for MAF officers at national and subnational levels but also for local community leaders or core farmers, so that all stakeholders have common understanding of the agroforestry-based models and motivation for introduction and development of the same. Based on fundamental and common understanding, on-farm training will be designed by MAF officials and implemented by NGOs and MAF field officers (forest guards and extension officers); and core-farmers would play a vital role in farmer-to-farmer extension.

iii. Furthermore, experiences and knowledge (e.g., lessons learned and best practices) obtained by the Project will be shared with various MAF DPs through donor coordination meetings, exchange visits, or joint implementation of training or workshop. The knowledge and results obtained through the project would be useful for the DPs, particularly those supported by WB and EU, namely SAPIP and EU Agroforestry Project. The former project, SAPIP, aims to promote sustainable agriculture models which contribute to local livelihood improvement and sustainable management of the major watersheds in the country, while the latter, EU Agroforestry Project, plans to promote agroforestry models along with development of community-based small enterprises in several municipalities in the country.

3. Regionality

While Timor-Leste is the observer of ASEAN and to obtain a membership in coming future, the project is highly associated with Strategic Plan of Action For ASEAN Cooperation on Forestry (2016-2025). It will contribute to Strategic Trust 1 "Enhancing Sustainable Forest Management", which includes Activities to "facilitate reforestation and afforestation programmes, review and assess fiscal and other social and economic incentives for enhancing forest conservation and restoration". It may also bring positive influences over Strategic Trust 4 "Institutional Strengthening and Human Resource Development," since it can facilitate cross-learning among ASEAN members in enhancing sustainable forest management practices, through study tours and training.

In addition, the project is expected to help Timor-Leste diversify sources of state revenue, which would contribute to preventing itself from further dependences on oil revenues. At present, much of the state revues derives from oil business; the government has been making endeavors for economic diversification. The good practices and lessons learned from the experience of the project over agroforestry development will be shared with and transferred to various projects supported by DPs, as stated above. Positive impacts on agriculture sector and then on national economy may be foreseen from their joint efforts. This eventually promotes global and regional integration of Timor-Leste, including its application to ASEAN membership and creating "enabling environment" for the private sectors to expand labor intensive sectors such as agriculture and tourism.

Reference:

Strategic Plan of Action for ASEAN Cooperation on Forestry (2016-2025)

4. Information on project target area

4.1. *Geographic information (A map of the project site location will be included)*

Timor-Leste can be divided into 6 agro-ecological zones (AEZs) according to altitude and rainfall (See Figure and Table 1). The project will explore the development of appropriate agroforestry models in the respective AEZs, thus a total of six (6) agroforestry models which cover 6 subdistricts in 4 selected municipalities.
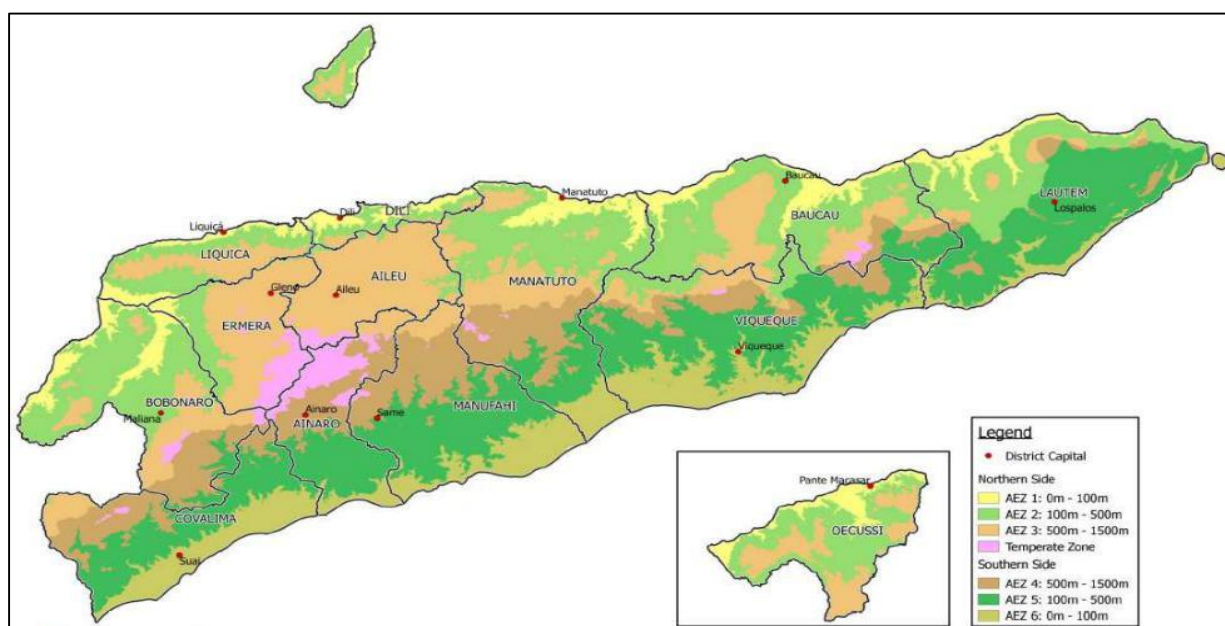
Figure 1. Agro-Ecology Zones (AEZ) in Timor Leste

Table 1. Characteristics of AEZs in Timor Leste

AEZ	Altitude	Rainfall
AEZ-1	0-100 m	500-1500 mm
AEZ-2	100- 500 m	500-1500 mm
AEZ-3	500- 1500 m	1500-3000 mm
AEZ-4	0-100 m	1500-2000 mm
AEZ-5	100- 500 m	1500-2000 mm
AEZ-6	500- 1500 m	1,700-3000 mm

In administrative terms, the project will target 6 Posts-administrative (sub-districts) from 4 Municipalities (districts) to correspond to a respective AEZ; Maliana and Bo bonaro (Bobonaro district), Maubara (Liquica district), Zumalai and Tilomar (Covalima d

istrict) and Railako (Ermera district).

For the establishment of demonstration plots and the implementation of on-farm training, the project will select one Suco (village) in each Sub-district. The selection criteria of the target suco will be further examined and determined, but they will include not only the representativeness of the AEZ designated but also the matter of whether it is located in priority watersheds[2] specified by MAF.

The relation among target AEZ, Sub-district, District, and Priority Watersheds can be summarized in the table below.

Table 1. Project targeted areas

AEZ	Target sub-district	District	Priority Watershed
AEZ-3	Bobonaro	Bobonaro	Loes watershed
AEZ-2	Maliana		
AEZ-5	Tilomar	Covalima	Mola watershed
AEZ-6	Zumalai		
AEZ-3	Railako	Ermera	Laclo and Comoro watershed
AEZ-1	Maubara	Liquica	Loes watershed

4.2. Environmental information

The table below shows the historical trends of forest coverage in the target Posts-administrative. The data in 2010 could serve as baseline data for future evaluation over deforestation.

Table 2. Forest coverage in targeted sub-districts

Sub-district	2003			2010		
	Forest Area (Ha)	Total Area (Ha)	Forest Cover Rate (%)	Forest Area (Ha)	Total Area (Ha)	Forest Cover Rate (%)
Bobonaro	13,034.265	21,639.32	60.2	7,327.99	21,311.92	34.4
Maliana	14,243.64	23,851.67	59.7	10,380.90	23,812.62	43.6
Tilomar	15,077.31	19,395.15	77.7	11,670.13	19,270.49	60.6
Zumalai	17,827.64	28265.19	63.1	13,418.17	28,116.25	47.7
Railaco	8,651.08	9,918.62	87.2	4,598.31	9,905.75	46.4
Maubara	22,628.79	25,772.80	87.8	15,552.75	25,647.47	60.6
National Total	1,053,018.23	1,426,518.94	73.8	869,130.41	1,410,500.45	61.6

Source: Nippon Koei Co., Ltd / *Asia Air Survey Co., Ltd.:* Forest Transition of 1990, 2003 and 2010 in Timor-Leste

4.3. Socio-Economic information

The project will introduce several agroforestry models which are expected to improve

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[2] There are 29 priority watersheds in Timor-Leste.

agricultural production and increase cash income from farming. The table 4 shows some socio-economic baseline data in the targeted sub-district, relating to agriculture.

Table 4. Level of agriculture in target sub-districts

Sub-district	Private Households	Level of Agricultural Activity		
		Only minor agriculture activity (backyard)	Producing mainly for home consumption with some sales	Producing mainly for sale with some home consumption
Bobonaro	4,467	2,380	1,919	108
Maliana	4,942	1,968	2,551	103
Tilomar	1,763	533	1,142	69
Zumalai	2,419	646	1,713	43
Railaco	1,950	1,139	715	49
Maubara	3,741	2,213	1,191	316
National	204,597	84,217	94,159	5,257

Source: Timor-Leste Population and Housing Census 2015

Table 3. Types of crops produced in targeted sub-districts

Types of crops produced	Number of Private Households Producing Crops (2015)					
	Bobonaro	Maliana	Tilomar	Zumalai	Railaco	Maubara
Rice	1136	3,439	316	1,591	277	639
Maize	4120	3,487	1,541	1,925	1,776	3,317
Cassava	3905	2,765	1,545	1,812	1,726	3,067
Sweet potato	3475	2,253	1,276	1,541	1,445	1,994
Vegetables	2613	2,315	1,574	1,701	1,430	2,365
Beans	3071	2,075	1,456	1,552	1,433	2,357
Coffee	2261	1,450	344	832	1,663	2,275
Coconout	2771	2,364	1,367	1,590	1,318	2,762
Fruith (permanent)	2414	1,295	1,295	1,474	2,346	2,346
Fruit (temporary)	2314	2,267	1,320	1,522	1,351	2,473

Source: Timor-Leste Population and Housing Census 2015

SECTION B. RATIONALE AND OBJECTIVES

1.   Rationale

1.1. Stakeholder analysis

The communities in the target villages will be the primary stakeholder of the project along with MAF (DGFCIP and MAF Municipalities). The results of the stakeholder analysis, based on findings from different consultations, are summarized below.

Table 4. Stakeholder analysis

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
Primary Stakeholders				
Target communities/ Sucos	Around 600 households in 6 target villages; no organisations among them; small holders in agriculture; and follow subsistence farming/shifting cultivation NDs have expertise in agriculture, horticulture, livestock, forestry, fisheries, research & extension	Problems: Poor productivity and less production from farms; soil erosion; less availability of forest produces – timber and fuelwood; over grazing and crop damage. Needs and Interests: Knowledge and support for land development and integrated farming; Support for reforestation; Skills for value addition and access to better markets for inputs and outputs.	Reforestation and forest conservation; increase in farm productivity with other environmental services; increase in income; knowledge and skills on agroforestry and upland management	Primary stake in the project in terms of planning and implementation of project interventions. Direct project participants, beneficiaries, comanagers of local natural resources.
Technical National Directorates (NDs) of MAF	NDs have expertise in agriculture, horticulture, livestock, forestry, fisheries, research & extension	Problems: Lack of financial resources; inadequate human resources; poor access to new technologies Needs and Interests: Financial support; Collaboration for technical support, knowledge sharing and building linkages.	Institutional capacity building; establishment of models for reforestation through agro-forestry in critical watersheds/ agro-ecological zones	Key responsibility for planning and implementation of the project

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
MAF Municipality Office	Municipalities are responsible for implementation of programs of MAF in their respective geographies. They have technical and extension staff and forest guards.	Problems: Inadequate budget for implementation of the program as well as sustaining the programs; Inadequate staff, equipment, facilities etc. Needs and Interests: Securing budgets for program; access to new technologies, equipments, facilities; additional human resources etc.	Establishing a model in each municipality for reforestation through agroforestry and popularization of the model to other areas; staff capacity building and collaborations for knowledge sharing etc.	Responsible for implementation of the project in respective municipality Municipalities will be involved in the project)
Technical National Directorates (NDs) of MAF	NDs have expertise in agriculture, horticulture, livestock, forestry, fisheries, research & extension	Problems: Lack of financial resources; inadequate human resources; poor access to new technologies Needs and Interests: Financial support; Collaboration for technical support, knowledge sharing and building linkages.	Institutional capacity building; establishment of models for reforestation through agro-forestry in critical watersheds/agro-ecological zones	Key responsibility for planning and implementation of the project
MAF Municipality Office	Municipalities are responsible for implementation of programs of MAF in their respective geographies. They have technical and extension staff and forest guards.	Problems: Inadequate budget for implementation of the program as well as sustaining the programs; Inadequate staff, equipment, facilities etc. Needs and Interests: Securing budgets for programs; access to new Technologies, equipment, facilities; additional human resources etc.	Establishing a model in each municipality for reforestation through agroforestry and popularization of the model to other areas; staff capacity building and collaborations for knowledge sharing etc.	Responsible for implementation of the project in respective municipality (6 nos. of Municipalities will be involved in the project)

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
Implementing partner: Center for International Forestry Research (CIFOR), Bogor, Indonesia	A non-profit international research institution experiences focusing on sustainable landscapes, nature based solution, landscape restoration in developing countries.	Problem: Acknowledges deforestation and forest degradation as a major problem with huge negative impacts on ecological services Needs, Interests: Facilitate and support DFCIP staff and other stakeholders to tackle deforestation and forest degradation	Facilitate the implementation,capacity building of MAF staff and local farmers, knowledge sharing through publication of research on the agroforestry approaches and the provision of ecosystem goods and services to wider audiences.	CIFOR will work with MAF Municipalities to mobilize and capacitate the communities and to carry out Participatory Land Use Planning, Farmers Field Schools on agroforestry models etc.
Secondary stakeholders				
Indonesian Institution – Balai penelitian dan pengembangan teknologi agroforestry (BP2TA)	It is a Centre for Research and Development under the Ministry of Environment and Forestry,Government of Indonesia. It has long standing expertise in reforestation, agro-forestry, staff training etc.	Problems: Limitations of budget to come and organize training in Timor Leste. Needs and Interests: Willing to provide necessary support in staff training and study tours.	Collaborations and knowledge sharing for multiplications of their agro-forestry models.	Help in conducting training and study tours for the MAF Staff and community Leaders/core farmers
Vietnam Forest Service of Ministry of Agriculture and Rural Development (MARD)	The Ministry through its various institutions has established varied agro-forestry systems in Vietnam.	Problems: No projects/ resources to support this initiative in Timor Leste. Needs and Interests: Collaborations with MAF, Timor Leste.	The Ministry can get information on the agro-forestry practices in Timor Leste and can help MAF to introduce agroforestry systems established in Vietnam.	Organisation of training programmes and study tour for the staff of MAF, Timor Leste and Community Leaders.

Stakeholder group	Characteristics	Problems, needs, interests	Potential benefits	Involvement in the project
Tertiary and other stakeholders				
Development Partners (DPs)	There are around 20 nos. of Development Partners implementing different agriculture related projects in Timor Leste. They have resources for implementation of their specific projects.	Problems: Limited budget and institutional capacity with MAF for sustainable forest management; limitations in sustaining the programs etc. Needs and Interests: Long term strategy for reforestation and sustainable forest management; securing adequate program budget by MAF; deploying adequate technically competent human resources etc.	Knowledge on appropriate agroforestry systems/ models for different agroecological zones.	DPs can learn the reforestation through agroforestry models from the project and integrate in their respective projects.

One of the important stakeholders for the proposed project is the on-going project implemented by JICA, namely, CBNRM Project Phase II (hereinafter refer to as "the JICA CBNRM Project"). The JICA CBNRM Project has developed and promoted a field-level mechanism for sustainable forest and natural resource management (so-call "the CBRNM mechanism) where local communities are capacitated to manage forest and land resources in a proper and sustainable manner. The CBNRM mechanism has been introduced in more than 20 villages in the country and proven effective in reduction of deforestation and forest degradation while maintaining local livelihoods. The introduction and establishment of the mechanism is a continuous capacity building process of local communities for sustainable management of natural resources, specifically forests and lands, in the respective localities. The process is composed of the following activities:

1) Participatory Land Use Planning (PLUP): is a series of dialogues for several months, where local leaders and communities are to: i) assess the current status of lands and other natural resources, ii) discuss and determine how to use the same in the future for

sustainable development, iii) discuss and develop village rules on not only natural resource management but also social norms, and iv) publicize and disseminate the future land use plan and village rules among local communities in and around the village through the customary ceremony (so-call "tarabandu" ceremony);

2) Regular meetings with village leaders after PLUP: are village meetings to be held with village leaders on a monthly or bi-monthly basis for at least two (2) years after PLUP to enhance their governance capacity to use the village rules and future land use plan for sustainable natural management in the village; and

3) Small-scale agricultural and/or forestry programs: are agricultural and/or forestry extension services to help local communities change their land use according to the future land use plan.

The field trials made by the JICA CBNRM Project as well as other MAF DPs, such as FAO, USAID, and GIZ, have proven the above-listed activities, particularly PLUP and regular meetings after PLUP, effective in reduction of the incidence of forest fires and free animal grazing in the localities. As the same activities are expected to be highly compatible with introduction of the agroforestry-based reforestation models, MAF/DGFCIP proposes that the experiences of the JICA CBNRM Project be fully used in the proposed project.

1.2. Problem analysis

As described in **Section A**, deforestation and forest degradation have widely occurred in Timor-Leste between 2003 and 2012. Deforestation and forest degradation have been caused by shifting cultivation, expansion of agriculture areas, free-animal grazing, forest fires, illegal logging for timber, poles and fuel wood, increased dependency on wood as cooking fuel etc. which are mainly attributed to human economic activities done by the marginalized upland communities. These drivers of deforestation and forest degradation have been further accentuated by several underlying causes, such as insufficient legislative systems, existing land ownership and tenure systems, weak law enforcement, limited human and financial resources, poor access to technologies, poor management information system, insufficient agriculture and forestry extension services, and limited knowledge on agroforestry techniques proved in the field.

The results of the problem analysis which illustrates the direct causes and underlying factors of deforestation are shown overleaf. Although MAF, particularly DGFCIP, and international agencies/donors (hereinafter referred to as Development Partners/ DPs) have been putting efforts into reforestation over years to reduce the deforestation rate by tackling the identified problems, deforestation and forest degradation still remain the crucial issue to be addressed in the country.
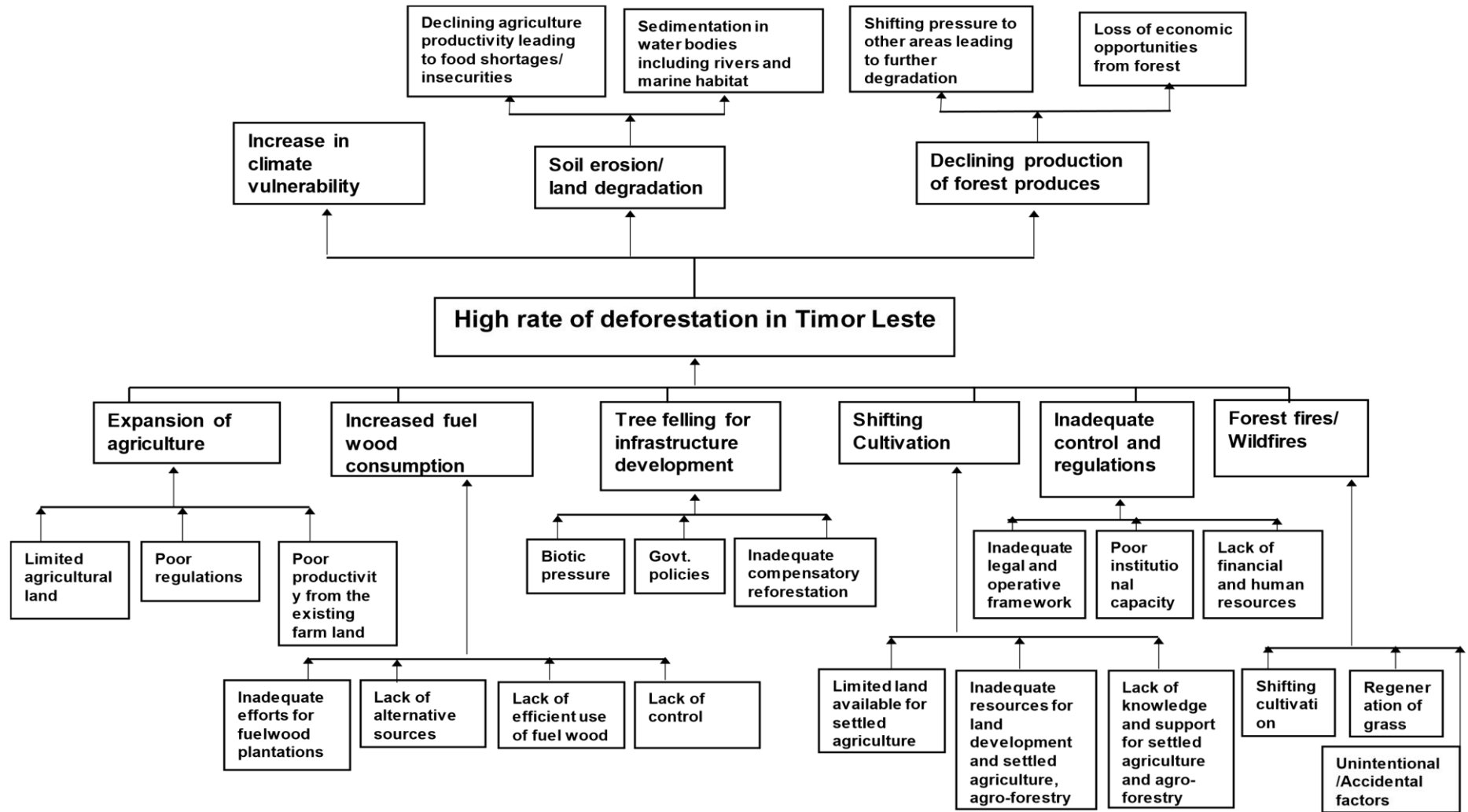
Figure 2. Problem tree analysis

The problem trees shown in the previous page indicate the situations in the forest sector in the country. Among other things, shifting cultivation and its associated problems, namely expansion of   agriculture lands   and occurrence of forest fires are considered as the major drivers of deforestation and forest degradation. Introduction of an effective self-regulatory mechanism along with productive-sustainable land use models will be essential to tackle those issues as they are attributed to a lack of knowledge or extension services on sustainable land management and weak regulatory measures against environmentally destructive activities.

Hence, MAF/DGFCIP proposes this project aiming to introduce a mechanism for sustainable and profitable land and forest management through i) introduction of agroforestry-based reforestation models technically and economically adaptable to local settings and ii) enhancement of local government capacity to regulate environmentally destructive activities, such as shifting cultivation and any other actions causing forest/wild fires.

The following figure shows which drivers the proposed project could tackle.

Figure 3. Targets of agroforestry model project

1.3 Logical framework matrix

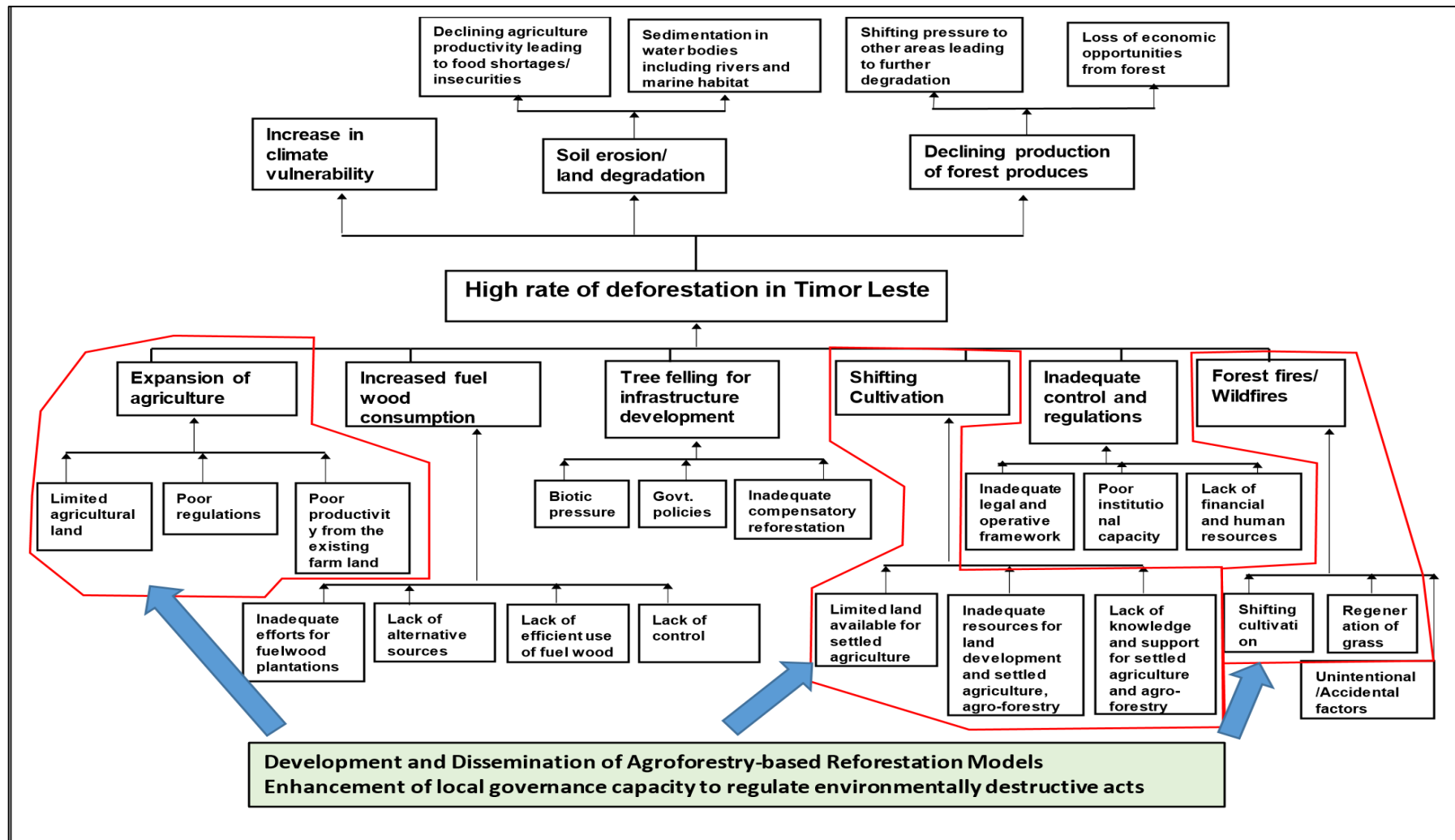| Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Goal MAF/GDFCIP takes initiatives for promotion of reforestation and sustainable forest management in collaboration with MAF DPs, NGOs, and local communities.	1. The national deforestation rate is reduced by at least 30%. 2. Demonstration plots on the agroforestry-based reforestation models are established in all the municipalities concerned with 29 important watersheds. 3. The agroforestry-based models are introduced in another 20 sucos (villages) in collaboration with MAF DPs.	1. Forest inventory survey with satellite image analysis 2. Annual reports of MAF/GDFCIP DPs-project progress reports (Database of GDFCIP-MAF coordination meeting)	1. The Government policies and programs remain favorable for expansion/ strengthening of reforestation programs. 2. The MAF secures adequate budget allocations for reforestation programs.
Objective The main objective is to strengthen country's efforts for reforestation and sustainable forest management through development and dissemination of agroforestry-based reforestation models in parallel with i) institutional capacity development, ii) promotion of the CB-NRM mechanism, iii) coordination/collaboration with MAF DPs, and iv) strengthening of linkages with	1. Effective agroforestry- based reforestation models suitable for introduction in the different AEZs and social context in the country are developed and disseminated to the MAF municipalities concerned with 29 important watersheds. 2. At least 50 % of the households in the target communities adopt the agroforestry-based reforestation models through the continuous extension services provided by MAF field officers. 3. All target sucos reduce the incidence of forest destructive events (e.g. forest fires, illegal cutting, and free grazing) by at least 50% with reference to the base year 2018.	1. Project completion report/M&E report or Minutes of introductory seminars) 2. Project completion report Memos of monthly monitoring meetings (Project completion report) 3. DPs-project progress reports (Database of GDFCIP-MAF coordination meeting)	1. The Government policies and programs remain favorable for expansion/ strengthening of reforestation programs. 2. The MAF secures adequate budget allocations for reforestation programs. 3. No drastic change happens in the climate conditions 4. MAF DPs integrate the agroforestry-based

[Attachment-A]

Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
relevant stakeholders for knowledge sharing at both the national and regional levels.	1. MAF DPs introduce and adopt the agroforestry-based models in at least 20 DPs project sucos.		models into their current and upcoming projects.
Output 1: To develop and disseminate agroforestry-based reforestation models suitable for introduction in different natural conditions in the typical AEZs in the country and effective in satisfying the needs of local communities.			
Activity 1.1: Conduct Participatory Land Use Planning (PLUP) in 6 target sucos in 6 municipalities, including preparation of Future Land Use Plan and Village Regulations to manage forest and other natural resources.	All the target sucos develop Future Land Use Plans and Village regulations.	Project progress reports	Suco election does not adversely affect the acceptance and understanding of the project among communities and village leaders.
Activity 1.2: Establish the CBNRM mechanism in 6 target sucos and periodically monitor the effectiveness in a participatory manner.	All the target sucos establish the CB-NRM mechanism.	Minutes of monthly monitoring meeting at the target sucos	(Ditto)
Activity 1.3: Develop a set of technical manuals on development of the agroforestry based	Technical manuals on development of agroforestry-based models are put in place by MAF/DGFCIP as guidelines for further expansion.	MAF letters to officialize the use of the technical manuals	(Ditto)

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Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
reforestation models.			
Activity 1.4: Establish demonstration plots on the agroforestry-based reforestation models in the target sucos through a series of on-farm training / farmers field schools	The lists of training courses per agroforestry-based reforestation model with the number of participants in the training courses (FFSs) are prepared.	Project progress reports/ attendance lists	(Ditto)
Activity 1.5: Monitor, evaluate and record the process and results of development and management of the agroforestry-based reforestation models in the target villages	The survival rate of trees (timber, coffee, fruits, and industrial plants) planted in the demonstration plot at the end of the Project is more than 70%.	Project progress reports/ M&E report	The climate conditions remain favorable for FFSs and demonstration of the agroforestrybased models.
Output 2: To strengthen institutional capacity of MAF/DGFCIP and the relevant offices to promote the agroforestry-based reforestation models and sustainable forest management in collaboration with MAF DPs, NGOs, and local communities.			
Activity 2.1: Formulate an institutional development plan in consultation of different stakeholders	The institutional development plan is formulated for planning and implementation of agroforestry programs for sustainable forest management.	MAF letters to endorse the institutional plans	NGOs and Development Partners contribute to expansion of the agroforestry-based models.

Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Activity 2.2: Communicate with different institutions in ASEAN countries to arrange and conduct training, workshop and study tours.	TOR for the study tours and modules for the training programs are developed with reference to the institutional development plan.	TOR approved by MAF	(Ditto)
Activity 2.3: Organize and conduct study tours, training programs etc. in collaborations with different resource institutions.	Staff of MAF (DGFCIP and Municipalities) participated in study tours in Indonesia and Vietnam use their knowledge and skills gained in the tours for establishment of agroforestry-based reforestation models.	Project progress reports	(Ditto)
Output 3: To build and strengthen linkages with relevant stakeholders in the country as well as the region (especially with AFoCO member countries) for knowledge sharing and scale-up of the agroforestry-based reforestation models.			
Activity 3.1: Extract and document lessons and good practices through monitoring and evaluation of the project activities.	Lessons and good practices are obtained from the project and properly documented to share with relevant stakeholders and other AFoCO member countries.	Report on lessons learned and good practices from the project	The MAF municipal offices concerned secure sufficient budget for monitoring the project activities during the project period.
Activity 3.2: Share the results including lessons learned and good practices from the project with other MAF DPs and AFoCO member countries.	Lessons and good practices are shared and discussed with MAF DPs working in the forestry sector and other AFoCO member countries, through knowledge sharing in the MAF DPs coordination meetings and participation in events and meetings organized by AFoCO, respectively.	Minutes of the meetings of AFoCO	DP coordination meetings between DGFCIP and MAF DPs and AFoCO meetings are maintained.

Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
Activity 3:3: Strengthen the linkages and networking to share knowledge and provide guidance with MAF DPs and AFoCO member countries for scaleup of the agroforestry-based reforestation models.	Regular communication channels are established with MAF DPs and AFoCO member countries (e.g. meeting, guidance, and web-communication).	Minutes of meeting, web-site or records of email communication	(Ditto)

1.4   Justification

1.   Consistency with National Policies and Law

The proposed project is in line with the goal of the forest sector policy in Timor-Leste, which is the sustainable management of forests and watersheds in the country. Particularly, the project will contribute to the achievement of the following policy objectives of the policy:

- Protection of forests
- Reforestation and land restoration
- Watershed Conservation
- Community and private participation in forestry

Moreover, it is considered that the project could be a positive driver of the implementation of the Forest Basic Law (Regime Geral das Florestas) issued in 2017, as the agroforestry-based reforestation models could be useful tools for rehabilitation and conservation of forest resources while the CBNRM mechanism could lay the foundation for introduction of community forestry, which is the essential scheme for sustainable forest management in Timor-Leste.

Hence, the implementation of the project could be fully supported by the national policy and legislation in the forest sector in Timor-Leste.

2.   Consistency with the Eighth Constitutional Government's Priorities

The Eighth Constitutional Government established in 2018 officially set the priority government programs in August 2018. In the forest sector, more than 10 priority programs are set by the GoTL. Among other things, the project will contribute to the implementation of the following priority programs:

- Implementation of the Forest Conservation Plan, particularly the promotion of reforestation and agroforestry practices for sustainable forest management;
- Implementation of the Forest Basic Law;
- Planting of 1 million trees throughout the country;
- Promotion of technical and administrative training of forestry professionals; and
- Promotion of watershed management through community-based natural resource management.

MAF/DGFCIP judges that the proposed project is essential to the current Constitutional Government as it is highly consistent with its priorities.

3.   Address to Key Problems in the Forest Sector

The Project will specifically focus on two intervention areas to address key problems described in the problem analysis: i) shifting cultivation, ii) expansion of farm lands, and iii) forest/ wild fires. First, it will make multifaceted interventions to build the institutional capacity to emphasize, demonstrate and scale up agroforestry-based models effective in reforestation and livelihood improvement with an emphasis on CB-NRM approaches as an operational strategy for sustainable participatory forest management. The project will learn from the experiences of the AFoCO member countries, particularly Indonesia and Vietnam, about potential agroforestry models (designs, types and species of trees and crops, cultural practices, etc.) which could be introduced in the local settings of Timor-Leste

2. Objectives

2.1. Main objective (development objective)

The main objective is to strengthen country's efforts for reforestation and sustainable forest management through development and dissemination of agroforestry-based reforestation models in parallel with i) institutional capacity development, ii) promotion of the CB-NRM mechanism, iii) coordination/collaboration with MAF DPs, and iv) strengthening of linkages with relevant stakeholders for knowledge sharing at both the national and regional levels.

2.2. Specific objective(s) and success criteria & indicators

In order to achieve the main objective of the proposed project, the project specifically aims to attain the following three (3) outputs:

Output 1 (Specific Objective 1): Promote reforestation throughout the country by developing and disseminating agroforestry-based reforestation models suitable for introduction in different natural conditions in the typical agro-ecological zones in the country and effective in satisfying the needs of local communities.

Success criteria and Indicators:
  1) About 600 households in 6 villages are sensitized and capacitated on the field-tested agroforestry-based reforestation models.

  2) All the target villages establish the CB-NRM mechanism.

  3) The survival rate of trees (timber, coffee, fruits, and industrial plants) planted in the demonstration plot at the end of the Project is more than 70%.

Output 2 (Specific Objective 2): Strengthen institutional capacity of MAF/DGFCIP and the relevant officials to promote reforestation and sustainable forest management in collaboration with MAF DPs, NGOs, and local communities.

SECTION C. DESCRIPTION OF PROJECT INTERVENTIONS

(Section C will be composed of two (2) matrices without narrative descriptions.)

1. Work Plan and Schedule

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline												Notes
			Year 1				Year 2				Year 3				
			2021				2022				2023				
			1	2	3	4	1	2	3	4	1	2	3	4	
Preparatory Works			▮												
01 Procurement of Project Equipment			▮												
0.1.1 Procurement of motorbikes.	*No. of motorbikes*	*GDFCIP*	▮												
0..1.2 Procurement of office equipment	*No. of office equipment*	*GDFCIP*	▮												
Objective 1: To develop and disseminate agroforestry-based reforestation models suitable for introduction in different natural conditions in the typical AEZs in the country and effective in satisfying the needs of local communities.															
(Output 1)															
A.1 Conduct Participatory Land Use Planning (PLUP) in 6 target sucos in 4 municipalities															
A.1.1 Select and finalize the target sucos after necessary assessment and consultations.	*No. of target sucos (6 sucos), 1 planning workshop, baseline data on socio-economic and environmental conditions of all selected sucos*	*GDFCIP/MAF Municipal offices/CIFOR*	▮												
A.1.2 Select local NGOs and conclude the contract with NGOs for field level implementation of activities.	*1 implementing partner selected*	*GDFCIP*	▮	▮											CIFOR is invited to implement the project in collaboration with DGFCIP. Field activities will be conducted by both parties.
A.1.3 Conduct community mobilization and organization building.	*No. of meetings (2 meetings) each for the target sucos,*	*GDFCIP/MAF Municipal offices*		▮	▮										

Outputs	Performance Indicator	Responsible Person/ Body	Year 1 2021 1	2	3	4	Year 2 2022 1	2	3	4	Year 3 2023 1	2	3	4	Notes
minutes meeting				■	■										
A.1.4 Conduct Participatory Land Use Planning (PLUP) developed by JICA CBNRM Project and MAF) including preparation of Future Land Use Plan and Village Regulation to manage and govern forest and other natural resources.	*Future land use plans and village regulations for the 6 target sucos*	*GDFCIP/CIFOR / MAF Municipal offices*		■	■										
A.2 Establish the CBNRM mechanism in 6 target sucos and periodically monitor the effectiveness in a participatory manner.															
A.2.1 Organize Tara Bandu ceremonies at the target sucos to formalize village regulations.	*Three Tara bandu ceremonies*	*NGOs/MAF Municipal offices*					■								Three Tara Bandu ceremonies will be conducted instead of six to budget effectiveness and efficient.
A.2.2 Enhance the capacity of village committees concerned on protection and sustainable management of land and other natural resources through monthly review meetings on the implementation of CBNRM, and Village Regulation.	*Regular monitoring meetings at the 6 target sucos on trimonthly basis after tara bandu ceremonies*	*GDFCIP/MAF Municipal offices*						■	■	■	■	■	■	■	
A.2.3 Assist in documentation and record keeping at the community level on the implementation of CBNRM and village regulations	*Memos, other documentations of CBNRM and village regulation implemnetation.*	*GDFCIP/MAF Municipal offices*						■	■	■	■	■	■	■	
A.3 Develop a set of technical manuals on development of the agroforestry-based reforestation models.															This is conducted prior to A.2
A.3.1 Review existing manuals and technical documents on PLUP,	*Manuals collected*	*GDFCIP/CIFOR , MAF Municipal*	■												

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline Year 1 2021 1	2	3	4	Year 2 2022 1	2	3	4	Year 3 2023 1	2	3	4	Notes
agroforestry and reforestation in Timor-Leste.		*offices*	🟨												
A.3.2 Review manuals and documents relating to the agroforestry models in Indonesia and VietnamVietnam	*Manuals and guidelines collected*	*GDFCIP/CIFOR, MAF Municipal offices*	🟨												Vietnam will be additional country for the review because it is one of good examples on community- based restoration and coffee production.
A.3.3 Extract lessons learnt from the overseas study tours and training programs.	*Reports on study tours and training programs*	*GDFCIP/CIFOR, MAF Municipal offices*		🟨											
A.3.4 Prepare manuals on different agroforestry models to be introduced in the project areas.	*Manuals developed*	*GDFCIP/CIFOR, MAF Municipal offices N*			🟨										
A.3.5 Online workshop/Focus-group discussion for the technical review and enhancement of the manuals	*ROD of the workshop/focus-group discussion*	*GDFCIP/MAF Municipal offices*			🟨										
A.4 Establish demonstration plots on the agroforestry-based reforestation models in the target villages through a series of on-farm training / farmers field schools on development of the agroforestry-based reforestation models in the plots.															This is conducted prior to A.2
A.4.1 Develop suitable agroforestry-based reforestation models in the respective AEZs in consultation with communities, experts in Timor-Leste and relevant resource agencies/ organizations in Indonesia and Vietnam.	*6 agroforestry-based reforestation models developed for the 6 target sucos, 1 consultation workshop*	*GDFCIP, MAF Municipal offices, CIFOR,*					🟨								
A.4.2 Develop a detailed work plan for development of agroforestry/	*6 detailed work plans on FFSs in*	*GDFCIP, MAF Municipal*					🟨								

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline												Notes
			Year 1				Year 2				Year 3				
			2021				2022				2023				
			1	2	3	4	1	2	3	4	1	2	3	4	
reforestation models and conducts of Farmers Field Schools (FFSs) on demonstration and implementation of agroforestry models.	*the 6 target sucos*	*offices, CIFOR*				▮									
A.4.3 Organize on-site training courses (FFSs) for the communities and extension workers.	*No. of training courses according to the plans and No. of participants in the training courses (FFSs)*	*NGOs/MAF Municipal offices*				▮	▮								Trainers will be served by extension department of MAF
A.5 Monitor, evaluate and document the process and results of development and management of the agroforestry-based reforestation models in the target villages.	*Progress and project reports, Community based Restoration Monitoring System (CBRMS), Data based of tree growth monitoring*	*DGFCIP/CIFOR MAF Municipal offices*						▮	▮	▮	▮	▮	▮	▮	CIFOR developed a digital community-based restoration monitoring system (CBRMS). This system could be adopted on this activity to encourage community engagement in the program, enhance locals' knowege on monitoring, provide real time data, potential reducing monitoring cost, and suitable to adapt on the current Covid 19 pandemic (reduce staff travel to outside their home)
Objective 2 To strengthen institutional capacity of MAF/DGFCIP and the relevant offices to promote the agroforestry-based reforestation models and sustainable forest management in collaboration with MAF DPs, NGOs, and local communities.															
(Output 2)															
B.1 Formulate an institutional development plan in consultation of different stakeholders.															
B.1.1 Organize workshops for identification of specific areas for	*One 2-day national workshop by*	*GDFCIP/ CIFOR*			▮										

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline												Notes
			Year 1				Year 2				Year 3				
			2021				2022				2023				
			1	2	3	4	1	2	3	4	1	2	3	4	
institution development as well as training need assessment of the staff of MAF/NDFWM with a focus on agroforestry.	*inviting all MAF municipalities, international experts, and other development agencies working in Timor Leste*						▓								
B.1.2 Prepare an institutional development plan for planning and implementation of agroforestry programs for sustainable forest management.	*Considering local environmental and socioeconomic conditions, a manual is prepared targeting to assist institutional development plan in favor of wider agroforestry adoption and forest management*	*GDFCIP/ CIFOR*					▓								
B.2 Communicate with different institutions in ASEAN countries to arrange and conduct training, workshop and study tours.															
B.2.1 Regularly communicate with Ministry of Agriculture and Forest in Indonesia and Vietnam to i) identify resource institutions and sites where different have been established and ii) explore opportunities.	*Ministerial cooperation is established with the Indonesia and Vietnam to support current and future projects.*	*GDFCIP*	▓	▓	▓	▓	▓	▓	▓	▓					
B.3 Organize and conduct study tours,	*Study tours are*	*GDFCIP*							▓						

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline												Notes
			Year 1				Year 2				Year 3				
			2021				2022				2023				
			1	2	3	4	1	2	3	4	1	2	3	4	
training programmes etc. in collaborations with different resource institutions.	*conducted in the selected locations in Timor Leste, Indonesia (CIFOR) and Vietnam (MARD)*								▓						
Objective 3 To build and strengthen linkages with relevant stakeholders in the country as well as the region (especially with AFoCO member countries) for knowledge sharing and scale-up of the agroforestry-based reforestation models.															
(Output 3)															
C.1 Extract and document lessons and good practices through monitoring and evaluation of the project activities.															
C.1.2 Document lessons learned and good practices and compile them into a report.	*A film, No of outreach products*	*GDFCIP CIFOR*									▓				
C.2 Share the results including lessons learned and good practices from the project with other MAF DPs and AFoCO member countries.															
C.2.1 Share the results of the project with MAF DPs and AFoCO member countries in the MAF DPs coordination meetings and AFoCO's regular meetings, respectively.	*Project results presented on an international conference or workhop, Minutes of MAF coordination meeting, Minutes of AFoCO regular meeting*	*GDFCIP, CIFOR*									▓	▓			
C.2.2 Upload the project deliverables (project reports and manuals) on the	*Project website developed, no. of*	*GDFCIP*		▓	▓	▓	▓	▓	▓	▓	▓	▓			The website will be created on the beginning of the project. Project

Outputs	Performance Indicator	Responsible Person/ Body	Annual Timeline												Notes
			Year 1				Year 2				Year 3				
			2021				2022				2023				
			1	2	3	4	1	2	3	4	1	2	3	4	
MAF's HP so that any relevant stakeholders, particularly MAF DPs, the forest and agriculture sectors in Timor-Leste and other member countries could access to the project information.	*project products uploaded*			▓	▓	▓	▓	▓	▓	▓	▓	▓	▓		information and other related products will be uploaded regularly.
C.2.3 Participate in the MAF DPs coordination meetings and AFoCO regional seminars or workshops and share the results of the project. in the respective opportunities.	*Attended in the MAF DPs coordination meetings, AFoCO's seminars/workshops*	*GDFCIP*										▓			
C.3 Strengthen the linkages and networking to share knowledge and provide guidance with MAF DPs and AFoCO member countries for scale-up of the agroforestry-based reforestation models.															
C.3.1 Regularly communicate with MAF DPs and the secretariat of AFoCO.	*Regular communication is established, PSC meeting*	*GDFCIP/ AFoCO*	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	Regular communication will be conducted throughout the project, PSC meeting will held annually
C.3.2 Share information and knowledge of the project through linkage with MAF DPs and AFoCO from time to time.	*No. of information and knowledge shared with other AFoCO members, 1 international policy dialouge on agroforestry and restoration in Timor Leste*	*GDFCIP*										▓			

[Attachment-A]

2. Budget (USD)

2.1 Budget to be Allocated by AFoCO

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
01 Procurement of Project Equipment										**25,000**	**24,000**	The price for motorbike has increased.
0.1.1 Procurement of motorbikes	6 motorbikes		*Units*	*3,000*	*6*	*18,000*	*18,000*					
0.1.2 Procurement of office equipment	2 laptops, 4 desktops, 1 slide projector, 4 printers											
01) Procurement of Laptop			*Units*	*750*	*2*	*1,500*	*1,500*					
02) Procurement of Desktop			*Units*	*700*	*4*	*2,800*	*2,800*					
03) Procurement of Projector			*Units*	*500*	*1*	*500*	*500*					
04) Procurement of Printer			*Units*	*350*	*4*	*1,400*	*1,400*					
05) Procurement of GPS			*Units*	*200*	*4*	*800*	*800*					
Objective 1: To develop and disseminate agroforestry-based reforestation models suitable for introduction in different natural conditions in the typical AEZs in the country and effective in satisfying the needs of local communities.										**313,240**	**411,200**	
A.1 Conduct Participatory Land Use Planning (PLUP) in 6 target sucos in 6 municipalities.										86,040	155,000	The proposal didn't provide detail activities to achieve the ouput and was a payment for a NGO to conduct participatory landuse planning. The current plan, the establishment will be conducted by MAF/DGFCIP with CIFOR's assistance Collaboration between MAF/DGFCIP and CIFOR reduces the budget and also expand opportunity of MAF staff (national and district levels) to improve capacity on participatory approach.

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
A.1.1 Select and finalize the target sucos after necessary assessment and consultations.	*No. of target sucos (6 sucos), 1 planning woekshop, baseline data on socio-economic and environmental conditions of all selected sucos*	*GDFCIP/ CIFOR/MAF Municipal offiices*										
International experts			Persons - Months	4,222	4	**16,889**	16,889					
Travel international experts Indonesia-Timor Leste			Trip	13,396	1	**13,396**	13,396					
Travel 4 MAF municipality representatives to attend planning workshop in Dili			Trip	3,720	1	**3,720**	3,720					
Meeting Package			Package	2,000	1	**2,000**	2,000					
Travel MAF/GDFCIP staff to conduct field assessment			Trip	3,120	1	**3,120**	3,120					
A.1.2 Select local NGOs and conclude the contract with NGOs for field level implementation of activities.	1 implementing partner selected	*GDFCIP*										GDFCIP invites CIFOR as implementing partner. Accordingly, no budget was allocated to finalize the contract.
A.1.3 Conduct community mobilization and organization building.	*No. of meetings, 2 meeting each for targeted sucos , minutes of meetings*	*GDFCIP/ MAF Municipalities*										The change in to 2 meetings from the original 5 meetings in each suco/village is sufficient to inform the project and organize community. Although they are less than the planning, the meetings will be conducted in depth. In addition, the project tries to avoid exploiting time of local communities to attend too many meetings. Reducing into 2 meeting per each suco would not change the target of the activity. The village facilitators will interact with local communities in daily basis so informal discussion will enrich the formal meetings to achieve the target.
Local Travel Cost (Timor Leste)			Trip	700	2	**1,400**	1,400					
Meeting Package (Timor Leste)			Package	600	2	**1,200**	1,200					

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
A.1.4 Conduct Participatory Land Use Planning (PLUP) developed by JICA CBNRM Project and MAF) including preparation of Future Land Use Plan and Village Regulation to manage and govern forest and other natural resources.	*Future land use plans and village regulations for the 6 target sucos*	*GDFCIP/ CIFOR/MAF Municipalities*										
International expert			*Persons - Months*	*4,007*	*3*	***12,020***	*12,020*					
International Travel Cost (CIFOR)			*Trip*	*1,528*	*2*	***3,055***	*3,055*					
Village facilitator			*Persons -months*									
Local Travel Cost (Timor Leste)			*Trip*	*1,420*	*2*	***2,840***	*2,840*					
Workshop Package(Timor Leste)			*Package*	*600*	*2*	***1,200***	*1,200*					
Supply and Material			*Package*	*4,200*	*6*	***25,200***	*8,400*	*8,400*	*8,400*			
A.2 Establish the CBNRM mechanism in 6 target sucos and periodically monitor the effectiveness in a participatory manner.										40,550	27,000	The proposal only budgeted for monitoring while no budget for Tara Bandu ceremony. While the ceremony is addressed on the performance indicator.
A.2.1 Organize Tara Bandu ceremonies at the target sucos to formalize village regulations	*3 Tara Bandu ceremonies*	*GDFCIP/ MAF Municipal offices*										The purpose of the ceremony is to bind/formalize the established CBNRM to communities. Considering the said importance, the project allocates the budget more on other activities, as combining 2
Tarabandu Ceremony Cost			*Ceremony*	6,600	3	**19,800**		19,800				
Travel MAF national staff and media			*Trip*	7,800	1	**7,800**		7,800				

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original * (*Project Proposal)	Remarks
			Unit	Unit Cost	Quant ity	Total	Year 1	Year 2	Year 3			
A.2.2 Enhance the capacity of village committees concerned on protection and sustainable management of land and other natural resources through trimonthly review meetings on the implementation of CBNRM, and Village Regulation.	*Regular monitoring meetings at the 6 target sucos on trimontly basis after Tara bandu ceremonies*	*GDFCIP/ MAF Municipal offies*										villages into one ceremony. Yet, it would not reduce the essence of the village regulations established.
Regular monitoring meeting of tara bandu effectiveness			*Meeting*	*450*	*7*	***3,150***		*1,575*	*1,575*			The monitoring budget includes trimonthly meeting, travel of MAF representatives and incentive for village facilitator for 24 months. The regular monitoring meetings are changed from bi-monthly to tri-monthly basis, in order to avoid in consuming farmers' time to attend to many meetings. Despite the change the number of meeting, the target of the activity will remain the same. Village facilitators will work closely with the local communities and monitor the implementation in daily basis.
Travel MAF national staff to sites			*Trip*	*1,400*	*7*	***9,800***		*4,900*	*4,900*			
A.2.3 Assist in documentation and record keeping at the community level on the implementation of CBNRM and village regulations	*Memos, other documentatio ns of CBNRM and village regulation implemnetatio n.*	*GDFCIP/ MAF Municipal office*										
Village facilitator												This is moved to village facilitator budget line
A.3 Develop a set of technical manuals on development of the agroforestry-based reforestation models.						-				46,731	13,100	GDFCIP has asked CIFOR to lead these activities. The budget is alocated to support 3 CIFOR staff time for 4 months
A.3.1 Review existing manuals and technical documents on PLUP, agroforestry and reforestation in Timor-Leste.	*Manuals collected*	*GDFCIP/ CIFOR/MAF Municipal offies*				-						

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
A.3.2 Review manuals and documents relating to the agroforestry models in Indonesia and Thailand.	*Manuals and guidelines collected*	*GDFCIP/ CIFOR/MAF Municipal offies*				-						
A.3.3 Extract lessons learnt from the overseas study tours and training programmes.	*Reports on study tours and training programmes*	*GDFCIP/ CIFOR/MAF Municipal offies*				-						
A.3.4 Prepare manuals on different agroforestry models to be introduced in the project areas.	*Manuals developed*	*GDFCIP/ CIFOR/MAF Municipal offies*				-						
Publication Cost (Timor Leste)			*Package*	*600*	*1*	***600***	*600*					
International Experts partner (CIFOR)			*Persons - Months, inc Trip*	*3,844*	*12*	***46,131***	*46,131*					
A.3.5 Online workshop/Focus-group discussion for the technical review and enhancement of the manuals	*ROD of the workshop/focus-group discussion*	*GDFCIP/ MAF municipal offices*										Organizing online workshop/FGD will be COVERED BY the national contribution of TL.This activity will be ORGANIZED together with activity A.1.1 to avoid excesive time for meeting and travel.
A.4 Establish demonstration plots on the agroforestry-based reforestation models in the target villages through a series of on-farm training/farmers field schools on development of the agroforestry-based reforestation models in the plots.										97,088	216,600	
A.4.1 Develop suitable agroforestry-based reforestation models in the respective AEZs in consultation with communities, experts in Timor-Leste and relevant resource agencies/	*6 agroforestry-based reforestation models*	*GDFCIP/CIFOR/MAF Municipal offices*				-	-					

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quant ity	Total	Year 1	Year 2	Year 3			
organizations in Indonesia and Vietnam	*developed for the 6 target sucos, 1 consultation workshop*											
International Experts partner (CIFOR)			*Persons - Months*	*5,006*	*4*	***20,023***	*20,023*					
Travel of 4 MAF municipalities respresentatives			*Trip*	*3,600*	*1*	***3,600***	*3,600*					
Meeting Package			*Package*	*1,500*	*1*	***1,500***	*1,500*					
Travel of Indonesian agroforestry expert to Timor Leste			*Trip*	*1,980*	*1*	***1,980***	*1,980*					This is agroforesry expert from Indonesian institution (Indonesian Institution – Balai penelitian dan pengembangan teknologi agroforestry (BP2TA)
Demonstration plot of agroforestry model												The demonstration plots cover 12 ha (2 ha per-sucos). The cost for Y0 (USD 3,300/ha) includes land preparation, nursery establishment, fencing and planting. The cost for Y1 and Y2 (USD 1,000/ha), the activity aims for plot maintenance (weeding and fertilizer application). We referred to TEEB standard for restoration cost which is USD 2,300/ha.
a. Land preparation, nursery establishment, planting and fencing			*Plot*	*6,600*	*6*	***39,600***	*39,600*					
b. Maintenance (weeding, fertilizer application)			*Plot*	*2,000*	*6*	***12,000***		*6,000*	*6,000*			Considering that the project is to test various agroforestry models, including its cost efficiency for future replication, the Secretariat conditionally accepts the budget and the unit cost, which will be further clarified by in-depth discussions with the Implementing Agency during the Project Inception

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original * (*Project Proposal)	Remarks
			Unit	Unit Cost	Quant ity	Total	Year 1	Year 2	Year 3			
												Meeting.
A.4.2 Develop a detailed work plan for development of agroforestry/ reforestation models and conducts of Farmers Field Schools (FFSs) on demonstration and implementation of agroforestry models.	*6 detailed work plans on FFSs in the 6 target sucos*	*GDFCIP/CIF OR/MAF Municipal offices*				-	-					
International expert partner(CIFOR)			*Persons - Months*	*719*	*1*	**719**	*719*					
A.4.3 Organize on-site training courses (FFSs) for the communities and extension workers.	*No. of training courses according to the plans and No. of participants in the training courses (FFSs)*	*GDFCIP/CIF OR/MAF Municipal offices*				-	-					
Training			*Package*	*3,004*	*4*	**12,015**	*12,015*					
Training facilitator			*Persons*	*1,125*	*4*	**4,500**	*4,500*					
International expert partner(CIFOR)			*Persons - Months, inc Trip*	*1,151*	*1*	**1,151**	*1,151*					

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original * (*Project Proposal)	Remarks
			Unit	Unit Cost	Quant ity	Total	Year 1	Year 2	Year 3			
A.5 Monitor, evaluate and document the process and results of development and management of the agroforestry-based reforestation models in the target villages.	*Progress and project reports, Community based Restoration Monitoring System (CBRMS), Data based of tree growth monitoring*	*GDFCIP/CIF OR/MAF Municipal offices*				-				42,831	4,500	The budget increases because the output consists of various products including Community based Restoration Monitoring System (CBNRMs), tree growth and environement monitoring data base monitoring and progress report. The CBRMS consists with a mobile app of tree growth and enviroment indicatiors monitoring, and a web GIS to present the data in real time. Budget is allocated to cover 2 CIFOR staff time for 3 month to develop CBRMS, tree growth monitoring data base, provide training on CBRMS to MAF municipality staff, village facilitators and farmers, and assist in developing project progress resport . The budget also include incentive for village facilitators who will be trained to assist the farmers/landowners in monitoring tree growth performance on their plots as well as testing the system
International expert partner (CIFOR)			*Person - Month inc Trip*	*4,741*	*6*	*28,446*		*28,446*				
Local Travel Cost			*Trip*	*660*	*1*	*660*		*660*				
Village facilitator												
Monitoring tool (CBRMS)			*Package*	*13,725*	*1*	*13,725*		*13,725*				
Objective 2 To strengthen institutional capacity of MAF/DGFCIP and the relevant offices to promote the agroforestry-based reforestation models and sustainable forest management in collaboration with MAF DPs, NGOs, and local communities.										<u>63,025</u>	<u>69,100</u>	
B.1 Formulate an institutional development plan in consultation of different stakeholders										24,000	4,300	The proposal was allocated budget for hiring an external expert to formulate the plan. The current

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
B.1.1 Organize workshops for identification of specific areas for institution development as well as training need assessment of the staff of MAF/NDFWM with a focus on agroforestry.	*One 2-day national workshop by inviting all MAF municipalities, international experts, and other development agencies working in Timor Leste*	*GDCFCIP/ CIFOR*										budget increases because DGFCIP will hold an a national participatory workshop to gain inputs from other istitutions to formulate the institutional. The workhop will invitive all MAF district representatives, other institutions working forestry sectors in Timor Leste,and international experts. Final formulation will be assisted by CIFOR.
International expert partner (CIFOR)			*Persons- Months, inc Trip*	*3,955*	*2*	**7,910**		*7,910*				
Travel of 13 MAF municipality representatives			*Trip*	*12,090*	*1*	**12,090**		*12,090*				
Meeting Package (2-DAY)			*Package*	*2,000*	*2*	**4,000**		*4,000*				
Exhibition (disply) on project achievements												This workshop is not dissemination of final project result. The final one will be international dialouge addressed on activity C.3.2. Exhibition of the project in the activity B.1.1 could be done in digital display by retriving information for the website. This cost could be combined on activity C.2.2.
B.1.2 Prepare an institutional development plan for planning and implementation of agroforestry programmes for sustainable forest management.	*An institutional development plan developed*	*GDFCIP/ CIFOR*				-						This work can be in lined with B.1.1 and CIFOR will lead on developing the institutional plan based on the result B.1.1.

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
B.2 Communicate with different institutions in ASEAN countries to arrange and conduct training, workshop and study tours.						-				**0**	**3,000**	The proposal was allocated payment to RECOFCT in arranging stuy tour. While on the cuurent budget, the communication cost will be included on DGFCIP daily communication email.
B.2.1 Regularly communicate with Ministry of Agriculture and Forest in Indonesia and Vietnam to i) identify resource institutions and sites where different have been established and ii) explore opportunities.	No of potential resource institutions in Indonesia and Vietnam identified	*GDFCIP/ CIFOR*				-						
B.2.2 Develop TOR for the study tours and modules for the training programmes with reference to the Institutional Capacity Building Plan.	*TOR developed and modules for training programmes*	*GDFCIP/ CIFOR*				-						
B.3 Organize and conduct study tours, training programmes etc. in collaborations with different resource institutions.	*1 study tour for farmers to Indonesia, 2 study tour and training for MAF/GDFCIP staff to Vietnam and AFoCO RETC*	*GDFCIP*				-				**39,025**	**61,800**	
Resource person in Indonesia (CIFOR)			*package*	1,765	1	**1,765**		1,765				
International Travel Cost for Training for Farmers (Timor Leste)			*Trip*	26,470	1	**26,470**		26,470				
International Travel Cost for Training for MAF Staff (Timor Leste)			*Trip*	7,300	1	**7,300**		7,300				
International Travel Cost for Training in RETC-AFOCO (Timor Leste)			*Trip*	3,490	1	**3,490**		3,490				

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
Objective 3 To build and strengthen linkages with relevant stakeholders in the country as well as the region (especially with AFoCO member countries) for knowledge sharing and scale-up of the agroforestry-based reforestation models.										**56,035**	**12,400**	
C.1 Extract and document lessons and good practices through monitoring and evaluation of the project activities.										**23,747**	**8,300**	The proposal budgeted for hiring external emplyment to develop a report on lesson learn. The current budget increases because the lesson learn of the project will be documeted into a film and other printing publications instead of reports. The film, as visual media, is a good media to deliver messages of the projects to various audiences (farmers, government officers, etc). The budget is to cover film production, travel of MAF/DGFCIP staff in assisting the production to project sites, and CIFOR staff time to collate reviews.
C.1.1 Review the project reports (progress report, annual reports, and monitoring and evaluation report) to extract lessons learned and good practices which could serve as useful references for MAF DPs working in the forest and agriculture sectors in Timor- Leste and other Asian countries.	A review report	GDFCIP/ CIFOR										
International expert			*Persons - Months*	*1,068*	*1*	*1,068*			*1,068*			
C.1.2 Document lessons learned and good practices and compile them into a report.	*A film, No of outreach products*	*GDFCIP/ CIFOR*				**-**			**-**			
Film Production (CIFOR)			*Package, inc Trip*	*20,140*	*1*	*20,140*			*20,140*			
Publication			*Packages*	*2,059*	*1*	*2,059*			*2,059*			
Local Travel Cost			*Trip*	*480*	*1*	*480*			*480*			
C.2 Share the results including lessons learned and good practices from the project with other MAF DPs and AFoCO member countries.						**-**				**7,068**	**3,100**	The budget increases because the lesson learn of the project will be shared to a international workshop/conference in another

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
C.2.1 Share the results of the project with MAF DPs and AFoCO member countries in the MAF DPs coordination meetings and AFoCO's regular meetings, respectively.	*Project results presented on an international conference or workhop, Minutes of MAF coordination meeting, Minutes of AFoCO regular meeting*	GDFCIP				-						ASEAN countries, as well as through online platform. The budget is to cover travel of MAF/DGFCIP staff to attend the workhop and to develop project website.
International Travel for attending a international conference/workshop			*Trip*	*2,750*	*1*	*2,750*			*2,750*			
C.2.2 Upload the project deliverables (project reports and manuals) on the MAF's HP so that any relevant stakeholders, particularly MAF DPs, the forest and agriculture sectors in Timor-Leste and other member countries could access to the project information.	*Project website developed, no. of project products uploaded*	GDFCIP/ CIFOR				-						
Website development and maintenance			*Package*	*4,318*	*1*	*4,318*	*3,455*	*432*	*432*			
C.2.3. Participate in the MAF DPs coordination meetings and AFoCO regional seminars or workshopsandsharetheresults of the project. in the respective opportunities.						-						This is similar to C.2.1
C.3 Strengthen the linkages and networking to share knowledge and provide guidance with MAF DPs and AFoCO member countries for scale-						-						On the proposal, the budget was allocated for internal MAF coordination meeting.The current budget increases significantly

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original* (*Project Proposal)	Remarks
			Unit	Unit Cost	Quantity	Total	Year 1	Year 2	Year 3			
up of the agroforestry-based reforestation models.												because an international policy dialogue will be conducted in Timor Leste to share the project lesson learn. The dialouge will invites international experts on agroforestry/restoration, district representatives, farmers and other stakeholders in Timor Leste. The cost is to cover meeting package (meal and other supply) for the Project Steering Committee meetings. When the implementing partner (CIFOR) is invited, the travel cost will be covered by their other existing activities which have travel cost.
C.3.1 Regularly communicate with MAF DPs and the secretariat of AFoCO.	*No. of communications with AFoCO*	GDFCIP				-						
Meeting package	PSC meetings	GDFCIP/ AFOCO	*Package*	*933*	*3*	*2,800*	*933*	*933*	*933*			
C.3.2 Share information and knowledge of the project through linkage with MAF DPs and AFoCO from time to time.	*No. of information and knowledge shared with other AFoCO members, 1 international policy dialouge on agroforestry and restoration in Timor Leste*	GDFCIP/CIF OR				-						
Internatonal expert			*Persons - Months*	*4,660*	*3*	*13,979*			*13,979*			
Local Travel Cost (Timor Leste)			*Trip*	*4,940*	*1*	*4,940*			*4,940*			
Meeting package (Timor Leste)			*Package*	*2,000*	*1*	*2,000*			*2,000*			
Meeting supply			*Package*	*1,500*	*1*	*1,500*			*1,500*			
D. Project operation										**59,400**	**0**	

Activity	Performance indicators	Responsible body	Budget Allocation by Year (USD)							Total	Original * (*Project Proposal)	Remarks
			Unit	Unit Cost	Quant ity	Total	Year 1	Year 2	Year 3			
Village facilitator			*Person-months*	*300*	*198*	*59,400*	*19,800*	*19,800*	*19,800*			We put village facilitator in one budget line instead of per-activity as they will assist local communities in targeted sucos in daily basis. The budget is to cover the incentive of 6 facilitators in 33 months.
Total						*516,700*	*250,247*	*175,496*	*90,958*	*516,700*	*516,700*	

[Attachment-A]

2.2. Budget to be Allocated by Timor Leste Government

Activity	Budget Allocation by Year (USD)						
	Unit	Unit Cost	Quantity	Total	Year 1 2021	Year 2 2022	Year 3 2023
01 Procurement of Project Equipment							
Objective 1: To develop and disseminate agroforestry-based reforestation models suitable for introduction in different natural conditions in the typical AEZs in the country and effective in satisfying the needs of local communities.							
A.1 Conduct Participatory Land Use Planning (PLUP) in 6 target sucos in 4 districts (municipalities)							
Allowance and transportation costs of staff	*Month*	*9*	*600*	*5,400*	*2,700*	*2,700*	
A.2 Establish the CBNRM mechanism in 6 target sucos and periodically monitor the effectiveness in a participatory manner.							
Allowance and transportation costs of staff	*Months*	*600*	*36*	*21,600*	*7,200*	*7,200*	*7,200*
A.3 Develop a set of technical manuals on development of the agroforestry-based reforestation models.							
A.4 Establish demonstration plots on the agroforestry-based reforestation models in the target villages through a series of on-farm training / farmers field schools on development of the agroforestry-based reforestation models in the plots.							
Allowance and transportation costs of staff	*Times*	*336*	*50*	*16,800*	*5040*	*8,400*	*3,360*
A.5 Monitor, evaluate and document the process and results of development and management of the agroforestry-based reforestation models in the target villages.							
1) Allowance and transportation costs of NDFWM staff	*Times*	*40*	*216*	*8,640*		*3456*	*5,184*
2) Allowance and transportation costs of MAF municipal officers	*Times*	*5*	*1,728*	*8,640*		*3456*	*5,184*
Objective 2 To strengthen institutional capacity of MAF/DGFCIP and the relevant offices to promote the agroforestry-based reforestation models and sustainable forest management in collaboration with MAF DPs, NGOs, and local communities.							
B.1 Formulate an institutional development plan in consultation of different stakeholders							

Activity	Budget Allocation by Year (USD)						
	Unit	Unit Cost	Quantity	Total	Year 1 2021	Year 2 2022	Year 3 2023
B.2 Communicate with different institutions in ASEAN countries to arrange and conduct training, workshop and study tours.							
B.3 Organize and conduct study tours, training programmes etc. in collaborations with different resource institutions.							
Objective 3 To build and strengthen linkages with knowledge sharing in the region (especially with AFoCO member countries).							
C.1 Extract and document lessons and good practices through monitoring and evaluation of the project activities.							
C.2 Share the results including lessons learned and good practices from the project with other Asian counties, especially AFoCO member countries, through the meetings of AFoCO, web-page, etc							
Participate in the meetings	*Time*	*2,780*	*10*	*27,800*			*27,800*
C.3 Strengthen the linkages and networking to share knowledge and provide guidance with MAF DPs and AFoCO member countries for scale-up of the agroforestry-based reforestation models.							
Total				***88,880***	***14,940***	***25,212***	***48,728***

SECTION D. IMPLEMENTATION ARRANGEMENT

1. Organizational structure

The proposed institutional set-up for implementation of the Project is illustrated below.

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┌─────────────────────────────────────────────┐
│   Assembly: Country Representative/          │
│          National Focal Point               │
└─────────────────────────────────────────────┘

┌─────────────────────────────────────────────┐
│           Chairperson: DGFCIP               │
└─────────────────────────────────────────────┘
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Center for International Forestry Research (CIFOR)

(*Implementing partner*)

Project steering committee:

- National Directors of NDFWM, NDNC, NDCIP, NDAHE, NDL, NDIWM

- Municipal Directors of Municipal MAF Offices of Liquica, Covalima, Bobonaro, Ermera

- Secretariat of AFoCO

- Any other persons appointed by Chairperson

Implementing Agency (Main):

At national level: National Directorate of Forest and Watershed Management

At municipal level: Municipal MAF Offices of the concerned districts (municipalities)

Supporting Agency:

National Directorate of Coffee and Industrial Plants, National Directorate of Agriculture, Horticulture and Extension, and National Directorate of Livestock
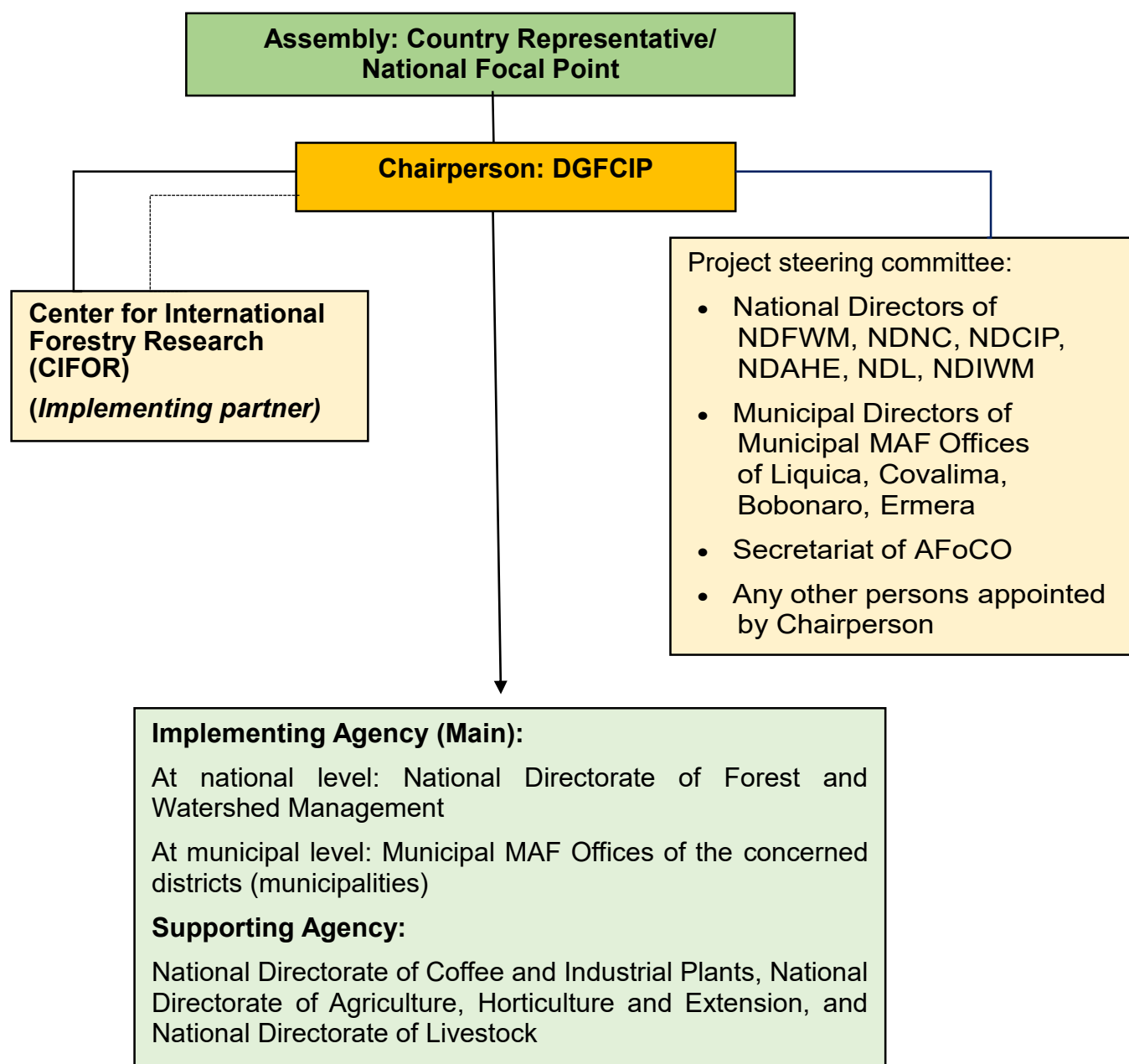
Figure 4. Organizational chart

General Director of Forest, Coffee, and Industrial Plans (DGFCIP) of MAF will be the Project Director of the project who will bear the overall responsibility for the administration and implementation of the Project, while National Director of the National Directorate of Forest and Watershed Management will act as the Project Management who shall be responsible for the managerial and operational matters of the Project. CIFOR is the implementing partner which will provide technical assistance on the project implementation, particularly on scientific aspects and filling knowledge gap between the practices and scientific evidence. The steering committee will be responsible:

- to monitor the project activities in accordance with the project plan;
- to review and examine the framework of the Project in accordance with the logical   framework agreed on by MAF and AFoCO;
- to discuss and advise on major issues that arise in the course of the project implementation;
- to coordinate activities and approaches of the relevant national directorates and MAF municipal officers to keep the Project on the right track and enable it to achieve the objectives;
- to approve and endorse an annual work and budget plan of the Project.

The main implementation agencies of the Project are: the National Directorate of Forest and Watershed Management at central level and the MAF municipal Officers concerned with the municipalities where the demonstration plots are established: Bobonaro, Covalima, Ermera, and Liquica.

2.   Staff resource plan

NDFWM plans to allocate the following officers to operate, manage, and monitor the project activities.

- National Director of NDFWM as Project Manager
- Director of Department of Reforestation and Soil and Water Conservation as Project Coordinator
- 2 technical officers of NDFWM as Project Monitoring Officers: one for Bobonaro and Covaima, and the other one for Liquica and Ermera

At municipal level, the following officers will be assigned to the Project.

- Head of the forestry section as a focal point of the Project in the municipal MAF office
- One technical officer in forestry for field monitoring and validation in coordination with forest guard, extension coordinator, and extension officer assigned to the Project
- One technical officer each in the fields of coffee and industrial plan, crops and horticulture, and livestock as subject matter specialists at municipal level
- One forest guard, one post-administrative extension coordinator, and extension officer concerned with the target suco as extension service providers to local communities in the target sucos in collaboration with the field implementers

CIFOR will assign four research staff as core team of the project and they consist of:

- 1 Senior scientist
- 1 Scientist
- 2 Senior Research Officer

3. Reporting and monitoring arrangements

3.1 Reporting

DGFCIP will provide regular reporting to the steering committee and AFoCO. DGFCIP will also submit the following project reports to the steering committee for approval and endorsement to AFoCO,

- Inception report
- Annual implementation reports
- Project completion report

3.2 Monitoring Arrangements

The project monitoring is composed of two parts: regular monitoring and periodic monitoring.

Regular monitoring

The regular monitoring is the monitoring activities to be undertaken by the project monitoring officers of NDFWM and technical and field officers of the MAF municipal offices i) to monitor the progress of the Project and performance of the field implementers, ii) to find out any issues and problems to be addressed for smooth and effective implementation of the Project, and iii) to validate the results reported by the field implementers in the field.

NDFWM will develop the quarterly and annual progress reports based on the results of the regular monitoring and submit the same to DGFCIP on a quarterly and annual basis, respectively. The progress reports will consist of: i) activities undertaken in this reporting period, ii) results and achievements made, iii) inputs made, iv) activities planned in the following reporting period, v) issues and problems, and vi) budget allocated and disbursed/used.

Periodic monitoring

The joint project monitoring is scheduled to be carried out by NDFWM, the MAF municipal offices, and other national directorates of MAF in the end of 2nd year and before 6 months of the end of the Project as the mid-term and terminal monitoring and evaluation (M&E) of the Project.

The focus of the M&E will be placed on i) assessment of the achievement level of the Project according to the indicators set in the beginning of the Project, ii) assessment of the implementation process in terms of efficiency and effectiveness, iii) assessment of the probability of attaining the project purpose, iii) confirmation of political, socio-economic, and natural environments which surround the Project to validate the relevance of the Project, and v) assessment of the sustainability of the Project as well as possible negative and positive impacts caused by the Project.

In order to collect data and information necessary for the assessments and analyses listed above for M&E, the joint project monitoring team will conduct the following surveys and data collection activities:

- Interviews to the municipal MAF officers and NGOs involved in the Project i) to assess the relevance of the Project, ii) to collect data on project inputs including financial data, and iii) to extract lessons learned from the Project;
- Field survey to confirm the growth and survival conditions of seedlings and plants planted in the demonstration plots;
- Interviews to local communities who have participated in the Project to assess i) adaptability of the agroforestry models, ii) potential economic impacts, iii) acceptance of the models among communities, and iv) possibility of further expansion of the same models to other sucos.
- Review of any changes in policy, legal frame work, socio-economic conditions, and natural conditions in the country.

The results of the joint monitoring will be compiled into the mid-term and terminal M&E reports and submitted to the steering committee and AFoCO through DGFCIP.

4. Risk management and sustainability

4.1. Assumptions and risks

The following table shows the details of the respective risks, their probability, and the associated mitigation measures which are internalized in the project design to address and manage such risks.

Table 7. Assumptions and risks

Risks	Possible risks	Probability	Mitigation measures
General	Occurrence of drastic climate changes, such as prolonged heavy rains, and long droughts	Low	Agroforestry techniques, which aim to establish a multi-layered structure of trees/plants canopies, to protect surface soils from erosion, and to maintain soil moisture contents, will be introduced in the demonstration plot as key practices to be demonstrated.
	Drastic change in the government policies and legal framework	Low	One of the key decision makers in MAF, such as DGFCIP, will be involved in the institutional framework for implementation of the Project as Project Director so that the Project could keep receiving support from

Risks	Possible risks	Probability	Mitigation measures
			the government and be prepared to adjust/revise the design if necessary.
	Delayed payments to the field implementers (NGOs) due to the untimely validation and late processing of billing documents submitted by the NGO	High	The technical officers of NDFWM and MAF municipal technical officers in forestry will be responsible for validation of the NGOs' activities in collaboration with the forest guards assigned to the Project. In order to ensure timely validation, Project Manager, National Director of NDFWM, will monitor the process of validation and processing of billings in close coordination with Directors of the respective MAF municipal offices and the relevant sections of NDFWM as well as MAF.
Social and cultural	Conflict over land tenure	Medium	A series of consultations with local communities will be held for selection of plots to be used for the demonstration plots to confirm the land tenure status and the willingness of the landowner.
	Less involvement of women or exclusion of women from project activities	Medium	A leader of women group as well as woman representatives of each sub-district will be the core members for discussions on a future land use plan and village regulations in the process of PLUP. Due attention shall be given to the participation of such women in the discussions to incorporate women's views into the plan and regulations. Women's roles in agriculture and crop production will be fully

Risks	Possible risks	Probability	Mitigation measures
			considered when the agroforestry models are designed so that women could participate in FFSs and learn necessary skills and techniques for their own farms. In general, women is responsible for production of vegetables and horticulture crops; hence, those crops will be incorporated into the designs.
Market-related	Drastic decline in the market prices of cash crops, horticulture crops / plants, and industrial plants	Medium	Several types of crops, horticulture plants, and industrial plants will be mixed with industrial trees in the demonstration plot so that the economic incentives for the local communities could be secured.
Technical	Limited knowledge or facilitation skills of forest guards and extension officers concerned with the target villages	Medium	The field activities will be carried out jointly by the MAF officers and NGOs, so that those who have less knowledge or limited facilitation skills could also learn from NGOs. At the same time, the manuals developed by the past and on-going projects which had/have successfully conducted the activities (e.g., PLUP and agroforestry development) similar to those introduced by the Project will be fully used as references for the field implementers to standardize the extension services of the field implementers and MAF field officers.
Operational/ Organiza-tional	Limited number of MAF staff assigned to the Project at both	Medium	DGFCIP will communicate with National Director of NDFWM and Directors of

Risks	Possible risks	Probability	Mitigation measures
	central and municipal level due to a lack of staff in the offices		the MAF municipal offices concerned to ensure that NDFWM and the MAF municipal offices could allocate necessary officers as planned. In case any of the municipal offices cannot allocate the sufficient number of their staff, NGOs will be fully utilized for extension services on FFSs.
	Limited budget allocation for project operations of the municipal MAF offices concerned	Medium	DGFCIP will also communicate with Vice Minister and Secretary General of MAF to enable the MAF municipal offices concerned to allocate sufficient budget for project operations.
	Limited transportation means of MAF staff assigned to the Project due to late procurement or misuse of the motorbikes in the municipal offices	Medium	NDFWM will start the procurement of motorbikes immediately after the project budget becomes effective to provide the same to the municipal offices concerned on a timely manner. Project Manager and Coordinator will also closely monitor the use of the motorbikes in the municipal offices so that they could be used effectively.

4.2. Sustainability

In order to sustain the results of the major project interventions, such as PLUP and FFSs on agroforestry techniques and further expand the project interventions to other areas, the Project will take the following approaches and strategies.

- Local communities, particularly local leaders, in the target sucos will be fully involved in the process of PLUP and planning of a work plan for development of a demonstration plot so that local communities could have clear understanding and

ownership of the future land use plan, village regulations, and demonstration plots developed by the Project.

- The Project will fully use the procedures, methodologies, skills/techniques, and lessons which have already been proven useful and effective by other projects implemented by MAF development partners, such as PLUP developed by JICA CBNRM Project, agroforestry techniques demonstrated GCCA, and knowledge/experiences gained by Seed of Life, to name a few.

- FFS, which consists of a series of hands-on training courses throughout a year, will be employed as the key intervention to transfer skills and techniques necessary for introduction of the proposed agroforestry models so that local communities who participate in the Project could learn and acquire the skills and techniques. Those who learn the skills and techniques are expected to replicate the same to their own plots with technical assistance from forest guards and extension officers concerned with the target village.